

# Commonwealth University – Lock Haven University

## 2022-2023 UNDERGRADUATE CATALOG

\*\*\*ALL INFORMATION CONTAINED IN THIS DOCUMENT IS ACCURATE AS OF July 1, 2022.\*\*\*

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## **MISSION, VISION, AND VALUES**

### **Mission Statement**

Our hard-working and determined students are at the heart of everything we do. Commonwealth University leverages the power of Bloomsburg, Lock Haven, and Mansfield to provide affordable, high-quality education emphasizing high-impact practices, personal and career connections, and inclusivity supporting all learners to succeed in our region and beyond.

### **Vision Statement**

Commonwealth University will be a premier regional public institution that supports and prepares all students for success in the global workforce by providing an accessible and transformative educational experience.

### **Values**

#### ***Student-Centered***

As faculty and staff, this means we:

- Put students first by meeting them where they are to help them achieve success.
- Provide holistic support to adapt our work around the needs of our students.

As students, this means we:

- Feel supported through available resources, faculty and staff interaction, and the meaningful connections we make on campus.
- Have ample opportunities for growth, individualized attention, and academic and career development.

#### ***Welcoming & Inclusive***

As faculty and staff, this means we:

- Represent the diversity of our students and create an environment in which all students, faculty, and staff feel supported, affirmed, and empowered.
- Encourage robust dialogue, intellectual curiosity, and diversity of thought while cultivating opportunities to have experiences with faculty, staff, and alumni as role models and mentors.

As students, this means we:

- Take an active role in fostering a welcoming and inclusive community.
- Seek out perspectives that are different from our own, create opportunities for dialogue, and encourage respectful discussions among a diversity of viewpoints.

#### ***Accessible***

As faculty and staff, this means we:

- Cultivate an encouraging educational experience that supports all students.
- Invest in and connect students to resources that promote persistence and success.

As students, this means we:

- Have the financial support and resources to make college affordable through scholarships and financial aid packages.
- Feel supported by faculty, staff, and campus partners and are able to easily access the personal assistance we are provided.

#### ***Innovative & Exceptional***

As faculty and staff, this means we:

- Provide a best-in-class practical and hands-on educational experience that prepares students to succeed as global citizens.
- Build connections to new opportunities and programs, leveraging employers, alumni, and cutting-edge research to ensure we provide a high-quality educational experience.

As students, this means we:

- Have access to state-of-the-art technology and equipment to enhance our academic experience through in-person, hybrid, online, multimodal, and hands-on learning.

- Have practical opportunities to engage within and beyond the classroom to develop knowledge and skills we need to succeed in the global workforce.

### ***Collaborative***

As faculty and staff, this means we:

- Learn from each other and take advantage of the opportunity to build meaningful partnerships with colleagues, both on our “home” campuses and across the triad.
- Engage in effective best practice sharing and relevant professional development to enable highly effective teaching, student support, and effective institutional management.

As students, this means we:

- Have varied and significant opportunities to foster relationships and build community with our peers, mentors, faculty, and staff across all three campuses.
- Are engaged in the communities surrounding our campuses through meaningful partnership and service.

### ***Resilient***

As faculty and staff, this means we:

- Are motivated to persevere through challenges and adversity.
- Are dedicated to ensuring students have the resources, support, and opportunities they need to be successful.

As students, this means we:

- Are hard-working and have the grit, resolve, and determination to power through obstacles and barriers that come our way.
- Are committed to and motivated by our future success

## **ACADEMIC INTERIM POLICIES FOR COMMONWEALTH UNIVERSITY OF PENNSYLVANIA**

### **Procedures, Definitions, Explanations**

Policies are available at <http://www.lockhaven.edu/about/policies.html>.

#### **Progress Reporting and Academic Intervention**

Roster reconciliation as verification of student enrollment in a course occurs at the end of the add/drop period. Faculty will report a student’s progress via Starfish at the end of the third week of classes for all students who are missing class, unprepared for class and/or underperforming in class. At the halfway point in each semester, faculty will submit mid-semester grades for all courses. When a student’s GPA is less than 2.0 for that semester (calculated using mid-semester grades from the current semester only), the student is designated for academic intervention. Prior performance in previous semesters is not considered in this GPA calculation.

Within two working days of the deadline for the mid-semester grade posting, each department secretary runs a query for advisors that lists the advisees designated for academic intervention. Query results are provided to advisors and to department chairs. Department chairs notify students via email, with a copy to each student’s advisor, that they have been designated for academic intervention. This email encourages students to contact their advisor as soon as possible to schedule an appointment.

Advisors will communicate with their advisees within a week of the mid-semester grade posting deadline. The advisor and advisee will then create and implement an individualized plan for success that includes the mandatory use of appropriate academic support resources, such as those provided by the Student Success department (tutoring services, supplemental instruction, the Writing Center, etc.).

Records of participation will be maintained and consulted during any future dismissal appeal decisions.

#### **Academic Probation**

Creation of a single policy for Undergraduate Academic Standing, Renewal, and Intervention. With levels for Academic Good Standing (above 2.0), Academic Warning (below 2.0 1 semester, Req Academic Recovery Plan), Academic Probation (continue below 2.0 2nd semester; Req Academic Recovery Plan), Academic Suspension (continue below 2.0 3rd semester; out 1 semester; return on Probation), Academic Dismissal (continue below 2.0 upon return, out 2-year min.), and Academic Renewal (min 2year sep., grades C- or less removed). Specific procedures specified for Academic Difficulty and Recovery pertaining to intervention in policy. The goal is to prevent students from accumulating significant deficiency in GPA through early identification and meaningful recovery planning, and clear documentation of outreach and expectations through the University’s official advising system.

### Academic Dismissal

Creation of a single policy for Undergraduate Academic Standing, Renewal, and Intervention. With levels for Academic Good Standing (above 2.0), Academic Warning (below 2.0 1 semester, Req Academic Recovery Plan), Academic Probation (continue below 2.0 2nd semester; Req Academic Recovery Plan), Academic Suspension (continue below 2.0 3rd semester; out 1 semester; return on Probation), Academic Dismissal (continue below 2.0 upon return, out 2-year min.), and Academic Renewal (min 2year sep, grades C- or less removed). Specific procedures specified for Academic Difficulty and Recovery pertaining to intervention in policy. The goal is to prevent students from accumulating significant deficiency in GPA through early identification and meaningful recovery planning, and clear documentation of outreach and expectations through the University's official advising system.

### Due Process (Appealing a Grade)

The grade appeal process should follow the Academic Appeal Process: Informal & Formal. Bloomsburg has a specific Grievance process in place similar to Lock Haven's grade appeal but broader. We recommend this broader appeal process. Informal: 1. Instructor 2. Chairperson 3. Dean. Formal file grievance as specified. (see Bloomsburg PRP 3592 Academic Grievance Procedure)

### Mid-Semester Grades

Midsemester grades should be reported for all students in all courses. A separate policy for Early alerts and interventions has been developed as a recommended Course Progress, Early Alerts and Interventions Policy.

### Academic Major

An academic major is the main field of study in an academic program. For baccalaureate degrees, the academic major (comprised of core and cognate courses) and general education are the two principal components of the degree. For master's degrees, the academic major (common core), concentration or specialization, and the capstone experience(s) are the principal components of the degree. An academic major can be a sequence of courses, activities, and/or experiences constituting a major field of study, culminating in a credit-based degree or certificate. Students should select a major as early as they are comfortable making the choice. All students will be expected to have declared an academic major prior to the completion of the third semester (45.0 semester hours). Delay in declaring a major may result in spending additional time in completion of a degree. All students should be aware that there is no assurance they will be able to declare any program they choose. Programs with limited capacity may be restricted or closed. The request to change a major will be reviewed by the relevant department chairperson.

### Academic Minor

A minor is an organized program of study that comprises the fundamental requirements of an academic major (core and cognate courses) equivalent to a minimum of 18 semester hours. As a secondary field of study, the academic minor should reflect a minimum of six credits of advanced standing coursework from the academic major. Exceptions to the advanced standing requirements may be granted on a case-by-case basis. Minors are available to undergraduate students enrolled in associate and bachelor degree programs. Minors may not be added to previously completed undergraduate degree programs.

### Add/Drop

Students may add and drop courses until the end of the eighth day of the semester using [OneSis]. This deadline is adjusted for nonstandard semesters or course offerings.

### **Adding Major(s) to a Completed Baccalaureate Degree**

See Second Baccalaureate Degree policy.

### Application for Graduation

Candidates for graduation must submit their intent to graduate by completing the Application for Graduation process through [OneSis] one year prior to the commencement ceremony. The Registrar's Office will send a graduation outlook of outstanding requirements to the student and academic advisor. During the student's final semester, immediately following the conclusion of the

semester's add/drop period, the student's academic advisor and department chairperson will confirm to the Registrar's Office the student's eligibility to graduate.

#### Attendance Policy

Regular and punctual class attendance is expected and is the foundation for academic success. When class work is missed due to extenuating circumstances beyond the student's control, the student communicates the need for special arrangements as soon as the need is known. Official documentation is provided to verify the reason for the absence if requested by the instructor. Legitimate excuses may

include illness, serious mitigating circumstances, official military service, or official university representation. In these cases, faculty members will permit students to make up all graded course components without penalty in a reasonable manner at a time agreeable to the instructor and student. Students must provide documentation before absences can be excused. All instructors are expected to make their class participation and attendance policies clear in the course syllabi. Policies stated in syllabi must be consistent with the university's attendance policy. Faculty will accept notification from the Dean of Students or Health Services offices as verification of excused absence for students who are unable to notify faculty through no fault of their own.

#### Audit (AU)

A student interested in auditing a course (attending class, but receiving no grade or credits) must submit the Audit Form before the end of the Add Period (first eight calendar days of the semester). The ability to enroll is subject to space availability. The class instructor must grant permission for any student to audit a course. Not all courses are available for audit. Courses with high degrees of specialized equipment and/or one-on-one faculty-student interaction (such as science labs) are generally not open to audit. Exceptions to this policy may be petitioned to the Dean of the college for review. The cost for auditing is \$25.

#### Change of Major/Minor

Change of major/minor forms are available on [OneSIS]. Once a change of major is approved by the department chair of the receiving department (the department housing the major the student wishes to declare), applications are processed by the Registrar's Office. Note: All majors require permission of the department chairperson in order to declare.

#### Commencement Honors

Superior scholastic achievement is recognized at Commencement. A bachelor's degree student must have completed at least 45 credit hours used to calculate the Grade Point Average (GPA) at the degree granting [campus] prior to the final semester to receive honors recognition at Commencement. Honors designations are based on cumulative grade point average (GPA) as indicated:

Cum Laude	3.500 to 3.749
Magna Cum Laude	3.750 to 3.949
Summa Cum Laude	3.950 to 4.000

Students who meet honors requirements upon completion of their final semester with a minimum of 60 credit hours at the degree-granting campus will have such recognition noted on their permanent record.

An associate's degree student must have completed at least 30 credit hours at the degree-granting campus prior to the final semester to receive honors recognition at commencement. A cumulative GPA of 3.5 or higher is required for this recognition, associate's degree with honors.

Commencement honors does not apply to graduate level degrees.

#### Course Load

A full-time undergraduate student has 12-18 credits. To schedule more than 18 credits in a semester, the student will need permission. Students who have less than a 3.0 GPA will need the permission of the academic advisor, department chair and dean through the petition process. Students who have higher than a 3.0 GPA will need the permission of their academic advisor and department chair.



### Credit by Exam (EX)

A student may petition for the privilege of establishing credit in a course or courses listed in the undergraduate catalog through a comprehensive examination given by the department instead of through registration and course attendance. This form is available from the Registrar's Office webpage. A student may not petition for an exam in a course audited or in which a failing grade was previously recorded. The administration of the exam is the responsibility of the department that offers the course. The exam must cover the course syllabus in a comprehensive manner. A copy of the completed Credit By Exam form must be sent to the Registrar's Office for credit to be awarded. A fee (1/3 of the tuition) is charged for courses taken by Credit by Exam regardless of the outcome of the exam. If the student passes the exam a grade of EX is assigned for the course. If the student fails, no record is made.

### Dean's List

The Dean's List is issued at the close of each fall and spring semester. It includes only undergraduate matriculated students. A student must earn at least 12 credits for which a letter grade is received (P/F and S/U grades are excluded) to be eligible. The semester grade point average (GPA) must be between 3.500 and 3.999 inclusive.

### Dual Degrees

Students who are enrolled in dual degree programs (e.g. majors with different degrees), and who meet the requirements of both programs of study, may be awarded both degrees after having met the total credit hour requirements for the programs.

For awarding dual master's degrees at least 12 hours will be required beyond the minimal credit requirements for the degree program with the most required credits.

### Dual/Multiple Majors

Students may complete multiple majors and must have a major advisor in each program. Students must meet all requirements for both majors including general education requirements. Double majors in some departments may require more than the minimum 120 credits for graduation.

### Grade Change

It is the student's responsibility to review final grades at the close of a semester or other academic session. In normal circumstances, grade changes can be made only by the instructor issuing the grade. In exceptional circumstances (e.g. death, retirement, or permission of the instructor) the department chairperson may be permitted to make a grade change.

Only grade changes, excluding incomplete grades (see below), due to grade miscalculation are accepted after the grade entry deadline of each semester/session. The change is completed in writing at the Registrar's Office no later than four weeks into the semester (fall or spring) following the session/semester for which the course was registered. (Ex: A course registered and graded in the fall semester or winter intersession may be changed up to four weeks in to the spring semester; a course registered and graded in the spring semester or summer sessions may be change up to four weeks in to the fall semester.) Grade changes require signature of chair and Dean or Associate Dean. Once the grade is issued, financial aid may be impacted and cannot be reversed. No grades may be changed for a student after the student has graduated. The student's cumulative grade point average is frozen at the time of graduation and cannot be changed. Students who have reason to believe a grade was incorrectly issued will follow the University's Grade Appeal Policy.

### Incomplete Grades (I)

An "I" (Incomplete) grade is used to denote unfinished work because of serious mitigating circumstances beyond the student's control. It is a privilege granted because of circumstances, not a right to be expected by the student.

The I is submitted by professors at their discretion on the grade report form at the end of the semester. The professor and the student will identify the specific requirements to be satisfied in order to convert the I to a letter grade. The student is responsible for the removal of an I grade by the last day of classes, not including finals, of the subsequent semester, except in cases where serious circumstances prevail and a request for an extension is made by the faculty member to the Registrar's Office. If the I grade is not cleared within the allotted time period, a final grade of F is recorded. Satisfactory record of partial progress is necessary for an incomplete grade to be considered.

### Minimum Academic Standards

All degree-seeking students must meet the minimum academic standards of the institution. The minimum academic requirement for continuation in an undergraduate program is a 2.0 cumulative Grade Point Average (GPA). The minimum academic requirement for continuation in a graduate or doctoral program is a 3.0 cumulative Grade Point Average (GPA).

### Pass/Fail (P or F)

Students may take a maximum of nine credits on a pass/fail basis; however, no more than one course each semester may be taken under the pass/fail option. Pass credits are not reflected in the student's GPA; however, a passing (P) grade is counted as credit hours earned. Students may neither change the pass/fail option to a letter grade nor select the pass/fail option after the first ten calendar days of the semester. A passing grade is considered D or better. A grade of F will impact the GPA. Two failures will constitute a loss of the option. Pass/Fail application forms are available online at Academic Forms.

The following restrictions apply:

1. One course in General Education may be taken as Pass/Fail.
2. One course in the major or academic minor may be taken as Pass/Fail at the discretion of the program department and requires the chairperson's signature. this may not apply to all programs.  
Please consult with your academic advisor and department chairperson.
3. One course as a free elective may be taken as Pass/Fail.
4. Students may not repeat a course using the Pass/Fail option.
5. If a Pass/Fail grade cannot be used towards an individual course or there is a minimum grade standard for a course, then this requirement will be clearly stated in the catalog and will supersede the general policy restrictions.

### Repeating a Course

Students are limited to a total of six repeated courses, with a limit of three repeats for any specific course. The most recent grade, regardless of whether it is higher or lower, will be the grade used for the GPA calculation. Students may not repeat a course using the pass/fail or credit-by-exam option. For

Graduate Students: Graduate students can repeat a single course for grade improvement only once.

Graduate students will be limited to a maximum total of two repeats across the program. The most recent grade (regardless of whether it is higher or lower) will be the grade used for the GPA calculation.

For Post Baccalaureate students, the Course Repeat Policy will be the same as the one for Graduate Students. That is, Post Baccalaureate students can repeat a single course for grade improvement only once with a limit of a maximum total of two repeats during the Post Baccalaureate career.

### Second Baccalaureate Degree

A student who possesses a baccalaureate degree may earn a second bachelor's degree upon completion of the following requirements:

- 1) A minimum of 30 credit hours following the first degree (internships, observation/participation, and student teaching credit hours are not counted in the required minimum),
- 2) All requirements for the major in which the second degree is to be earned,
- 3) General Education is considered closed on the first degree except for any specific General Education requirements for the second degree if not already completed, and
- 4) Earn the minimum cumulative grade point average (GPA) in all work attempted and in the major required by the program.

The GPA of the original degree will be "sealed." There will be a new and totally distinct GPA for the new degree.

### Semester Off Campus

Undergraduate students wishing to take all classes for a fall or spring semester at a regionally accredited non-PASSHE (Pennsylvania State System of Higher Education) college or university located within the United States are required to secure prior approval by petitioning the Dean. The process will also require completion of the Transfer Credit Form. The Undergraduate Petition and Transfer

Credit Form are both available on the Registrar's website at Academic Forms. To attend another PASSHE university, please refer to the Visiting Student policy. To attend a college or university outside of the United States, please refer to the Study Abroad and International Exchanges policy.

#### Visiting Students

Students enrolled full-time at a PASSHE university may elect to participate, for a limited period of time, in the Board of Governors' Visiting Student program offered at sister institutions. Information regarding the Visiting Student program is available online through the Registrar's Office.

#### Withdrawal from a Course (W)

After the add/drop period is completed, and continuing until the final instructional day of the semester prior to finals, a student may withdraw from a course and a grade of W will be recorded on the transcript and remain as part of the student's permanent academic record.

There is no limit to the number of courses from which a student may withdraw; however, this decision may impact your financial aid eligibility.

Although not required, students are encouraged to consult with the instructor to verify their grades and status in the course and to meet with their advisor to discuss potential benefits and concerns of withdrawing from a particular course.

#### Academic Integrity

Academic Integrity refers to the adherence to agreed-upon moral and ethical principles when engaging in academic and scholarly pursuits. An act of academic dishonesty involves fraud, deceit, or misrepresentation in attempting to obtain academic credit or influence the grading process by means unauthorized by the course instructor or inconsistent with university policy. Academic honesty is breached when a student willfully gives or receives assistance not authorized in course work, and/or intentionally fails to adhere to, or assists others in failing to adhere to, the university policy on academic honesty. The university's academic integrity policy is part of an effort to nurture a community where trust, honesty, and personal integrity guide all of our dealings with one another. Personal integrity is vital to our pursuit of educating and becoming educated. Faculty are expected to instruct students in ways of avoiding these forms of academic dishonesty.

#### Academic Standing

Good academic standing for undergraduate students is a minimum 2.00 cumulative grade point average (GPA). Some programs require a higher overall GPA to complete the program. Refer to specific program requirements.

#### Act 48

Act 48 of 1999 requires persons holding Pennsylvania professional educator certification to complete continuing education requirements every five years to maintain active certification. Students wishing to report completion of college-level credit-bearing courses complete the form located on the Registrar's Office website.

#### Advanced Placement (AP)

The various subject examinations offered through the College Board's Advanced Placement Program (AP) are approved by the faculty for the award of credit.

#### Class Standing

Class standing is determined by the total number of credit hours earned including credits accepted in transfer from other accredited colleges.

First Year: 0-29 credit hours earned

Sophomore: 30-59 credit hours earned

Junior: 60-89 credit hours earned

Senior: 90+ credit hours earned

### College Level Examination Program (CLEP)

We participate in the national College Level Examination Program (CLEP). Credit is granted for CLEP SUBJECT examinations, but not for the CLEP GENERAL examination. Subject examinations are available in the areas of Composition and Literature, World Languages, History and Social Sciences, Science and Mathematics, and Business.

CLEP offers a way to earn college credits for prior learning and may shorten the length of the college experience. The minimum score to earn credit is 50. No letter grades are recorded; only credit hours for the corresponding university catalog course title and number are recorded. CLEP may not be taken to replace a failing grade. Information regarding CLEP examinations is available from the Registrar's Office.

### Complete Degree/Program Requirements Off Campus

1. All first baccalaureate degree students must complete at least 30 of their last 60 credits from the degree granting institution. All first associate's degree students must complete at least 15 of their last 30 credits from the degree granting institution.
2. All first baccalaureate students must take at least 50% of the credits required for the major from a PASSHE university.
3. Program exceptions to this policy are approved by the Office of the Chancellor.
4. 4. Students wishing to take final courses at another institution must fill out a Prior Approval Form to ensure the course will transfer properly and allow the advisor and department to sign off on the transfer.
5. Students wishing to take courses at another PASSHE Institution and transfer back the grade are required to complete the Visiting Student Form. This form can be obtained from the Registrar's Office.
6. Courses to be transferred that do not have a current course equivalency will require the student's advisor/department chair to submit a Petition for Exception to Undergraduate Graduation Requirements.

### Course Time Limit

Students who have been away from college for a variety of reasons are welcome to return.

Departments may require students to repeat courses previously completed at their campus or another institution if there is evidence the content has changed significantly since the student last took the course.

### IB Credits

International Baccalaureate collaborates with secondary schools around the world on programs for students ages 16 through 19. The two-year comprehensive curriculum allows participating students and IB graduates to fulfill requirements of various national education systems. In addition to applied academics, the IB program works with students to develop responsible citizenship, leadership skills, and cultural sensitivity. Credits are awarded for higher-level subjects. No credit is awarded for subsidiary level subjects.

Entering IB students may receive 6-8 credits for each higher level IB examination completed with a minimum test score of 4. There is no limit to the number of courses for which IB may award credit. No letter grades are recorded, only credit hours for the corresponding university catalog course title and number. Official score reports for the IB examinations sent directly from the testing service are required. Credits are recorded by the Registrar's Office.

### Maintenance of Matriculation

Students who are off campus completing approved course work consistent with program requirements and thereby meet degree or program requirements in effect at the time of initial matriculation are considered to be in a continuing matriculated status.

### Military Service Credit

Students who have completed basic training in the Armed Forces of the US and have a DD-214, NGB-22 or similar discharge documents will receive 2 transfer credits for EXERSCI 100-Military Basic Training and 2 GEPS for Goal 9 Health Living. 2 GEPS for Goal 10 Citizenship are awarded in MILSERV 99 Honorable Military Service for service in the Armed Forces of the US based on DD-214, NGB-22 or other similar discharge documents indicating General or Honorable separation conditions.

(see: PRP 3344 "Evaluation of Military Experiences for Academic Credit")

Additional course equivalencies and credit hours may be granted through the Military Academic Credit Review Board (MAC-RB). This provides a system whereby the unique and widely variable training, work, and experiences of military students can be professionally and systematically analyzed to provide a college/discipline specific individualized analysis of their military record. The analysis will be conducted by academic faculty experts and other with deep knowledge of the curriculum.

#### Petition Process

Under special circumstances, curriculum requirements may be modified.

*Major Variance:* With the approval of the relevant dean, a department chairperson may substitute or waive course requirements in a major by informing the Registrar's Office in writing of such requested program changes.

*General Education Variance:* With written support of the chairperson of the impacted course department, requests shall be submitted to the Dean with prior approval of the student's academic advisor or program coordinator and department chair.

Waivers in educator preparation require review by the Dean of the College of Education and Human Studies.

Waiver of University Policies or Regulations: when any rule or regulation of the University causes an unfair hardship, a student may petition the Dean for an exception. In these instances, students should contact their advisor for assistance in preparation of petitions. Denials may be appealed to the Office of the Provost.

#### Preparatory Courses

Courses with course numbers beginning with zero do not count toward degree completion.

#### Priority Registration

Certain populations are identified as requiring priority registration to ensure timely program completion. Registration will occur prior to start of regular registration. These populations include student athletes, at-risk (Act 101/EOP/TRiO), BOG scholarship recipients, honors program, students with disabilities, and veterans.

#### Credit Hour

Clock hour or credit hour equivalency is 50 minutes of in-person instruction or its online equivalency.

#### Withdrawal from the University

Recommendation to add an Undergraduate Leave of Absence from the University Policy specifying that students may "declare a leave of absence" by communicating they will not be enrolling at the University in the current or upcoming semester but plan to continue in the near future. By doing so they ensure they will not have to apply for re-admission, that their student records will be maintained, and their student status will be re-activated upon submission of a Resume Studies Request and that they will have access to ongoing academic advising services. The policy specifies 7 categories of leave including academic, financial, health-related, military service, personal or family, professional opportunity, and service or mission as well as the steps for a student to declare a leave of absence.

#### Graduate Degree Completion Time Limit

Graduate programs must be completed within a maximum of seven years unless specific programs list otherwise.

Doctoral programs must be completed within a maximum of seven years unless specific programs list otherwise.

#### Preferred Name

In accordance with Commonwealth University's mission of being an inclusive, comprehensive, public university that prepares students for personal and professional success in an increasingly complex global environment, the University has established this preferred name policy. Commonwealth University recognizes that many students use a first name other than their legal first name.

Therefore, the University has created this policy and these procedures to allow students to indicate their preferred first names to the University community even if they have not changed their legal first names. While any student is welcome to use a preferred first name, this option has been developed to respond to the needs of some international students, transgender/non-conforming identified students, and others who prefer the use of a nickname. These may include, but are not limited to, individuals who prefer to use:

- o a middle name or nickname instead of a first name; o an anglicized name;
- o a name to which the individual is in the process of legally changing, or a name that better represents the individual's gender identity.

*Policy Definitions:*

**Student:** Any admitted full- or part-time individual with undergraduate, graduate, non-degree, or alumni status. Student status will continue as long as the student has a continuing relationship with Commonwealth University.

**Legal First Name:** Refers to the first name that identifies a person for legal, administrative, and other official purposes. A person's legal first name generally is the name of the person that was given for the purpose of registration of the birth and which then appears on a birth certificate.

**Legal Last Name (surname):** Legal last name used, which cannot be changed/alterd within the University's information systems unless it has been changed through a legal process outside of the University.

**Preferred Name:** A name designated in the University systems and communications as the preferred alternative to the individual's legal first name. Only first names may be changed to a preferred name.

**SCOPE:** This policy pertains to both prospective students and current students and primarily impacts procedures in Admissions and Student Affairs.

**RESPONSIBILITY:** Student Affairs will review the policy periodically. Cabinet approves the policy and any subsequent changes.

**PROCEDURE:** Note: As long as the use of a preferred first name is not for the purpose of misrepresentation, the University acknowledges that a preferred first name may be used in the course of University business and education. Therefore, the University will permit students to change their names within the University's information systems so that a preferred first name will be used instead of the legal first name.

**Prospective Students:** Prospective students may indicate their preferred first name when submitting an inquiry to Admissions, when filling out a request-for-more-information card, and/or on the [Insert name] University application form.

**Continuing Students:** Students who are currently enrolled may submit their preferred name using the form available via hyperlink in [insert source]. All such submissions are subject to review by the Dean of Students.

**Restrictions/Limitations:** The ability to use a preferred name is a limited accommodation of a preference. Preferred first name requests will be denied or revoked when the name is deemed inappropriate, including, but not limited to, avoiding a legal obligation, fraud, obscene language, misrepresentation, or misuse of this policy. Students will be subject to disciplinary action through the Office of the Dean of Students in accordance with University policy and the Student Code of Conduct for misuse of this policy.

**Appeals:** Students who feel their preferred first name change was denied unjustly may file an appeal to the Vice President for Student Affairs and Enrollment Management.

Where the preferred first name will appear: o Student

Identification Cards \* o Official Student Email Display Name

o Online Student Directory

o Class and Grade Rosters (for students taking courses) o University Diploma

o Press Releases o Social Media Sites

o Other instances where a legal name is not required

\*A one-time waiver of the fee to update the Student Identification Card with the preferred first name will be provided. Subsequent changes will incur the University's standard replacement/loss ID fee.

Where a preferred first name will not appear:

o Legal Documents and Reports Produced by the University o Student Financial Records

o Financial Aid and Scholarship Documents o Medical Records o Transcripts o Enrollment Verifications o Degree Verifications o Student Employment Documents o Employment Verifications o Employment Documents

o Paychecks, W2s, and other Payroll Documents o Benefits Enrollment o Third Party Database Systems

### Independent Study and Individualized Instruction

*Individualized Instruction* is available on a restricted basis. Ordinarily permission to take a course by individualized instruction (II) is reserved for students who are close to graduation and who have not been able to meet a degree requirement because of a mitigating circumstance. Individualized instructions may not be used to retake a course the student has previously failed. A student's decision to move from the home institution's area or a conflict with another obligation, such as a job, will not normally be sufficient to justify an Individualized Instruction. A call to military service or a serious extended illness, on the other hand, may be viewed as a sufficient mitigating circumstance. An Individualized Instruction is not normally approved if there is evidence that a student delayed taking a course or dropped a course earlier in their academic career and did not make a clear attempt to complete it as part of a regular schedule.

*Independent Study* provides academic opportunity that can enhance a student's education.

Independent Study (IS) is available in each curricular field. The appropriate curricular prefix precedes the course number XXXX, and the credit hours vary from one to three. Independent studies will be approved only when there is sufficient evidence of the potential of the study to advance the student's scholarly development. To qualify, a student must have earned at least 30 semester hours and have a minimum cumulative grade point average of 2.500.

Independent Study may be repeated for more than three credit hours total, but each Independent Study project may be for no more than three credit hours. Independent Study is an activity initiated by a student to increase their already advanced knowledge in a particular academic discipline. A specified subject is examined in an intensive manner with guidance by a faculty member who has special expertise in that field.

All requests for Independent Study should be accompanied by an appropriate and scholarly proposal that has been carefully reviewed by the student and the faculty director who will supervise the Independent Study. The proposal should include a plan of activities to be undertaken, the "products" to be expected from the study (for example, a paper, a performance, a research report, or presentation to a departmental symposium), a timetable for the study, and an estimate of the amount of effort that will be applied to the study so that the appropriate amount of credit can be assessed. A request for Independent Study must be completed prior to the start of the semester or summer session for which the Independent Study is sought.

### Graduation - Commencement Participation Policy

Students are expected to attend the commencement ceremony following the semester in which they have been certified for graduation. In the case that a commencement ceremony is not held in the semester of completion at the attending campus- August completers may walk in the previous May commencement. December completers may walk in the May commencement.

### Graduation Requirements

It is the student's responsibility to understand the university requirements for the chosen major and for graduation.

Students who graduate from Commonwealth University with an associate's degree must meet the following requirements:

- 1) Earn the minimum number of credit hours for the particular major, plus any required preparatory (0090) courses. Preparatory courses completed increase the total number of credit hours required for graduation.
- 2) Earn a minimum 2.0 cumulative grade point average (GPA) in all work attempted and in the major unless otherwise specified.
- 3) Complete requirements for general education and the major.

Students who graduate from Commonwealth University with a baccalaureate degree must meet the following requirements:

- 1) Earn the minimum number of credit hours for the particular major, plus any required preparatory (0090) courses. Preparatory (0090) courses completed increase the total number of credit hours required for graduation.
- 2) Earn a minimum 2.0 cumulative grade point average (GPA) in all work attempted and in the major unless otherwise specified.
- 3) Complete requirements for general education and for the major.
- 4) Complete 42 credits of the total credits required for a degree at the 3000-course level or higher.
- 5) Complete a second-year language proficiency or minor for a B.A. degree. Second-year language proficiency is defined as successful completion of the 2202 level of a foreign language.

Students who graduate from Commonwealth University with a recommendation for teacher certification must meet the following requirements:

- 1) Earn the state-mandated minimum GPA for your cohort group (determined when first “gates” requirements are met and not sooner than 48 credits).
- 2) Complete a teacher preparation certificate program approved by the Pennsylvania Department of Education.
- 3) Complete all Commonwealth University requirements for a baccalaureate degree.
- 4) Pass all state mandated examinations (e.g. Praxis/PECT) for the appropriate area(s) of teaching certification.
- 5) Present evidence that state mandated clearance requirements as specified under Act 34 and Act 151, Act 114 (PA FBI), and PA School Code 23.44 (proof of a negative TB Tine Test) have been met.

A student may earn a university degree with less than the state-mandated minimum GPA, lacking the required clearances, or without having passed all required certification examinations, but the University will not recommend that student to the Pennsylvania Department of Education for certification.

No student may be granted an associate’s degree or a baccalaureate degree from the University without earning at least 25% of the required total credits for the degree. Transfer credit may be awarded for up to 50% of the major requirements including major-related electives. If the remaining credits do not meet University guidelines for general education, they are applied as free electives. Each student will receive a “Graduation Outlook” upon completion of the Application for Graduation. The “Graduation Outlook” notes courses and/or requirements still necessary to be completed for graduation including any deficiency in the cumulative grade point average (GPA) in all work attempted and in the major. A final outlook showing deficiencies will be sent after the end of the Add/Drop period in the semester in which the student intends to graduate.

### Grading

Academic year 22-23 will follow current local policy.

#### *Lock Haven Campus:*

Grades are a reflection of academic performance. Prospective employers and graduate schools consider grades when making decisions about employment or admission. Grades are a record of achievement satisfying learning, interest, application, and motivation. Grades are submitted by faculty using online grade entry. Grades are due by the deadline on the academic calendar, typically Tuesday at 3 PM following the close of a semester. A quality point is the unit of measurement of the quality of work done by the student. For graduation, students must have to their credit twice as many quality points as they have semester hours, or a 2.0 GPA. Quality points are computed as follows:

- A 4.000 Excellent
- A- 3.700
- B+ 3.300
- B 3.000 Good
- B- 2.700
- C+ 2.300
- C 2.000 Fair
- C- 1.700
- D+ 1.300
- D 1.000 Passing
- E .000 Failure
- EW .000 Failure (unofficial withdrawal)
- F Failure\*
- P Passed\*
- CH Credit w/Honors\*
- CR Credit\*
- NC No Credit\*
- I Incomplete\*
- S Satisfactory (Undergraduate – D or higher)\*
- U Unsatisfactory (Undergraduate – less than D)\*
- AU Audit\*
- W Withdrawal\*

\* Does not affect GPA; "passed" indicates a grade of "D" or better. The GPA is obtained by dividing the total quality points a student has earned at LHU by the total of semester hours attempted or scheduled (less those semester hours taken as pass/fail, repeated, or credit/no credit or transferred).



## Programs of Study

### Major Areas of Study

Degree	Major	Concentration	College
Bachelor of Science	Accounting		Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Applied Comp Sci/Info Sy	Data Science	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Applied Comp Sci/Info Sy	Interdisciplinary Comput	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Applied Comp Sci/Info Sy	Mobile & Game Appl Dev	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Applied Comp Sci/Info Sy	Network and Cybersecurity	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Arts	Art		Liberal Arts & Education
Bachelor of Science	Biology		Natural, Behavioral & Health Sciences
Bachelor of Science	Biology	Biomedical Sciences	Natural, Behavioral & Health Sciences
Bachelor of Science	Biology	Cellular-Organismal	Natural, Behavioral & Health Sciences
Bachelor of Science	Biology	Ecology-Environmental	Natural, Behavioral & Health Sciences
Bachelor of Science	Biology	Marine Biology	Natural, Behavioral & Health Sciences
Bachelor of Science	Business Administration	Business Intelligence	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Business Administration	Entrepreneurship	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Business Administration	Finance and Economics	Poorman College of Business, Info Syst & Human Svcs
Associate of Science	Business Administration	Healthcare Management	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Business Administration	International Business	Poorman College of Business, Info Syst & Human Svcs
Associate of Science	Business Administration	Management	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Business Administration	Management	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Business Administration	Marketing	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Chemistry		Natural, Behavioral & Health Sciences
Bachelor of Science	Chemistry	Biochemistry	Natural, Behavioral & Health Sciences
Bachelor of Science	Chemistry	Clinical Laboratory Sci	Natural, Behavioral & Health Sciences
Bachelor of Science	Chemistry	Forensic	Natural, Behavioral & Health Sciences
Bachelor of Science	Chemistry	Nanoscience	Natural, Behavioral & Health Sciences
Bachelor of Arts	Communication	Advertising & Public Rel	Liberal Arts & Education
Bachelor of Arts	Communication	Electronic Media	Liberal Arts & Education
Bachelor of Arts	Communication	Journalism	Liberal Arts & Education
Bachelor of Arts	Communication	Organiz/Present Commun	Liberal Arts & Education
Associate of Arts	Criminal Justice		Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Criminal Justice		Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Criminal Justice	Conservation Law Enforce	Poorman College of Business, Info Syst & Human Svcs

Bachelor of Science	Disability Community Srv		Liberal Arts & Education
Bachelor of Arts	English	Literature	Liberal Arts & Education
Bachelor of Arts	English	Writing	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies		Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Business	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Computer Science	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Cooperative Engineering	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Health Science	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Mathematics	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Middle-Elem Educ 4-8	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Nursing	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	PreK-Grade 4 Early Child	Liberal Arts & Education
Bachelor of Arts	Exploratory Studies	Science	Liberal Arts & Education
Bachelor of Science	Finance and Risk Managem		Poorman College of Business, Info Syst & Human Srvcs
Bachelor of Arts	Foreign Language	French	Liberal Arts & Education
Bachelor of Arts	Foreign Language	Spanish	Liberal Arts & Education
Bachelor of Science	Geology	Applied Geology	Natural, Behavioral & Health Sciences
Bachelor of Science	Geology	Engineering Geology	Natural, Behavioral & Health Sciences
Bachelor of Science	Geology	Geography-GIS	Natural, Behavioral & Health Sciences
Bachelor of Science	Geology	Water and Environment	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Health & Physical Ed		Liberal Arts & Education
Bachelor of Science	Health & Physical Ed	Aquatics	Liberal Arts & Education
Bachelor of Science	Health & Physical Ed	Coaching	Liberal Arts & Education
Bachelor of Science	Health & Physical Ed	Sport & PE in Correction	Liberal Arts & Education
Bachelor of Science	Health Sciences	Applied Health Studies	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Community Public Hlth Ed	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Exercise Sci (Pre-AT)	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Exercise Science 3+2	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Physician Assistant	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Pre Physician Assistant	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Pre-physical Therapy	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Pre-physical Therapy 3+3	Natural, Behavioral & Health Sciences
Bachelor of Science	Health Sciences	Pre-professional	Natural, Behavioral & Health Sciences
Associate of Applied Sci	Healthcare Professions		Natural, Behavioral & Health Sciences
Associate of Applied Sci	Healthcare Professions	Social Services	Natural, Behavioral & Health Sciences
Bachelor of Arts	History		Liberal Arts & Education
Bachelor of Arts	History	Public History	Liberal Arts & Education
Bachelor of Science	Interdisciplinary Studie	Option 1	Liberal Arts & Education
Bachelor of Science	Interdisciplinary Studie	Option 2	Liberal Arts & Education
Bachelor of Arts	International Studies	Cultural Studies	Liberal Arts & Education
Bachelor of Arts	International Studies	Global Economy	Liberal Arts & Education
Bachelor of Arts	International Studies	Governance and Conflict	Liberal Arts & Education
Bachelor of Science	Mathematics		Natural, Behavioral & Health Sciences

Bachelor of Science	Mathematics	Actuarial Science	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Middle/Elem Educ 4-8	Language Arts	Liberal Arts & Education
Bachelor of Science in Education	Middle/Elem Educ 4-8	Mathematics	Liberal Arts & Education
Bachelor of Science in Education	Middle/Elem Educ 4-8	Science	Liberal Arts & Education
Bachelor of Science in Education	Middle/Elem Educ 4-8	Social Studies	Liberal Arts & Education
Associate of Applied Sci	Nanotechnology	Applied Computer Science	Natural, Behavioral & Health Sciences
Associate of Applied Sci	Nanotechnology	Earth Science	Natural, Behavioral & Health Sciences
Associate of Applied Sci	Nanotechnology	Life Sciences	Natural, Behavioral & Health Sciences
Associate of Applied Sci	Nanotechnology	Physical Sciences	Natural, Behavioral & Health Sciences
Associate of Sci in Nursing	Nursing		Natural, Behavioral & Health Sciences
Bachelor of Science in Nursing	Nursing		Natural, Behavioral & Health Sciences
Bachelor of Science	Physics	Applied Physics Nanotech	Natural, Behavioral & Health Sciences
Bachelor of Science	Physics	Pre-Engineering	Natural, Behavioral & Health Sciences
Bachelor of Science	Physics	Traditional	Natural, Behavioral & Health Sciences
Bachelor of Arts	Political Science		Liberal Arts & Education
Bachelor of Arts	Political Science	Pre-law	Liberal Arts & Education
Bachelor of Science in Education	PreK-Grade 4/Special Edu		Liberal Arts & Education
Bachelor of Science in Education	PreK-Grade4/Early Child		Liberal Arts & Education
Bachelor of Science in Education	PreK-Grade4/Early Child	Accelerated-PreK-4 Educ	Liberal Arts & Education
Bachelor of Applied Sci	Professional Studies	Entrepreneurship	Liberal Arts & Education
Bachelor of Applied Sci	Professional Studies	Management	Liberal Arts & Education
Bachelor of Applied Sci	Professional Studies	Spanish	Liberal Arts & Education
Bachelor of Arts	Psychology		Natural, Behavioral & Health Sciences
Bachelor of Arts	Psychology	Accelerated Psychology	Natural, Behavioral & Health Sciences
Bachelor of Science	Psychology		Natural, Behavioral & Health Sciences
Bachelor of Science	Psychology	Accelerated Psychology	Natural, Behavioral & Health Sciences
Bachelor of Science	Recreation Management	Adventure Leadership&Out	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Recreation Management	Community-Commercial	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Recreation Management	Cultural Heritage Mgmt	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Recreation Management	Fitness Management	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Recreation Management	Outdoor Management	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Recreation Management	Therapeutic	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Recreation Management	Tourism & Event Mgmt	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science in Education	Secondary Education	Biology	Natural, Behavioral & Health Sciences

Bachelor of Science in Education	Secondary Education	Chemistry	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Secondary Education	Earth & Space Science	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Secondary Education	English	Liberal Arts & Education
Bachelor of Science in Education	Secondary Education	General Science	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Secondary Education	Mathematics	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Secondary Education	Physics	Natural, Behavioral & Health Sciences
Bachelor of Science in Education	Secondary Education	Social Studies	Liberal Arts & Education
Bachelor of Science	Social Work		Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Sociology		Liberal Arts & Education
Bachelor of Science	Sociology	Delinquent Youth Analysis	Liberal Arts & Education
Bachelor of Science	Sociology	Industry and Economics	Liberal Arts & Education
Bachelor of Science in Education	Special Education		Liberal Arts & Education
Bachelor of Science	Sport Management		Poorman College of Business, Info Syst & Human Svcs
Bachelor of Science	Sport Management	Accelerated Sport Mgmt	Poorman College of Business, Info Syst & Human Svcs
Bachelor of Fine Arts	Studio Arts		Liberal Arts & Education
Bachelor of Fine Arts	Studio Arts	Graph-Online Inter Des	Liberal Arts & Education
Associate of Arts	Sustainability Studies		Poorman College of Business, Info Syst & Human Svcs

## Minor Areas of Study

*Minors are not recorded on a student's academic record until the student's degree is earned.*

Minor	College	Minor	College
Applied Computer Science & Information Systems	Poorman College of Business, Info Syst & Human Svcs	Geoscience	Natural, Behavioral & Health Sciences
Alternative Education	Liberal Arts & Education	History	Liberal Arts & Education
Anthropology	Liberal Arts & Education	International Studies	Liberal Arts & Education
Aquatics	Liberal Arts & Education	Leadership Studies	Natural, Behavioral & Health Sciences
Art History	Liberal Arts & Education	Latin American Studies	Liberal Arts & Education
Biology	Natural, Behavioral & Health Sciences	Mathematics	Natural, Behavioral & Health Sciences
Business	Poorman College of Business, Info Syst & Human Svcs	Middle School Mathematics	Natural, Behavioral & Health Sciences
Chemistry	Natural, Behavioral & Health Sciences	Nanotechnology	Natural, Behavioral & Health Sciences
Coaching	Liberal Arts & Education	Philosophy	Liberal Arts & Education
Communication	Liberal Arts & Education	Physics	Natural, Behavioral & Health Sciences
Community Health	Natural, Behavioral & Health Sciences	Political Science	Liberal Arts & Education
Early Childhood Education	Liberal Arts & Education	Psychology	Natural, Behavioral & Health Sciences
Economics	Poorman College of Business, Info Syst & Human Svcs	Recreation Management	Poorman College of Business, Info Syst & Human Svcs
English	Liberal Arts & Education	Sociology	Liberal Arts & Education
Entrepreneurship and Innovation	Poorman College of Business, Info Syst & Human Svcs	Spanish	Liberal Arts & Education

Environmental Studies	Poorman College of Business, Info Syst & Human Srvcs	Special Education	Liberal Arts & Education			
Fine Arts/Music	Liberal Arts & Education	Sport & Exercise Psychology	Poorman College of Business, Info Syst & Human Srvcs			
French	Liberal Arts & Education	Studio Art	Liberal Arts & Education			
Geography	Liberal Arts & Education	Theatre ( <i>Offered as a partnership through another State System University</i> )	Liberal Arts & Education			
		Women and Gender Studies	Liberal Arts & Education			
<table border="1"> <tr> <td> <b>Poorman College of Business, Information Systems and Human Services</b>  Akeley Hall 118  Phone: 570-484-2136 </td> <td> <b>College of Natural, Behavioral and Health Sciences</b>  East Campus J108  Phone: 570-484-2204 </td> <td> <b>College of Liberal Arts and Education</b>  Sloan 105-106  Phone: 570-484-2137 </td> </tr> </table>				<b>Poorman College of Business, Information Systems and Human Services</b> Akeley Hall 118 Phone: 570-484-2136	<b>College of Natural, Behavioral and Health Sciences</b> East Campus J108 Phone: 570-484-2204	<b>College of Liberal Arts and Education</b> Sloan 105-106 Phone: 570-484-2137
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Certificate Programs

Curriculum Assessment in Early Childhood Education
E-Commerce Fulfillment
Early Childhood Development, Education and Family
Social Media Marketing

## GENERAL EDUCATION, BACHELOR OF ARTS, AND UNIVERSITY REQUIREMENTS

A list of courses meeting each area is available online at <http://www.lockhaven.edu/generaleducation/>.

### General Education – Bachelors Degree

INTELLECTUAL FOUNDATION		
• Written Communication		3.0 sh
• Oral Communication		3.0 sh
• Mathematical and Computational Thinking		3.0 sh
KNOWLEDGE AND INQUIRY		
• Natural Sciences Inquiry (at least one course with lab)		6.0 sh
• Historical, Behavioral, and Social Sciences Inquiry		6.0 sh
• Philosophical, Literary, and Aesthetic Inquiry		9.0 sh
○ One course must come from Visual or Performing Arts and one from Philosophy or Literature		
PERSONAL AND SOCIAL RESPONSIBILITY		
• Global Awareness and Citizenship		9.0 sh
○ One Course must fulfill historical foundation component of the competency		
• Wellness		3.0 sh
TOTAL CREDITS		42.0 sh
OVERLAYS		
• 2 Writing Emphasis courses (beyond ENGL100)		
• 2 Critical Thinking courses		
• 2 Experiential Learning Units (each unit equals 14 hours)		
<p><b>Note:</b> A single course may be used to satisfy only one GE course requirement in “Knowledge and Inquiry” and “Global Awareness and Citizenship” (e.g., The English Department could submit ENGL220 World Literature to count <i>either</i> for the “Knowledge and Inquiry” category <i>or</i> the “Global Awareness and Citizenship,” category but not both. A single course may, however, be used to satisfy a course and an overlay requirement (e.g., The Mathematics Department could submit MATH107: Basic Statistics for Intellectual Foundations and a Critical Thinking overlay).</p>		

### General Education – Associate of Arts Degree

INTELLECTUAL FOUNDATION		
• Written Communication		3.0 sh
• Oral Communication		3.0 sh
• Mathematical and Computational Thinking		3.0 sh
KNOWLEDGE AND INQUIRY		
• Natural Sciences Inquiry (with lab)		3.0 sh
• Historical, Behavioral, and Social Sciences Inquiry		6.0 sh
• Philosophical, Literary, and Aesthetic Inquiry		3.0 sh
PERSONAL AND SOCIAL RESPONSIBILITY		
• Global Awareness and Citizenship		6.0 sh
○ One Course must fulfill historical foundation component of the competency		
• Wellness		3.0 sh
TOTAL CREDITS		30.0 sh
OVERLAY		
• 1 Critical Thinking course		

### General Education – Associate of Science Degree

INTELLECTUAL FOUNDATION		
• Written Communication		3.0 sh
• Oral Communication		3.0 sh
• Mathematical and Computational Thinking		3.0 sh
KNOWLEDGE AND INQUIRY		
• Natural Sciences Inquiry (with lab)		3.0 sh
• Historical, Behavioral, and Social Sciences Inquiry		3.0 sh

<ul style="list-style-type: none"> <li>Philosophical, Literary, and Aesthetic Inquiry</li> </ul>	3.0 sh
PERSONAL AND SOCIAL RESPONSIBILITY	
<ul style="list-style-type: none"> <li>Global Awareness and Citizenship</li> </ul>	3.0 sh
<ul style="list-style-type: none"> <li>Wellness</li> </ul>	3.0 sh
TOTAL CREDITS	24.0 sh
OVERLAY	
<ul style="list-style-type: none"> <li>2 Critical Thinking courses</li> </ul>	

### General Education – Associate of Applied Science and Associate of Science in Nursing Degrees

INTELLECTUAL FOUNDATION	
<ul style="list-style-type: none"> <li>Written Communication</li> </ul>	3.0 sh
<ul style="list-style-type: none"> <li>Oral Communication</li> </ul>	3.0 sh
<ul style="list-style-type: none"> <li>Mathematical and Computational Thinking</li> </ul>	3.0 sh
KNOWLEDGE AND INQUIRY	
<ul style="list-style-type: none"> <li>Natural Sciences Inquiry (with lab)</li> </ul>	3.0 sh
<ul style="list-style-type: none"> <li>Historical, Behavioral, and Social Sciences Inquiry</li> </ul>	3.0 sh
<ul style="list-style-type: none"> <li>Philosophical, Literary, and Aesthetic Inquiry</li> </ul>	3.0 sh
PERSONAL AND SOCIAL RESPONSIBILITY	
<ul style="list-style-type: none"> <li>Global Awareness and Citizenship</li> </ul>	3.0 sh
TOTAL CREDITS	21.0 sh
OVERLAY	
<ul style="list-style-type: none"> <li>1 Critical Thinking course</li> </ul>	

### Bachelor of Arts Degree Requirements

In addition to the 42.0 semester hours of general education coursework, Bachelor of Arts degree candidates must meet the following requirements.

SEMINARS	9.0 sh
<ul style="list-style-type: none"> <li>Two of the three seminars must be in two different areas</li> </ul>	
FOREIGN LANGUAGE	3.0 sh to 12.0 sh
<ul style="list-style-type: none"> <li>Proficiency at level four of a foreign language (<i>a student who has experience in a language may not need to complete all four levels</i>)</li> </ul>	

### GENERAL EDUCATION COURSE LIST, INCLUDING COMPETENCIES

*NOTE: If a course has been approved to meet more than one general education course requirement, the course may be used to satisfy only one requirement. If a course has been approved to meet both a general education course requirement and a competency, the course may be used to satisfy both.*

Course	Title	Written Communication (3.0 sh required)	Oral Communication (3.0 sh required)	Mathematical and Computational Thinking (3.0 sh required)	Natural Sciences Inquiry (6.0 sh total/at least 3.0 sh must be lab)	Historical, Behavioral, and Social Sciences Inquiry (6.0 sh required)	Philosophical, Literary, and Aesthetic Inquiry (9.0 sh total/must meet both areas)	Global Awareness and Citizenship (9.0 sh total/at least 3.0 sh must be historical)	Wellness (3.0 sh required)	COMPETENCY Written Communication (2 courses required)	COMPETENCY Critical Thinking (2 courses required)	COMPETENCY Experiential Learning (2 units required)
	Independent Study											2 units
	Internship											2 units
	Foreign Language Courses							Non-Histor				
	Study Abroad (semester long exp - satisfies 6.0 sh)							Non-Histor				
ANTH101	Introduction to Anthropology					X		Non-Histor				
ANTH102	Cultural Anthropology					X		Non-Histor				
ANTH223	Indigenous Cultures of North and South America					X		Non-Histor				
ANTH328	Social Sci Seminar: Anthropology of Women ( <i>only this ANTH328 seminar title has been approved for GAC-NH</i> )							Non-Histor				
ART100	Understanding Art						Vis & Perf Art	Non-Histor				
ART103	Introduction to Art						Vis & Perf Art					
ART105	Introduction Three-Dimensional Art						Vis & Perf Art					
ART112	Drawing 1						Vis & Perf Art					
ART217	Introduction to Digital Art						Vis & Perf Art					
ATTR230	Evidence-Based Medicine								X			
ATTR453	Clinical Experience 1									X		2 units
ATTR456	Clinical Experience 4									X		2 units







ENGL225	Core Texts in the Western Tradition							Lit & Phil											
ENGL230	British Literature Before 1800							Lit & Phil											
ENGL231	British Literature After 1800							Lit & Phil											
ENGL240	American Literature Before the Civil War							Lit & Phil											
ENGL242	American Literature After the Civil War							Lit & Phil											
ENGL264	Fiction Workshop											X	X						
ENGL266	Drama Workshop											X							
ENGL268	Poetry Workshop											X							
ENGL280	Introduction to the Study of Language											X							
ENGL315	Composition Usage and Editing											X							1 unit
ENGL328	Humanities Seminar											X	X						
ENGL336	Shakespeare												X						
ENGL345	Business Writing											X							
ENGL493	StdT Tch/Prof Prac: Sec Ed English											X							2 units
ENGL494	StdT Tch/Prof Prac: Sec Ed English											X							2 units
ENVT101	Introduction to Environmental Studies											X							
ENVT328	Liberal Arts Sem: Topics Environmental Studies													X					
FREN101	French 1																		
FREN102	French 2																		
FREN201	French 3																		
FREN202	French 4																		
GEOG101	World Regional Geography						X												
GEOG212	Geography of the Developing World						X												
GEOS101	Earth Science																		
GEOS107	Natural Disasters																		
GEOS125	Geology of Gemstones																		
GEOS130	Principles of Geology I																		
GEOS135	Geology of National Parks																		
GEOS140	Sustainability Science																		
HIST101	World History 1											X							
HIST102	World History 2											X							
HIST201	History of the United States 1											X							
HIST202	History of the United States 2											X							

HIST222	Introduction to Cultural Heritage Management									X	X	
HIST301	Medieval Europe									X	X	
HIST305	Renaissance and Reformation									X	X	
HIST316	Early Christianity									X	X	
HIST328	Seminar: Social Science									X	X	
HIST337	Cold War American: US History 1945-1989									X	X	
HIST347	The Ancient Mediterranean									X	X	
HLTH105	Introduction to Health								X			
HLTH122	Essentials of Human Anatomy and Physiology <i>(restricted to HPED majors)</i>				Lab							
HLTH225	Comparative Healthcare							Non-Histor				
HLTH235	Community Health Education Methods & Strategies		X									
HLTH401	Current Issues in Health										X	
HLTH410	Applied Community and Public Health										X	
HLTH414	Current Issues in Exercise Science									X	X	
HLTH440	Research in Health Sciences									X	X	
HLTH470	Sex Education for the Health Sciences										X	
HLTH485	Professional Field Experience in Health Sciences									X		2 units
HONR101	Ethics: Historical and Global Perspectives						Lit & Phil	Non-Histor			X	
HONR102	Global Honors: World History 2					X		Historical				
HONR107	Global Politics					X		Non-Histor				
HONR110	Honors: Concepts in Biological Science				Lab							
HONR111	Composition: Global Honors	X										
HONR112	Global Honors: Introduction to Literature						Lit & Phil	Non-Histor		X		
HONR115	Honors: Earth Resources and Environment				Lab							
HONR180	Honors: Introduction to Psychological Science					X						
HONR200	Global Honors: Nutrition for Wellness								X			
HONR303	Honors: Argumentation and Debate		X								X	
HONR328	Liberal Arts Seminar							Non-Histor				

HPED115	Teaching Invasion Sports 1		X									
HPED140	Wellness for Life							X				
HPED145	Globalization and Cultural Differences in Sports							Non-Histor				
HPED245	Health/Physical Education in Elem School								X			
HPED252	Physical Activity, Movement & Sport for Indiv w/ Disabil							Non-Histor			X	
HPED255	Teaching Fitness in K-12 Schools								X			
HPED450	Physical Education Professional Field Experience									X	X	2 units
HPED493	Health & Physical Educ Student Teaching and Prof Practicum: Elementary									X	X	2 units
HPED494	Health & Physical Educ Student Teaching and Prof Practicum: Secondary									X	X	2 units
MANG307	Budgeting Theory and Practice											2 units
MANG350	Small Business Management											2 units
MANG400	Business, Society and Government										No longer meets this, effective FA16	
MANG475	Capstone Seminar in Strategic Management									X	X	
MATH101	Topics in Math			X								
MATH102	Number Systems			X								
MATH107	Basic Statistics 1			X								
MATH112	Intermediate Algebra			X								
MATH113	Precalculus			X								
MATH115	Statistics and Geometry			X								
MATH141	Calculus 1			X								
MATH180	Mathematics for Management			X								
MATH205	Foundations of Mathematics										X	
MATH225	History of Mathematics									X	X	
MATH493	Student Teaching and Professional Practicum 1									X		2 units
MATH494	Student Teaching and Professional Practicum 2									X		2 units
MUSI100	World Music							Vis & Perf Art	Non-Histor			

MUSI101	Introduction to Music						Vis & Perf Art					
MUSI103	Basic Musicianship						Vis & Perf Art					
MUSI105	Explor Contemp Trends Jazz/Rock/Musical Theatre						Vis & Perf Art					
MUSI111	University Choir											2 units
MUSI112	University Band											2 units
MUSI113	Percussion Ensemble											2 units
MUSI114	Jazz/Rock Ensemble											2 units
MUSI115	Ensemble Small Choral											2 units
MUSI116	Ensemble Small Instrument											2 units
MUSI125	Introduction to Musical Theater						Vis & Perf Art					2 units
NURS201	Nursing III										X	2 units
NURS202	Nursing IV										X	2 units
NURS310	Foundations for Professional Practice									X		
NURS420	Nursing Leadership and Management in Practice										X	2 units
NURS490	Nursing Research									X	X	
PHIL101	Problems in Philosophy						Lit & Phil				X	
PHIL102	Ethics						Lit & Phil				X	
PHIL105	Philosophy of Religion						Lit & Phil	Non-Histor			X	
PHIL106	Social and Political Philosophy						Lit & Phil				X	
PHIL220	Existentialism						Lit & Phil				X	
PHIL400	Ethics and the Environment							Non-Histor			X	
PHIL415	Ethical Issues in the Health Care Professions							Non-Histor			X	
PHIL425	Ethics in Business and Industry							Non-Histor			X	
PHYS101	Matter and Energy					Lab						
PHYS108	Galileo: The Father of Experimental Science					Non-Lab		does not meet GAC-NH, even though previously indicated (03/07/2018)				2 units
PHYS110	How Things Work					Non-Lab						
PHYS125	Physics of Sports					Non-Lab						
PHYS130	Physics 1					Lab						
PHYS131	Physics 2					Lab						
PHYS133	Physics of Sports Analysis					Lab						







SPEC441	Strategies Teach Stdts High Incidence Disabilities		X										2 units
SPEC450	Community Service Field Experience											X	2 units
SPEC493	StdT Tch/Prof Prac-Spec Ed: PreK-8											X	2 units
SPEC494	StdT Tch/Prof Prac-Spec Ed: 7-12											X	2 units
SPRT321	Management and Leadership of Sport											X	
SPRT324	Sport Law and Ethics									X			
SPRT337	Governance of Sport											X	
SPRT450	Sport Administration Prof Field Experience												2 units
SPRT465	Organization and Admin of Sport and Athl Prog									X			
THEA110	Theatre: An Orientation						Vis & Perf Art						
WMST101	Introduction to Women's Studies							Non-Histor				X	
WMST110	Introduction to LGBTQ Studies							Non-Histor					

## University Requirement

### FIRST YEAR STUDENT SEMINAR

Each discipline will offer either a discipline oriented First Year Student Seminar course (typically XXXX119) with the following objectives or have the objectives included in an existing required course within the department.

#### Objectives of the First Year Student Seminar

- Identify student support resources and services on campus
- Define short and long-term academic and professional goals as they relate to an academic discipline
- Identify learning strategies and demonstrate effective study skills and time management
- Demonstrate active engagement with faculty and service or civic opportunities within the context of the university community

The First Year Seminar Course shall be a requirement of all new students. Department Chairs shall be given the option to waive this requirement for specific students including transfer students, students returning to the university, etc. In the event that the course is waived, the 1 sh associated with this course shall be placed into the student's Elective Category for the major.

## **REQUIREMENTS FOR MAJORS**

<http://www.lockhaven.edu/academics/programs.html>

Start on next page

# Accounting - Bachelor of Science

Effective Fall 2016

GENERAL EDUCATION REQUIREMENTS (42 sh)		MAJOR CORE -- REQUIRED FOR ALL		(36)
<b>INTELLECTUAL FOUNDATION</b>		9 sh	<i>Note: A minimum GPA of 2.0 is required in the major</i>	
<b>Written Communication</b>		3 sh	<b>Recommended before Junior Year</b>	<b>24 sh</b>
ENGL100: Composition			MANG105: Introduction to Business	3 sh
<i>WC Competency 1: ENGL345</i>			<i>Upper-level transfer students may substitute a major elective</i>	
<i>WC Competency 2: MANG475</i>			<i>Meets FYS requirement</i>	
<b>Oral Communication</b>		3 sh	ACCT110: Financial Accounting	3 sh
<b>Mathematical and Computational Thinking</b>		3 sh	ACCT115: Management Accounting #	3 sh
MATH107: Basic Statistics I			<i>Prerequisite: ACCT110</i>	
<b>Critical Thinking</b>			COMP150: Introduction to Computers	3 sh
<i>CT Competency 1: PHIL425</i>			ECON103: Principles of Microeconomics	3 sh
<i>CT Competency 2: MANG475</i>			MRKT200: Introduction to Marketing	3 sh
<b>KNOWLEDGE &amp; INQUIRY</b>		<b>21 sh</b>	COMP250: Advanced Microcomputer Apps #	3 sh
<b>Natural Science Inquiry (at least 1 lab science)</b>		6 sh	<i>Prerequisite: COMP150, &amp; grade "C" or better in MATH107</i>	
			MATH180: Math for Management# OR MATH141: Calculus 1	3 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>		6 sh	<i>Prerequisites: MATH107. Also MATH 112 or placement score of 9+ in Categories 1-3</i>	
ECON102: Principles of Macroeconomics				
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		9 sh		
<i>(at least 1 Visual or Performing Arts )</i>			<b>Recommended for Juniors &amp; Seniors</b>	<b>9 sh</b>
			MANG315: Management: Concepts & Strategies #	3 sh
PHIL102: Ethics (or PHIL425 as GAC)			<i>Prerequisite: 45 semester hours when course begins</i>	
			MANG325: Financial Management #	3 sh
<b>PERSONAL &amp; SOCIAL RESPONSIBILITY</b>		<b>12 sh</b>	<i>Prerequisite: ECON102, ECON103, &amp; ACCT110</i>	
<b>Global Awareness &amp; Citizenship (at least 1 GAC-H)</b>		9 sh	MANG302: Business Law I #	3 sh
ENGL345: Business Writing #				
HIST101/HIST102: World History I or II			<b>For Seniors Only</b>	<b>3 sh</b>
<b>Wellness</b>		3 sh	MANG475: Capstone/Strategic Mgmt #	3 sh
			<i>Prerequisites: MANG325</i>	
<b>Experiential Learning</b>			<i>Must have 75 sh to register and 90 when course begins.</i>	
EL Competency 1 (1 unit)				
EL Competency 2 (1 unit)			<b>ACCOUNTING REQUIREMENTS</b>	<b>(18 sh)</b>
OR Internship (1 credit = 2 units)			ACCT210: Intro. To Federal Income Tax #	3 sh
<b>ELECTIVES (Internships strongly advised!)</b>		<b>(18 sh)</b>	ACCT215: Acct. Info. Systems #	3 sh
<i>Electives can be used for internships, study abroad, or other student interests.</i>			ACCT300: Cost Accounting #	3 sh
			ACCT335: Intermediate Accounting I #	3 sh
			ACCT340: Intermediate Accounting II #	3 sh
			ACCT420: Auditing #	3 sh
<b>WARNING: MATH COURSES MAY BE REQUIRED</b>				
<u>IF math placement score is BELOW 9 in:</u>				
Cat. 1, MATH 009 is required as a 0 credit course			<b>ACCOUNTING ELECTIVES</b>	<b>(6 sh)</b>
Cat. 2, MATH100 is required as a gen ed elective			#	
Cat. 3, MATH112 is required as a gen ed elective			#	
			Accounting electives include 300-level or higher ACCT courses, COMP160, COMP255, COMP260, COMP305, ECON340, MANG220, MANG326, MANG303, MANG305, MANG430. Internships (ACCT369) can count for up to 3 credits in the major.	
			# Designates advanced coursework	

# Applied Computer Science and Information Systems – Bachelor of Science

Effective Fall 2017

<b>GENERAL EDUCATION REQUIREMENTS</b>	<b>42 sh</b>
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<b>INTELLECTUAL FOUNDATION</b>	<b>9 sh</b>	<b>Taken</b>	<b>Grade</b>
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**Written Communication** 3 sh

ENGL100

*WC Competency 1: COMP220*  
*WC Competency 2: COMP304 or*

COMP405

**Oral Communication** 3 sh

**Mathematical and Computational Thinking** 3 sh

MATH107 #

**Critical Thinking**

*CT Competency 1: COMP160*  
*CT Competency 2: COMP220*

<b>KNOWLEDGE &amp; INQUIRY</b>	<b>21 sh</b>
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**Natural Science Inquiry** (at least 1 lab science) 6 sh

**Historical, Behavioral, and Social Science Inquiry** 6 sh

**Philosophical, Literary, and Aesthetic Inquiry** 9 sh

(at least 1 from Visual or Performing Arts & and  
 1 from Philosophy or Literature)

<b>PERSONAL &amp; SOCIAL RESPONSIBILITY</b>	<b>12 sh</b>
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**Global Awareness & Citizenship** (at least 1 GAC-HI) 9 sh

**Wellness** 3 sh

**Experiential Learning**

EL Competency 1 (1 unit)  
 EL Competency 2 (1 unit)  
 OR Internship (1 credit = 2 units)

<b>ELECTIVES</b>	<b>18 sh</b>
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NOTE: Either ENGL345 or ENGL360 is recommended

<b>NOTE: MATH COURSES MAY BE REQUIRED</b>
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If math placement score is BELOW 9 in:

- Cat. 1, MATH 009 is required as a 0 credit course
- Cat. 2, MATH100 is required as a gen ed elective
- Cat. 3, MATH112 is required as a gen ed elective

<b>MAJOR REQUIREMENTS</b>	<b>60 sh</b>
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A GPA of 2.0 or higher is required for graduation, both overall and in the major.

<b>MAJOR CORE</b>	<b>30 sh</b>
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When Taken Grade

COMP119 Intro to Comp & Prob Solv 3 sh F

*Transfer Students may substitute a major elective*  
*Meets FYS requirement*

COMP150 Introduction to Computers 3 sh F&S

COMP160 Programming I # 3 sh F&S

*Prerequisite: Appropriate Math Placement/MATH112*

COMP200 Fundamentals of Networking # 3 sh S

*Prerequisite: COMP150 or COMP119*

COMP202 Op Sys Concepts and Sys Admin # 3 sh F

*Corequisite: COMP160*

COMP205 Web-Based Application Dev. # 3 sh S

*Prerequisite: COMP160*

COMP220 Contemp Issues in Comp # 3 sh F

*Prerequisite: COMP150*

COMP255 Database Design # 3 sh F

*Prerequisite: COMP160 or COMP250*

COMP230 Discrete Struc & Formal Lang # 3 sh S

*Prerequisite: COMP160 and MATH107*

COMP475 Senior Capstone # 3 sh S

<b>MAJOR TRACKS</b>	<b>30 sh</b>
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Each student is required to complete a track within the major.

Current options are:

- Mobile and Game Application Development Track
- Networking and Cybersecurity Track
- Data Science Track
- Interdisciplinary Computing Track

Requirements for our tracks are provided on the next page.

Note: The # symbol indicates advanced coursework.

<b>Mobile and Game Application Development Track (30 credits)#</b>		<i>Hrs</i>	<i>When</i>	<i>Taken</i>	<i>Grade</i>
COMP161	Programming II # ( <i>Prerequisite: COMP160</i> )	3	F	_____	_____
COMP225	Mobile Device Programming # ( <i>Prerequisite: COMP161</i> )	3	F	_____	_____
COMP240	Game Programming # ( <i>Prerequisite: COMP161</i> )	3	S	_____	_____
COMP300	Data Structures and Algorithms # ( <i>Prerequisite: COMP161</i> )	3	S	_____	_____
COMP302	C/C++ for Systems Programming # ( <i>Prerequisite: COMP161</i> )	3	F	_____	_____
COMP405	Software Engineering# ( <i>WC, Prerequisite: COMP300</i> )	3	F	_____	_____
COMP430	Computer Graphics # ( <i>Prerequisite: COMP300</i> )	3	F	_____	_____
MATH141	Calculus I # ( <i>Prerequisite: Appropriate Math Placement/MATH113</i> )	3	F&S	_____	_____
_____	Major Elective	3		_____	_____
_____	Major Elective	3		_____	_____

<b>Data Science Track (30 credits)#</b>		<i>Hrs</i>	<i>When</i>	<i>Taken</i>	<i>Grade</i>
COMP235	Intro to Data Science	3	F	_____	_____
COMP305	Database Application Development # ( <i>Prerequisite: COMP255</i> )	3	S	_____	_____
MANG342	Fund of Mang Science	3	S	_____	_____
COMP325	Advanced SQL # ( <i>Prerequisite: COMP255</i> )	3	F	_____	_____
COMP340	Data Mining ( <i>Prerequisite: COMP235 and COMP255</i> )	3	S	_____	_____
COMP345	Advanced Programming for Data Analysis ( <i>Prerequisite: COMP255, COMP160 or COMP245 -Intro Prog for DS, and Math 180/141</i> )	3	F	_____	_____
COMP425	Advanced DB Architectures ( <i>Prerequisite: COMP255</i> )	3	F	_____	_____
MATH180	Math for Management # ( <i>Prerequisite: MATH107 and Appropriate Math Placement/MATH112</i> )	3	F&S	_____	_____
_____	Major Elective	3		_____	_____
_____	Major Elective	3		_____	_____

<b>Networking and Cybersecurity Track (30 credits)#</b>		<i>Hrs</i>	<i>When</i>	<i>Taken</i>	<i>Grade</i>
COMP212	Data and Computer Communications # ( <i>Prerequisite: MATH112</i> )	3	S	_____	_____
COMP308	Wireless Networking ( <i>Prerequisite: COMP200 and COMP212</i> )	3	S	_____	_____
COMP335	Advanced Networks ( <i>Prerequisite: COMP200 and COMP212</i> )	3	F	_____	_____
COMP312	Intro to Cybersecurity ( <i>WC, Prerequisite: COMP200</i> )	3	S	_____	_____
COMP435	Next Generation Networks and Services ( <i>Prerequisite: COMP200, COMP212</i> )	3	F	_____	_____
COMP407	Network Systems and Security Administration # ( <i>Prerequisite: COMP335, COMP312, COMP308</i> )	3	S	_____	_____
COMP412	Advanced Network Security # ( <i>Prerequisite: COMP335, COMP312, COMP308</i> )	3	F	_____	_____
MATH113	PreCalculus ( <i>Prerequisite: Appropriate Math Placement/MATH112</i> ) or substitute major elective based on math placement score	3	F&S	_____	_____
_____	Major Elective	3		_____	_____
_____	Major Elective	3		_____	_____

### **Interdisciplinary Computing Track (30 credits)#**

Note: The Interdisciplinary Computing track requires the student, with guidance from the advisor, to develop a detailed study plan prior to declaring this track. This plan must be approved by the Departmental Interdisciplinary Committee and two consulting faculty members from a second discipline prior to the final three semesters of study. It is suggested that courses in the track consist of at least 4 COMP classes and an additional MATH or COMP class. Please refer to the Interdisciplinary Track approval form for course tracking.

### **Major Elective Requirements**

Major electives include courses in other tracks as well as COMP369 (Internship), COMP499 (Independent Study), and any 200, 300 or 400-level COMP course not in the core such as those listed above and COMP402 Algorithm Design and Analysis, COMP415 Structures of Programming Languages, COMP480 Special Topics, etc .

The following courses can also count towards the major elective requirement: ART217, ART308, MANG101, MRKT305, BIOL106, BIOL107, CHEM120, CHEM121, PHYS170, PHYS171, PHYS290, MATH142, MATH205, MATH211, MATH243, MATH244 or any 300 or 400 level MATH course aside from 316, 359, 415, 416, 493, 494.

Classes that satisfy a general education requirement cannot be used as a major elective.

## Art - Bachelor of Art

Effective Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (1 lab required)</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART103: Introduction to Art (3 sh)	
Choose Two Additional Courses from PLA	
One must be from Philosophy or Literature	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
One must be a Historical Foundations course	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	
<b>Total Gen Ed Requirements</b>	<b>42 sh</b>

<b>Seminars (two of three required from the following)</b>	<b>6 sh</b>
Humanities (328), Social Sciences (328) Science /Math (328)	
<b>Foreign Language Requirement</b>	<b>12 sh</b>

<b>Electives</b>	<b>18 sh</b>
<b>Total University Requirements</b>	<b>78 sh</b>

	<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
	VAPA119: First Year Student Seminar	1 sh

	<b>Core Requirements</b>	<b>18 sh</b>
	ART105: Introduction to 3-D Design	3 sh
	ART110: Color and 2-Dimensional Design	3 sh
	ART112: Drawing 1	3 sh
	#ART210: Materials & Techniques	3 sh
	#ART217: Electronic (Digital) Art	3 sh
	#ART312: Drawing 2	3 sh
	<b>#Art History</b>	<b>6 sh</b>
	Select Two Courses from the following:	
	ART301: Renaissance & Baroque Art	
	ART304: Ancient and Medieval Art	
	ART307: Asian Art	
	ART401: Modern Art	
	ART420: Art Since 1950	
	ART430: American Art	
	<b>Studio Art</b>	<b>12 sh</b>
	Select from the following:	
	#ART325: Printmaking	
	#ART330: Painting	
	#ART335: Sculpture	
	#ART318: Digital Photography OR ART350: Photography as Art	
	#ART355: Life Studies	
	Note: At least 1 of the above courses must be taken as an ART425: Special Problems Studio	
	#ART499: Independent Study#	
	<b>Art Electives</b>	<b>5 sh</b>
	<b>Junior Portfolio</b>	
	Students must pass a portfolio review	
	<b>Senior Exhibition (final semester)</b>	
	<b>Total Required Courses</b>	<b>120 sh</b>

# Biology - Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>(3 sh)</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>(3 sh)</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>(3 sh)</b>
MATH141: Calculus I	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>(6 sh)</b>
BIOL106: Principles of Biology I	3
BIOL107: Principles of Biology II	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>(6 sh)</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>(9 sh)</b>
(at least one from Visual or Performing Arts)	3
(at least one from Philosophy or Literature)	3
	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>(9 sh)</b>
(at least one GAC-Historical Foundation)	3
	3
	3
<b>Wellness</b>	<b>(3 sh)</b>
	3
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Cognate Courses</b>	<b>(24 sh)</b>
CHEM120: Principles of Chemistry I#	4
CHEM121: Principles of Chemistry II#	4
CHEM220: Organic Chemistry I#	4
CHEM221: Organic Chemistry II#	4
PHYS130: Physics I#	4
PHYS131: Physics II#	4
<b>Biology Requirements</b>	<b>(36 sh)</b>
<b>Required Biology Courses</b>	<b>[9 sh]</b>
BIOL202: Genetics#	3
BIOL206: Botany#	3
BIOL240: Zoology#	3
<b>Biology Electives</b>	<b>[27 sh]</b>
Take 27 credits of 200-400 level# BIOL courses*	

# Advanced coursework

\*Except BIOL215, BIOL225, and BIOL328.

\*A maximum of 3 credits of BIOL369 count in this category.

\*A maximum of 3 credits of BIOL499 count in this category.

**BIOLOGY: GENERAL BIOLOGY**  
**Suggested Course Sequence**

SEMESTER	SH	SEMESTER	SH
<b>Fall Freshman Year</b>		<b>Spring Freshman Year</b>	
SCI119 First Year Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I (Must be eligible for MATH113)	4	General Education	3
General Education- MATH xxx (depends on Math Placement test)	3	General Education	3
General Education	3	General Education	3
	-		-
	<b>14</b>		<b>16</b>
<b>Fall Sophomore Year</b>		<b>Spring Sophomore Year</b>	
BIOL206 Botany	3	BIOL202 Genetics	3
CHEM220 Organic Chemistry I	4	CHEM221 Organic Chemistry II	4
PHYS130 Physics I (MATH 113 Prerequisite)	4	PHYS131 Physics II	4
General Education	3	General Education	3
	-	General Education	3
	<b>14</b>		<b>17</b>
<b>Fall Junior Year</b>		<b>Spring Junior Year</b>	
BIOLxxx Biology course	3	BIOL240 Zoology	3
BIOLxxx Biology course	3	BIOLxxx Biology course	3
General Education	3	BIOLxxx Biology course	3
General Education	3	General Education	3
Elective	3	Elective	3
	-		-
	<b>15</b>		<b>15</b>
<b>Fall Senior Year</b>		<b>Spring Senior Year</b>	
BIOLxxx Biology course	3	BIOLxxx Biology course	3
BIOLxxx Biology course	3	BIOLxxx Biology course	3
General Education	3	BIOLxxx Biology course	3
Elective	3	Elective	3
Elective	3	Elective	2
	-		-
	<b>15</b>		<b>14</b>



# Biology: Biomedical Sciences – Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>(3 sh)</b>
ENGL100: Composition	3
WC Competency 1 (BIOL107)	
WC Competency 2 (CHEM410)	
<b>Oral Communication</b>	<b>(3 sh)</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>(3 sh)</b>
MATH141: Calculus I	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>(6 sh)</b>
BIOL106: Principles of Biology I	3
BIOL107: Principles of Biology II	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>(6 sh)</b>
SOCI101: recommended	3
PSYC100: recommended	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>(9 sh)</b>
(at least one from Visual or Performing Arts)	3
PHIL102: recommended	3
ENGL110: recommended	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>(9 sh)</b>
(at least one GAC-Historical Foundation)	3
PHIL415: recommended	3
	3
<b>Wellness</b>	<b>(3 sh)</b>
	3
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Cognate Courses</b>	<b>(36 sh)</b>
CHEM120: Principles of Chemistry I#	4
CHEM121: Principles of Chemistry II#	4
CHEM220: Organic Chemistry I#	4
CHEM221: Organic Chemistry II#	4
CHEM410: Biochemistry I#	4
PHYS130: Physics I#	4
PHYS131: Physics II#	4
HLTH115: Human Anatomy & Physiology I	4
HLTH120: Human Anatomy & Physiology II	4

<b>Biology Requirements</b>	<b>(24 sh)</b>
<b>Required Biology Courses</b>	<b>[14 sh]</b>
BIOL202: Genetics#	3
BIOL310: Immunology#	3
BIOL330: Cell & Molecular Biology#	4
BIOL340: Microbiology#	4

<b>Biology Electives</b>	<b>[10 sh]</b>
Take 10 credits of 200-400 level# BIOL courses*	

# Advanced coursework

\*Except BIOL215, BIOL225, and BIOL328.

\*A maximum of 3 credits of BIOL369 count in this category.

\*A maximum of 3 credits of BIOL499 count in this category.

**BIOLOGY: BIOMEDICAL SCIENCES**  
**Suggested Course Sequence**

<b>Fall Freshman Year</b>	<b>Spring Freshman Year</b>
SCI119 First Year Seminar 1 BIOL106 Principles of Biology I 3 CHEM120 Principles of Chemistry I 4 (Must be eligible for MATH113) General Education- MATHxxx (depends on Math Placement test) 3 General Education 3 - <b>14</b>	BIOL107 Principles of Biology II 3 CHEM121 Principles of Chemistry II 4 General Education 3 General Education 3 General Education 3 - <b>16</b>
<b>Fall Sophomore Year</b>	<b>Spring Sophomore Year</b>
CHEM220 Organic Chemistry I 4 HLTH115 Human Anatomy & Physiology I 4 BIOL202 Genetics 3 General Education 3 General Education 3 - <b>17</b>	BIOL310 Immunology 3 CHEM221 Organic Chemistry II 4 HLTH120 Human Anatomy & Physiology II 4 General Education 3 - <b>14</b>
<b>Fall Junior Year</b>	<b>Spring Junior Year</b>
BIOL330 Cell & Molecular Biology 4 BIOLxxx Biology course 3 PHYS130 Physics I 4 (MATH 113 Prerequisite) General Education 3 - <b>14</b>	BIOLxxx Biology course 3 CHEM410 Biochemistry 4 PHYS131 Physics II 4 General Education 3 General Education 3 - <b>17</b>
<b>Fall Senior Year</b>	<b>Spring Senior Year</b>
BIOL340 Microbiology 4 BIOLxxx Biology course 1 Elective 3 Elective 3 Elective 3 - <b>14</b>	BIOLxxx Biology course 3 General Education 3 Elective 3 Elective 3 Elective 2 - <b>14</b>

# Biology: Cellular and Organismal Biology - Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>(3 sh)</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>(3 sh)</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>(3 sh)</b>
MATH141: Calculus I	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>(6 sh)</b>
BIOL106: Principles of Biology I	3
BIOL107: Principles of Biology II	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>(6 sh)</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>(9 sh)</b>
(at least one from Visual or Performing Arts)	3
(at least one from Philosophy or Literature)	3
	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>(9 sh)</b>
(at least one GAC-Historical Foundation)	3
	3
	3
<b>Wellness</b>	<b>(3 sh)</b>
	3
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Cognate Courses</b>	<b>(28 sh)</b>
CHEM120: Principles of Chemistry I#	4
CHEM121: Principles of Chemistry II#	4
CHEM220: Organic Chemistry I#	4
CHEM221: Organic Chemistry II#	4
CHEM410: Biochemistry I#	4
PHYS130: Physics I#	4
PHYS131: Physics II#	4
<b>Biology Requirements</b>	<b>(32 sh)</b>
<b>Required Biology Courses</b>	[17 sh]
BIOL202: Genetics#	3
BIOL206: Botany#	3
BIOL240: Zoology#	3
BIOL330: Cell & Molecular Biology#	4
BIOL340: Microbiology#	4
<b>Biology Electives</b>	[15 sh]
Take 15 credits of 200-400 level# BIOL courses*	

# Advanced coursework

\*Except BIOL215, BIOL225, and BIOL328.

\*A maximum of 3 credits of BIOL369 count in this category.

\*A maximum of 3 credits of BIOL499 count in this category.

**BIOLOGY: CELLULAR AND ORGANISMAL BIOLOGY**  
**Suggested Course Sequence**

<b>Fall Freshman Year</b>		<b>Spring Freshman Year</b>	
SCI119 First Year Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	General Education	3
(Must be eligible for MATH113)		General Education	3
General Education- MATHxxx (depends on Math Placement test)	3	General Education	3
General Education	3		
	-		-
	<b>14</b>		<b>16</b>
<b>Fall Sophomore Year</b>		<b>Spring Sophomore Year</b>	
BIOL206 Botany	3	BIOL202 Genetics	3
CHEM220 Organic Chemistry I	4	CHEM221 Organic Chemistry II	4
PHYS130 Physics I	4	PHYS131 Physics II	4
(MATH113 Prerequisite)		General Education	3
General Education	3	General Education	3
	-		-
	<b>14</b>		<b>17</b>
<b>Fall Junior Year</b>		<b>Spring Junior Year</b>	
BIOL340 Microbiology	4	BIOL240 Zoology	3
BIOL330 Cell & Molecular Biology	4	BIOLxxx Biology course	3
BIOLxxx Biology course	3	CHEM410 Biochemistry	4
General Education	3	General Education	3
	-	Electives	3
	<b>14</b>		<b>16</b>
<b>Fall Senior Year</b>		<b>Spring Senior Year</b>	
BIOLxxx Biology course	3	BIOLxxx Biology course	3
General Education	3	BIOLxxx Biology course	3
Elective	3	General Education	3
Elective	3	Elective	3
Elective	3	Elective	2
	-		-
	<b>15</b>		<b>14</b>

# Biology: Ecology and Environmental - Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>(3 sh)</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>(3 sh)</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>(3 sh)</b>
MATH141: Calculus I	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>(6 sh)</b>
BIOL106: Principles of Biology I	3
BIOL107: Principles of Biology II	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>(6 sh)</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>(9 sh)</b>
(at least one from Visual or Performing Arts)	3
(at least one from Philosophy or Literature)	3
	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>(9 sh)</b>
(at least one GAC-Historical Foundation)	3
	3
	3
<b>Wellness</b>	<b>(3 sh)</b>
	3
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Cognate Courses</b>	<b>(23 sh)</b>
CHEM120: Principles of Chemistry I#	4
CHEM121: Principles of Chemistry II#	4
CHEM205: Intro to Organic Chemistry#	4
GEOS130: Principles of Geology I	3
PHYS130: Physics I#	4
PHYS131: Physics II#	4
<b>Biology Requirements</b>	<b>(37 sh)</b>
<b>Required Biology Courses</b>	<b>[12 sh]</b>
BIOL202: Genetics#	3
BIOL206: Botany#	3
BIOL240: Zoology#	3
BIOL309: Ecology#	3
<b>Field Course Requirements</b>	<b>[9 sh]</b>
At least 9 credits must be taken that are designated as field courses. Field courses are listed below.	
BIOL305: Ichthyology#	3
BIOL317: Mycology#	3
BIOL405: Field Ecology#	3
BIOL409: Ornithology#	3
BIOL411: Aquatic Biology#	3
BIOL413: Entomology#	3
BIOL430: Herpetology#	3
BIOL432: Ecosystems#	3
BIOL440: Environmental Microbiology# (BIOL340 prereq)	3
Chincoteague Bay Field Station BIOL Field Courses#	
<b>Biology Electives</b>	<b>[16 sh]</b>
Take 16 credits of 200-400 level# courses in Biology.* This category can also include field courses not taken in the category above.	

# Advanced coursework

\*Except BIOL215, BIOL225, and BIOL328.

\*A maximum of 3 credits of BIOL369 count in this category.

\*A maximum of 3 credits of BIOL499 count in this category.

**BIOLOGY: ECOLOGY AND ENVIRONMENTAL BIOLOGY**  
Suggested Course Sequence

SEMESTER	SH	SEMESTER	SH
<b>Fall Freshman Year</b>		<b>Spring Freshman Year</b>	
SCI119 First Year Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I (Must be eligible for MATH113)	4	General Education	3
General Education- MATH xxx (depends on Math Placement test)	3	General Education	3
General Education	3	General Education	3
	-		-
	<b>14</b>		<b>16</b>
<b>Fall Sophomore Year</b>		<b>Spring Sophomore Year</b>	
BIOL206 Botany	3	BIOL202 Genetics	3
CHEM205 Intro. to Organic Chemistry	4	PHYS131 Physics II	4
PHYS130 Physics I (MATH 113 Prerequisite)	4	General Education	3
General Education	3	General Education	3
	-	General Education	3
	<b>14</b>		<b>16</b>
<b>Fall Junior Year</b>		<b>Spring Junior Year</b>	
BIOL309 Ecology	3	BIOL240 Zoology	3
BIOLxxx Biology course	3	BIOLxxx Biology course	3
GEOS130 Principles of Geology	3	BIOLxxx Biology course	3
General Education	3	General Education	3
Electives	3	Electives	3
	-		-
	<b>15</b>		<b>15</b>
<b>Fall Senior Year</b>		<b>Spring Senior Year</b>	
BIOLxxx Biology course	3	BIOLxxx Biology course	3
BIOLxxx Biology course	3	BIOLxxx Biology course	3
Elective	3	BIOLxxx Biology course	3
Elective	3	BIOLxxx Biology course	1
Elective	3	General Education	3
	-	Elective	2
	<b>15</b>		<b>15</b>

# Biology: Marine Biology - Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>(3 sh)</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>(3 sh)</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>(3 sh)</b>
MATH141: Calculus I	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>(6 sh)</b>
BIOL106: Principles of Biology I	3
BIOL107: Principles of Biology II	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>(6 sh)</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>(9 sh)</b>
(at least one from Visual or Performing Arts)	3
(at least one from Philosophy or Literature)	3
	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>(9 sh)</b>
(at least one GAC-Historical Foundation)	3
	3
	3
<b>Wellness</b>	<b>(3 sh)</b>
	3
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Cognate Courses</b>	<b>(23 sh)</b>
CHEM120: Principles of Chemistry I#	4
CHEM121: Principles of Chemistry II#	4
CHEM205: Intro. to Organic Chemistry#	4
GEOS120: Oceanography at Lock Haven University or MS110: Intro. to Oceanography at Chincoteague Bay Field Station	3
PHYS130: Physics I#	4
PHYS131: Physics II#	4

<b>Biology Requirements</b>	<b>(37 sh)</b>
<b>Required Biology Courses</b>	<b>[9 sh]</b>
BIOL202: Genetics#	3
BIOL206: Botany#	3
BIOL240: Zoology#	3

<b>Marine Biology Requirements</b>	
Minimum of 9 SH of Biology courses offered at Chincoteague Bay Field Station or other marine station#	<b>[9 sh]</b>

<b>Biology Electives</b>	<b>[19 sh]</b>
Take 19 credits of 200-400 level# BIOL courses*	

# Advanced coursework  
 \*Except BIOL215, BIOL225, and BIOL328.  
 \*A maximum of 3 credits of BIOL369 count in this category.  
 \*A maximum of 3 credits of BIOL499 count in this category.

**BIOLOGY: MARINE BIOLOGY**  
Suggested Course Sequence

<b>SEMESTER</b>	<b>SH</b>	<b>SEMESTER</b>	<b>SH</b>
<b>Fall Freshman Year</b>		<b>Spring Freshman Year</b>	
SCI119 First Year Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I (Must be eligible for MATH113)	4	GEOS120 Oceanography	3
General Education- MATH xxx (depends on Math Placement test)	3	General Education	3
General Education	3	General Education	3
	-		-
	<b>14</b>		<b>16</b>
<b>Fall Sophomore Year</b>		<b>Spring Sophomore Year</b>	
BIOL206 Botany	3	BIOL202 Genetics	3
CHEM205 Intro. to Organic Chemistry	4	PHYS131 Physics II	4
PHYS130 Physics I (MATH 113 Prerequisite)	4	General Education	3
General Education	3	General Education	3
	-	General Education	3
	<b>14</b>		<b>16</b>
<b>At least one summer of Biology classes offered at Chincoteague Bay Field Station (CBFS) or other marine station (Minimum total of 9 SH for the degree)</b>			
<b>Fall Junior Year</b>		<b>Spring Junior Year</b>	
BIOLxxx Biology course	3	BIOL240 Zoology	3
BIOLxxx Biology course	3	BIOLxxx Biology course	3
General Education	3	BIOLxxx Biology course	3
General Education	3	General Education	3
Elective	2		-
	-		-
	<b>14</b>		<b>12</b>
<b>Fall Senior Year</b>		<b>Spring Senior Year</b>	
BIOLxxx Biology course	3	BIOLxxx Biology course	3
BIOLxxx Biology course	1	General Education	3
Elective	3	Elective	3
Elective	3	Elective	3
Elective	3		-
	-		-
	<b>13</b>		<b>12</b>



# Business Administration – Associate of Science

Effective Fall 2017

<b>GENERAL EDUCATION REQUIREMENTS</b>	<b>27 sh</b>	
<b>INTELLECTUAL FOUNDATION</b>	<b>9 sh</b>	<b>Taken</b>
Written Communication	3 sh	
ENGL100		
Oral Communication	3 sh	
Mathematical and Computational Thinking	3 sh	
MATH107		
Critical Thinking		
CT Competency 1: PHIL102		
CT Competency 2:		
<b>KNOWLEDGE &amp; INQUIRY</b>	<b>9 sh</b>	
Natural Science Inquiry ( <i>with lab</i> )	3 sh	
Historical, Behavioral, & Social Science Inquiry	3 sh	
ECON102 or ECON103		
Philosophical, Literary, & Aesthetic Inquiry	3 sh	
PHIL102		
<b>PERSONAL &amp; SOCIAL RESPONSIBILITY</b>	<b>6 sh</b>	
Global Awareness and Citizenship	3 sh	
HIST101 or HIST102		
Wellness	3 sh	
<b>ELECTIVES</b>	<b>3 sh</b>	

**WARNING: MATH COURSES MAY BE REQUIRED**

IF math placement score is BELOW 9 in:

Cat. 1, MATH 009 is required as a 0 credit course

Cat. 2, MATH100 is required as a gen ed elective

Cat. 3, MATH112 is required as a gen ed elective

<b>MAJOR REQUIREMENTS</b>	<b>36 sh</b>	
<i>An overall minimum 2.00 grade point average is required in major</i>		
<b>CORE REQUIREMENTS</b>	<b>24 sh</b>	<b>Taken</b>
MANG105: Introduction to Business	3 sh	
<i>Upper-level transfer students may substitute major elective</i>		
<i>Meets FYS requirement</i>		
ACCT110: Financial Accounting	3 sh	
ACCT115: Management Accounting	3 sh	
<i>Prerequisite: ACCT110</i>		
COMP150: Introduction to Computers	3 sh	
COMP250: Advanced Microcomputer Apps	3 sh	
<i>Prerequisite: COMP150, &amp; grade "C" or better in MATH107</i>		
ENGL345: Business Writing	3 sh	
MANG315: Management: Concepts & Strategies	3 sh	
<i>Prerequisite: 45 semester hours</i>		
MRKT200: Introduction to Marketing	3 sh	
<b>MANAGEMENT TRACK</b>	<b>12 sh</b>	
PSYC235: Interpersonal & Leadership Skills	3 sh	
MANG317: Entrepreneurship	3 sh	
<i>Prerequisite: MANG315 &amp; MRKT200</i>		
MANG320: Human Resources Management	3 sh	
<i>Prerequisite: MANG315</i>		
TRACK ELECTIVE: _____	3 sh	
<i>Management track electives include any ACCT, COMP, ECON, MANG, or MRKT Course. Management track electives may also come from any major/major elective course listed on the B.S. in Business Administration Checklist if approved by advisor.</i>		
<b>HEALTHCARE MANAGEMENT TRACK</b>	<b>12 sh</b>	
HLTH108: Med. Terminology for Hlth Professions	3 sh	
HLTH225: Comparative Healthcare	3 sh	
PHIL415: Ethical Issues in Healthcare Professions	3 sh	
TRACK ELECTIVE: _____	3 sh	
<i>Healthcare Management track electives include HLTH102, HLTH140, HLTH204, HLTH307, HLTH315, HLTH320, HLTH401, HLTH402, HLTH430, HLTH498, POLI335, SOCW110 or another health related course if approved by advisor.</i>		

# Business Administration – Bachelor of Science

Effective Fall 2017

## GENERAL EDUCATION REQUIREMENTS (42 sh)

### INTELLECTUAL FOUNDATION 9 sh Taken

Written Communication 3 sh

ENGL100: Composition

WC Competency 1: ENGL345

WC Competency 2: MANG475

Oral Communication 3 sh

Mathematical and Computational Thinking 3 sh

MATH107: Basic Statistics I

Critical Thinking

CT Competency 1: PHIL102/425

CT Competency 2: MANG475

### KNOWLEDGE & INQUIRY 21 sh

Natural Science Inquiry (at least 1 lab science) 6 sh

Historical, Behavioral, and Social Science Inquiry 6 sh

ECON102: Principles of Macroeconomics

Philosophical, Literary, and Aesthetic Inquiry 9 sh

(at least 1 Visual or Performing Arts)

PHIL102: Ethics (or PHIL425 in GAC)

### PERSONAL & SOCIAL RESPONSIBILITY 12 sh

Global Awareness & Citizenship (at least 1 GAC- 4) 9 sh

ENGL345: Business Writing #

HIST101/HIST102: World History I or II

Wellness 3 sh

Experiential Learning

EL Competency 1 (1 unit)

EL Competency 2 (1 unit)

OR Internship (1 credit = 2 units)

### ELECTIVES (Internships strongly advised!) (18 sh)

### WARNING: MATH COURSES MAY BE REQUIRED

IF math placement score is BELOW 9 in:

Cat. 1, MATH 009 is required as a 0 credit course

Cat. 2, MATH100 is required as a gen ed elective

Cat. 3, MATH112 is required as a gen ed elective

# Designates advanced coursework

## MAJOR CORE – REQUIRED FOR ALL (42 sh)

Note: A minimum GPA of 2.0 is required in the major

### Recommended before Junior Year 24 sh Taken

MANG105: Introduction to Business 3 sh

Upper-level transfer students may substitute a major elective

Meets FYS requirement

COMP150: Introduction to Computers 3 sh

ACCT110: Financial Accounting 3 sh

ACCT115: Management Accounting # 3 sh

Prerequisite: ACCT110

ECON103: Principles of Microeconomics 3 sh

MRKT200: Introduction to Marketing 3 sh

COMP250: Advanced Microcomputer Apps # 3 sh

Prerequisite: COMP150, & grade "C" or better in MATH107

MATH180: Math for Management # 3 sh

MATH141: Calculus 1

Prerequisites for both: MATH107. Also MATH 112 or

placement score of 9+ in Categories 1-3

### Recommended for Juniors & Seniors 15 sh

MANG315: Management: Concepts & Strategies # 3 sh

Prerequisite: 45 semester hours when course begins

ECON340: Money and Banking # 3 sh

Prerequisite: ECON102

MANG325: Financial Management # 3 sh

Prerequisite: ECON102, ECON103 & ACCT110

MANG302: Business Law I # 3 sh

Prerequisite: 60 semester hours

MANG305: Operations/Production Mgmt # 3 sh

Prerequisites: (MATH180 or MATH141) & COMP250

### For Seniors Only 3 sh

MANG475: Capstone/Strategic Mgmt # 3 sh

Prerequisites: MANG325

Must have 75 sh to register and 90 when course begins.

### MAJOR ELECTIVES 3 sh

# 3 sh

Major electives include any ACCT, COMP, ECON, MANG, OR MRKT course, as well as COMM333, GEOG440, HIST205, PHIL425, POLI260, POLI315, POLI322, POLI325, POLI330, POLI350, PSYC235 and PSYC313. Internships can count for up to 6 credits in the major.

### CONCENTRATIONS IN BUSINESS ADMINISTRATION

(Shown on the back of this sheet)

To meet requirements for this degree, students MUST have a minimum of 18 credits beyond the core (above). Options include:

- \* One concentration and additional major electives to make up the 18 total.
- \* Two concentrations, using some of your Electives to meet the required number of courses for both concentrations.

Note: Students may double count 2 courses to meet requirements for 2 concentrations, but 2 concentrations require 30 business credits beyond the core.

**ECONOMICS AND FINANCE (15) #****REQUIRED CORE:**

ECON310	Intermediate Macroeconomics	3 sh	S	_____
	<i>Prerequisites: ECON101 or ECON102</i>			_____
ECON315	Intermediate Microeconomics	3 sh	F	_____
	<i>Prerequisites: ECON101 or ECON103</i>			_____
MANG430	International Financial Management	3 sh	S	_____
	<i>Prerequisites: MANG325</i>			_____

**CONCENTRATION ELECTIVES (Select 2):**

MANG326	Fundamentals of Investment Mgmt	3 sh	*	_____
MANG360	Small Business Finance	3 sh	*	_____
	<i>Prerequisite: MANG325</i>			_____
MANG480	Topics in Business (Finance)	3 sh	*	_____
ECON301	Economics of the Environment	3 sh	*	_____
ECON328	Social Seminar	3 sh	*	_____
ECON330	Economic Development	3 sh	*	_____
ECON350	Comparative Economic Systems	3 sh	*	_____
ECON355	International Trade and Finance	3 sh	S	_____
ECON360	Current Economic Problems	3 sh	*	_____
ECON410	Econometrics	3 sh	*	_____

**ENTREPRENEURSHIP & INNOVATION (15) #****REQUIRED CORE:**

MANG317	Entrepreneurship	3 sh	F	_____
	<i>Prerequisites: MANG315 &amp; either MRKT200 or RECR330</i>			_____
MANG350	Small Business Management	3 sh	S	_____
	<i>Prerequisite: MANG317</i>			_____
MRKT310	Entrepreneurial & Small Biz Marketing	3 sh	F	_____
	<i>Prerequisite: MRKT200</i>			_____

**CONCENTRATION ELECTIVES (Select 2)\*\*:**

MANG320	Human Resource Management	3 sh	F	_____
MANG345	Strategic Sustainability	3 sh	*	_____
MANG355	Social Entrepreneurship	3 sh	*	_____
MANG360	Small Business Finance	3 sh	*	_____
	<i>Prerequisite: MANG325</i>			_____
MANG425	International Business	3 sh	B	_____
MRKT305	Internet Marketing & eCommerce	3 sh	*	_____
MRKT410	Marketing Research	3 sh	*	_____
MRKT405	Behavioral Pricing	3 sh	*	_____
MANG480	Topics in Business (Entrepreneurship)	3 sh	*	_____

*\*\* Electives for the Entrepreneurship and Innovation Concentration can include any course approved for the Entrepreneurship Minor*

**INTERNATIONAL BUSINESS (15) #****REQUIRED CORE:**

ECON355	International Trade & Finance	3 sh	S	_____
MANG425	International Business	3 sh	B	_____
MANG430	International Financial Management	3 sh	S	_____

*Students in Int'l. Business are strongly encouraged to study at least 1 semester abroad and to become proficient in another language.*

**CONCENTRATION ELECTIVES (Select 2):**

ECON330	Economic Development	3 sh	*	_____
GEOG440	Economic Geography	3 sh	*	_____
HIST390	Contemporary World Problems	3 sh	*	_____
POLI315	Politics in Developing Nations	3 sh	*	_____
POLI322	International Political Economy	3 sh	*	_____
POLI350	International Relations	3 sh	*	_____
MANG480	Topics in Business (International)	3 sh	*	_____

**MANAGEMENT (15) #****REQUIRED CORE:**

MANG320	Human Resource Management	3 sh	B	_____
	<i>Prerequisite: MANG315</i>			_____
MANG425	International Business	3 sh	B	_____
	<i>Prerequisites: MANG315 &amp; MANG325</i>			_____
MANG400	Business, Society & Govt.	3 sh	B	_____
	<i>Prerequisites: MANG315 &amp; either PHIL102 or PHIL425</i>			_____

**CONCENTRATION ELECTIVES (Select 2):**

MANG317	Entrepreneurship	3 sh	F	_____
MANG350	Small Business Management	3 sh	S	_____
MANG480	Topics in Business (Management)	3 sh	*	_____
POLI260	Intro to Public Administration	3 sh	F	_____
POLI325	Labor Management Relations	3 sh	*	_____
POLI330	Public Policy	3 sh	S	_____
PSYC235	Interpersonal & Leadership Skills (EL)	3 sh	B	_____

**BUSINESS INTELLIGENCE (15) #**

*These courses are all required*

COMP235	Intro to Data Science	3 sh	F	_____
COMP245	Intro to Programming for Data Sci	3 sh	F	_____
COMP255	Database Design	3 sh	F	_____
	<i>Prerequisite: COMP250</i>			_____
COMP340	Data Mining	3 sh	S	_____
MANG342	Fund. of Management Science	3 sh	S	_____

**MARKETING (15) #****REQUIRED CORE:**

	<i>Prerequisite for all 3 required courses is MRKT200</i>			_____
MRKT300	Consumer Behavior	3 sh	S	_____
MRKT305	Internet Marketing	3 sh	*	_____
MRKT410	Marketing Research	3 sh	*	_____
	<i>Prerequisite for MRKT410 is also MATH107</i>			_____

**CONCENTRATION ELECTIVES (Select 2):**

MRKT310	Entrepreneurial & Small Bus. Mktg.	3 sh	F	_____
MRKT405	Behavioral Pricing	3 sh	*	_____
MRKT480	Topics in Marketing	3 sh	*	_____
MANG317	Entrepreneurship	3 sh	F	_____
COMM292	Principles of Advertising	3 sh		_____
COMP255	Database Design	3 sh	F	_____
	<i>Prerequisite: Grade "C" or better in MATH 107</i>			_____
MUSI308	Music Marketing	3 sh		_____
SPRT233	Sport Sales, Sponsorship & Fundraising	3 sh		_____

**Warning:** \* All courses on this page marked with an asterisk are taught less frequently than once a year.



**Chemistry, B.S. Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
CHEM120: Principles of Chemistry I (4)  
MATH141: Calculus I (3)  
HBSS1 (Historical, Behavioral, and Social Science Inquiry) (3)

Credit Total: \_\_\_\_\_14

**Spring Freshman (example)**

CHEM121: Principles of Chemistry II (4)  
MATH142: Calculus II (3)  
PHYS170: Intermediate General Physics I (4)  
GAC1 (Global Awareness and Citizenship) (3)  
PLA1 (Philosophical, Literary, and Aesthetic Inquiry)(3)

Credit Total: \_\_\_\_\_17

**Fall Sophomore (example)**

CHEM220: Organic Chemistry I (4)  
CHEM316: Quantitative Analysis (4)  
PHYS171: Intermediate General Physics II (4)  
Elective (3)

Credit Total: \_\_\_\_\_15

**Spring Sophomore (example)**

CHEM221: Organic Chemistry II (4)  
CHEM410: Biochemistry I (4) or  
CHEM In-depth (4)  
HBSS2 (3)  
Oral Communication (3)  
PLA2 (3)

Credit Total: \_\_\_\_\_17

**Fall Junior (example)**

CHEM320: Physical Chemistry I (4), CHEM301: Inorganic  
Chemistry (3),  
CHEM Elective (3-4), and/or  
CHEM In-depth (4)  
GAC2 (3)  
Elective (3)

Credit Total: \_\_\_\_\_12-16

**Spring Junior (example)**

CHEM321: Quantum Chemistry (4), CHEM440: Advanced  
Inorganic Chemistry (4),  
CHEM410 Biochemistry I (4),  
CHEM In-depth (4), and/or  
CHEM Elective (3-4)  
Elective (3)

Credit Total: \_\_\_\_\_14-15

**Fall Senior (example)**

CHEM301: Inorganic Chemistry (3), CHEM320: Physical  
Chemistry I (4),  
In-depth (4), and/or  
CHEM Elective (3-4)  
GAC3 (3)  
Wellness (3)  
Elective (3)

Credit Total: \_\_\_\_\_15-17

**Spring Senior (example)**

CHEM440 Advanced Inorganic Chemistry (4), CHEM 321:  
Quantum Chemistry (4),  
In-depth (4), and/or  
CHEM Elective (3-4)  
CHEM499 (1)  
PLA3 (3)  
Electives (5)

Credit Total: \_\_\_\_\_12-17

# Chemistry: Biochemistry – Bachelor of Science

Effective Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH141: Calculus I	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Sciences Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology I	3
BIOL107: Principles of Biology II	3
<b>Historical, Behavioral, and Social Sciences Inquiry</b>	<b>6 sh</b>
PSYC100 recommended	3
SOCI101 recommended	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
PHIL102 recommended	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: Freshmen Seminar	1

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Cognates</b>	<b>14 sh</b>
PHYS130: Physics 1 OR PHYS170: Intermediate General Physics 1	4
#PHYS131: Physics 2 OR #PHYS171 Intermediate General Physics 2	4
#MATH142: Calculus II	3
BIOL202: Genetics	3
<b>Area requirements</b>	
<b>Chemistry requirements</b>	<b>36 sh</b>
CHEM120: Principles of Chemistry I	4
CHEM121: Principles of Chemistry II	4
#CHEM220: Organic Chemistry I	4
#CHEM221: Organic Chemistry II	4
#CHEM316: Quantitative Analysis	4
#CHEM317: Instrumental Analysis	4
#CHEM320: Physical Chemistry I	4
#CHEM410: Biochemistry I	4
#CHEM415: Biochemistry II	4
<b>Chemistry electives</b>	<b>7 sh</b>
#Choose from 300-400 level courses in Chemistry*	
* Except CHEM328 and CHEM369	
<b>Biology electives</b>	<b>3 sh</b>
#Choose one of the following	
BIOL302: Developmental Biology	3
BIOL310: Immunology	3
BIOL330: Cell and Molecular Biology	4
BIOL340: Microbiology	4
BIOL410: Organismal Physiology	3
# 45-46 sh of upper division courses	

# Chemistry: Clinical Laboratory Science – Bachelor of Science

Effective Fall 2017

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100 Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
MATH141 Calculus	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL106 Principles of Biology I	3
BIOL107 Principles of Biology II	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>7 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119 Freshmen Seminar	1

<b>Major Area and Cognate Courses</b>	<b>70 sh</b>
<b>Cognates</b>	<b>18 sh</b>
PHYS130 Physics I	4
PHYS131 Physics II	4
BIOL202 Genetics	3
BIOL310 Immunology	3
BIOL340 Microbiology	4

<b>Area requirements</b>	
<b>Chemistry requirements</b>	<b>24 sh</b>
CHEM120 Principles of Chemistry I	4
CHEM121 Principles of Chemistry II	4
#CHEM220 Organic Chemistry I	4
#CHEM221 Organic Chemistry II	4
#CHEM316 Quantitative Analysis	4
#CHEM410 Biochemistry I	4

<b>#Medical Technology requirements</b>	<b>28 sh</b>
Must be completed at an accredited program	

# 44 sh of upper division courses

**Lock Haven University**  
**B.S. Chemistry – Clinical Laboratory Science Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
CHEM120: Principles of Chemistry I (4)  
BIOL106: Principles of Biology I (3)  
MATH141: Calculus (3)

Credit Total: \_\_\_\_ 14

**Spring Freshman (example)**

CHEM121: Principles of Chemistry II (4)  
BIOL107: Principles of Biology II (3)  
GAC1(Global Awareness and Citizenship) (3)  
PLA1 (Philosophical, Literary, and Aesthetic Inquiry) (3)  
HBS1 (Historical, Behavioral, & Social Science Inquiry) (3)

Credit Total: \_\_\_\_ 16

**Fall Sophomore (example)**

CHEM220: Organic Chemistry I (4)  
CHEM316: Quantitative Analysis (4)  
PHYS130: Physics I (4)  
PLA2 (3)

Credit Total: \_\_\_\_ 15

**Spring Sophomore (example)**

CHEM221: Organic Chemistry II (4)  
BIOL202: Genetics (3)  
PHYS131: Physics II (4)  
HBS2 (3)  
PLA3 (3)

Credit Total: \_\_\_\_ 17

**Fall Junior (example)**

BIOL340: Microbiology (4)  
Wellness (3)  
GAC2 (3)  
Gen Ed Electives (4)

Credit Total: \_\_\_\_ 14

**Spring Junior (example)**

CHEM410: Biochemistry I (4)  
BIOL310: Immunology (3)  
Oral Communication (3)  
GAC3 (3)  
Gen Ed Electives (3)

Credit Total: \_\_\_\_ 16

**Fall Senior (example)**

MTEC (14)\*

Credit Total: \_\_\_\_ 14

**Spring Senior (example)**

MTEC (14)\*

Credit Total: \_\_\_\_ 14

\*A minimum of 28 credits are completed at a nationally accredited program in Clinical Laboratory Science.





**Chemistry - Forensic Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
MATH141: Calculus I (3)  
CHEM120: Principles of Chemistry I (4)  
BIOL106: Principles of Biology I (3)

---

Credit Total: \_\_\_\_\_14

**Spring Freshman (example)**

MATH142: Calculus II (3)  
CHEM121: Principles of Chemistry II (4)  
BIOL107: Principles of Biology II (3)  
SOC1101: Intro Sociology (3)  
Wellness (3)

---

Credit Total: \_\_\_\_\_16

**Fall Sophomore (example)**

CHEM220: Organic Chemistry I (4)  
BIOL202: Genetics (3)  
Historical, Behavioral, and Social Science (3)  
PLA1 (Philosophical, Literary, and Aesthetic Inquiry) (3)  
GAC1 (Global Awareness and Citizenship) (3)

---

Credit Total: \_\_\_\_\_16

**Spring Sophomore(example)**

CHEM221: Organic Chemistry II (4)  
PHYS170: Intermediate General Physics I (4)  
PLA2 (3)  
Elective (3)

---

Credit Total: \_\_\_\_\_14

**Fall Junior (example)**

PHYS171: Intermediate General Physics II (4)  
CHEM316: Quantitative Analysis (4)  
CHEM320: Physical Chemistry I (4)\*  
CRJS102: Intro Criminal Justice (3)

---

Credit Total: \_\_\_\_\_15\*

**Spring Junior (example)**

CHEM317: Instrumental Analysis (4)  
CRJS240: Law Enforcement (3)  
GAC2 (3)  
Electives (6)

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Credit Total: \_\_\_\_\_16

**Fall Senior (example)**

CHEM3xx/4xx: Upper level CHEM elective (3)\*  
CRJS310: Criminal Investigation (3)  
Oral Communication (3)  
GAC3 (3)  
Electives (3)

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Credit Total: \_\_\_\_\_15\*

**Spring Senior (example)**

CHEM410: Biochemistry I (4)  
CRJS360: Criminal Procedure (3)  
PLA3 (3)  
Electives (4)

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Credit Total: \_\_\_\_\_14

\* When the Fall semester of the junior year occurs in an even year (e.g., 2016) as written. When the Fall semester of the junior year occurs in an odd year (e.g., 2017), CHEM320 and CHEM3xx/4xx switch places and the credit totals become 14 and 16 for the junior and senior Fall semesters respectively. Also, the distribution of free electives allows for considerable flexibility for taking CHEM3xx/4xx as they become available and strike the interest of particular students in a given semester in the last two years of study.



**Nanoscience Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
MATH141: Calculus I (3)  
CHEM120: Principles of Chemistry I (4)  
NANO105: Intro to Nanoscale Science (3)

Credit Total: \_\_\_\_\_14

**Spring Freshman (example)**

MATH142: Calculus II (3)  
CHEM121: Principles of Chemistry II (4)  
PHYS170: Intermediate General Physics I (4)  
HBS1 (Historical, Behavioral, and Social Science) (3)

Credit Total: \_\_\_\_\_14

**Fall Sophomore (example)**

CHEM220: Organic Chemistry I (4)  
CHEM316: Quantitative Analysis (4)  
PHYS171: Intermediate General Physics II (4)  
PLA1 (Philosophy, Literature, Aesthetics) (3)

Credit Total: \_\_\_\_\_15

**Spring Sophomore (example)**

CHEM221: Organic Chemistry II (4)  
NANO210: Nano Tools and Techniques (3)  
GAC1 (Global Awareness and Citizenship) (3)  
PLA2 (3)  
Elective (3)

Credit Total: \_\_\_\_\_16

**Fall Junior (example)**

CHEM301 or Chemistry In-depth (3/4)  
CHEM499 (Nano research) (2)  
NANO306: Characterization of Nano-structures (3)

HBSII (3)  
Wellness (3)

Credit Total: \_\_\_\_\_15\*

**Spring Junior (example)**

CHEM321 Quantum Chemistry or  
Chemistry In-depth (4)  
CHEM499 (Nano research) (2)  
GAC2 (3)  
NANO304: Generation & Modification, of  
Nanostructures (3)  
Electives (3)

Credit Total: \_\_\_\_\_15

**Fall Senior (example)**

CHEM301 or Chemistry In-depth (3/4)  
Oral Communication (3)  
GAC (3)  
Electives (7)

Credit Total: \_\_\_\_\_16\*

**Spring Senior (example)**

CHEM321 Quantum Chemistry or  
Chemistry In-depth (4)  
Chemistry In-depth (4)  
PLA3 (3)  
Electives (4)

Credit Total: \_\_\_\_\_15

\* When the Fall semester of the junior year occurs in an odd year (e.g., 2015) as written. When the Fall semester of the junior year occurs in an even year (e.g., 2016), CHEM301 and Chemistry In-depth switch places and the credit totals become 14 and 17 for the junior and senior Fall semesters respectively. Also, the distribution of free electives allows for considerable flexibility for taking CHEM3--/4-- as they become available and strike the interest of particular students in a given semester in the last two years of study.

## Communication Studies – Bachelor of Arts

For students entering Fall 2019

### INTELLECTUAL FOUNDATION (9 cr.)

- ENGL100: Composition
- COMM102, COMM103, or COMM104
- Math and Computational course (101 or higher)

### KNOWLEDGE AND INQUIRY (21 cr.)

#### Natural Science (6 cr.)

- Natural Science w/lab
- Natural Science w/o lab (or w/lab)

#### Historical, Behavioral, & Soc. Sci. Inquiry (6 cr.)

- Course 1
- Course 2

#### Philosophical, Literary, and Aesthetic Inquiry (9 cr.)

- Visual and Performing Arts
- Philosophy or Literature
- Philosophy, Literature or Visual and Performing Arts

### PERSONAL AND SOCIAL RESPONSIBILITY (12 cr.)

#### Global Awareness and Citizenship (9 cr.)

- GAC-H (e.g. HIST101 or HIST102)
- GAC or Lower Level Foreign Language
- GAC or Lower Level Foreign Language

#### WELLNESS (3 cr.)

- Course 1

### UNIVERSITY AND B.A. REQUIREMENTS (7 cr.)

- COMM119: First Year Seminar\*

#### Seminars (need 2 of 3 categories)

- #328Sem: Humanities, Social Sci., or Natural Sci./Math
- #328Sem: Humanities, Social Sci., or Natural Sci./Math

#### Language (12 cr. or achieving Level 4 proficiency)

- Level 1
- #Level 2
- #Level 3
- #Level 4

### GENERAL EDUCATION ELECTIVES (17 cr.)

#### Competencies (overlays) – 2 of each needed

Writing Competency, Critical Thinking, Experiential Learning  
**78 Total Credits Gen Ed and Univ. Requirements**

### MAJOR AREA AND COGNATE (42 cr.)

#### Core Courses (required of all tracks) (12 cr.)

- COMM100: Introduction to Communication
- COMM150: Introduction to Mass Communication
- #COMM330: Cultural Studies in Mass Communication
- #COMM400: Communication Capstone Seminar

#### COMMUNICATION TRACKS (18 cr.) – must complete one Journalism

- COMM190: Writing for the Mass Media
- #COMM201/202/203: Practicum I\*, II\*, and III\* **or** #COMM369: Internship

- #COMM290: Multimedia Journalism

- #COMM393: News Editing

- #COMM493: Online Journalism

- #COMM494: Communication Law and Ethics

#### Electronic Media

- COMM190: Writing for the Mass Media

- #COMM201/202/203: Practicum I\*, II\*, and III\* **or** #COMM369: Internship

- #COMM295: Radio Journalism

- #COMM310: Television Journalism

- #COMM315: Corporate Video Production **or**

#COMM317: Radio Workshop **or**

#COMM 370: Digital Video Editing

- #COMM494: Communication Law and Ethics

#### Advertising and Public Relations

- COMM190: Writing for the Mass Media

- #COMM201/202/203: Practicum I\*, II\*, and III\* **or** #COMM369: Internship

- #COMM292: Principles of Advertising

- #COMM333: Public Relations

- #COMM495: Public Relations Writing

- #COMM494: Communication Law and Ethics

#### Organizational and Presentational Communication

- COMM103: Small Group Communication **or** COMM104: Interpersonal Communication

- #COMM208: Communication Theory

- #COMM300: Organizational Communication **or**

#COMM320: Business Communication

- #COMM303: Argumentation and Debate **or**

#COMM345: Advanced Public Speaking

- #COMM360: Communication Analysis **or**

#COMM405: Communication and Responsibility

- #COMM369: Internship

### COMMUNICATION ELECTIVES (12 cr.)

(at least six credits must be advanced level indicated by #)

### 42 Credits of Major Requirements

# Criminal Justice – Associate of Arts

Effective Fall 2016

<b>General Education Courses</b>	<b>30 sh</b>
<b>Intellectual Foundation 9 sh</b>	
<b>Written Communication 3 sh</b>	<b>3</b>
ENGL100: Composition	
<b>Oral Communication 3 sh</b>	<b>3</b>
<b>Mathematical and Computational Thinking 3 sh</b>	<b>3</b>
<b>Critical Thinking</b> <i>(not counted in 9 credits)</i>	
CT Competency 1	

<b>Knowledge and Inquiry 12 sh</b>	
<b>Natural Science Inquiry (Lab) 3 sh</b>	<b>3</b>
<b>Historical, Behav., &amp; Social Science Inquiry 6 sh</b>	
SOCI101: Introduction to Sociology	3
PSYC100: Intro to Psychological Science	3
<b>Philosophical, Literary, &amp; Aesthetic Inquiry 3 sh</b>	<b>3</b>

<b>Personal and Social Responsibility 9 sh</b>	
<b>Global Awareness and Citizenship 6 sh</b>	
GAC	3
GAC-Historical Foundation course	3
<b>Wellness 3 sh</b>	<b>3</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
CRJS119: Freshmen Seminar	
<b>Major Area and Cognate Courses</b>	<b>30 sh</b>
CRJS102: Introduction to Criminal Justice	3
CRJS240: Law Enforcement	3
CRJS260: Criminal Law	3
CRJS302: Criminology	3
CRJS301: Juvenile Justice	3
CRJS304: Criminal Justice Ethics	3
CRJS305: Corrections	3
<b>Electives toward the major</b>	
Elective	3
Elective	3
Elective	3
*Note – CRJS210: Diversity in Criminal Justice is strongly suggested as one of the electives.	

**AA in Criminal Justice  
Suggested Course Sequence**

**Abbreviations:** PLA (Philosophical, Literary and Aesthetic); HBSS (Historical, Behavioral and Social Sciences); NS (Natural Sciences); GAC (Global Awareness and Citizenship); GAC-H (Global Awareness and Citizenship Historical Foundation); MCT (Mathematical and Computational Thinking); WEL (Wellness)

**Fall Freshman (example)**

ENGL100: Composition  
CRJS102: Introduction to Criminal Justice  
General Education: NS  
SOC1101: Intro to Sociology Gen Ed: HBSS  
MATH Gen Ed: MCT  
CRJS119: Freshmen Seminar  
Credit Total: 16

**Spring Freshman (example)**

CRJS240: Law Enforcement  
PSYC100: Intro to Psychology Gen Ed: HBSS  
CRJS302: Criminology  
Elective  
General Education: GAC  
Credit Total: 15

**Fall Sophomore (example)**

CRJS260 Criminal Law  
General Education: GAC-H  
General Education: OC  
CRJS305: Corrections  
Elective  
Credit Total: 15

**Spring Sophomore (example)**

CRJS301: Juvenile Justice  
CRJS304: Criminal Justice Ethics  
General Education PLA  
Elective  
General Education WEL  
Credit Total: 15

**PLEASE NOTE**

- This check sheet of suggested course progression is a guide. Students must meet with their advisors each semester prior to registration for guidance on academic progress and course offerings. This is a hypothetical 4 semester map. It is not expected or likely that any student would take the courses required for the AA in exactly the above listed sequence.
- Graduation in two years requires that students enroll in and pass 15 new credits with the guidance of their academic advisor each semester.
- General education requirements dictate that students must take a MATH course above MATH100 or MATH009 to satisfy those requirements. Some students may be required to take a preparatory Math Course in order to be eligible for a MATH course that satisfies the general education requirement, which could cause them to graduate with more than the required 60 credits for the AA. MATH107 is strongly suggested as the selection.
- General education requirements dictate that students must take ENGL100. Some students may be required to take ENGL090 prior to ENGL100, which could cause them to graduate with more than the required 60 credits for the AA.
- Students select 9 credits (3 courses) of elective choice with guidance from their Academic Advisor. These credits may be taken in any semester and can include criminal justice and non-criminal justice courses. CRJS210: Diversity in Criminal Justice is strongly suggested as one of the electives.

# Criminal Justice - Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	3 sh
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	3 sh
<b>Mathematical and Computational Thinking</b>	3 sh
MATH107: Basic Statistics	
<b>Critical Thinking</b>	
CT Competency 1 CRJS 301	
CT Competency 2 CRJS 490	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	6 sh
Natural Science with Lab	
Natural Science with or without Lab	
<b>Historical, Behavioral, and Social Science Inquiry</b>	6 sh
PSYC100: Introduction to Psychological Science	
SOCI101: Introduction to Sociology	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	9 sh
Aesthetics:	
Philosophy/Literature:	
PLA:	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	9 sh
GAC:	
GAC:	
GAC-H:	
<b>Wellness</b>	3 sh
WELL:	
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
CRJS119: Freshman Seminar	

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Required Courses</b>	36 sh
CRJS102: Introduction to Criminal Justice (min. grade C)	3 sh
#CRJS205: Drug Abuse	3 sh
#CRJS210: Diversity in Criminal Justice	3 sh
#CRJS240: Law Enforcement	3 sh
#CRJS260: Criminal Law	3 sh
#CRJS301: Juvenile Justice	3 sh
#CRJS302: Criminology	3 sh
#CRJS305: Corrections	3 sh
#CRJS330: World Criminal Justice Systems	3 sh
#CRJS360: Criminal Procedure	3 sh
#CRJS425: Senior Seminar	3 sh
#CRJS490: Criminal Justice Research	3 sh

<b>Electives toward the major</b>	<b>24 sh</b>
At least 12 sh must be 300 or 400 level courses	
Elective	
Elective	
Elective	
Elective	
#Elective	
#Elective	
#Elective	
#Elective	


42 sh must be # advanced coursework



**Criminal Justice**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
CRJS119: Freshman Seminar (1)  
CRJS102: Introduction to Criminal Justice (3)  
SOC101: Introduction to Sociology (3)  
PSYC100: Introduction to Psychological Science (3)  
Wellness General Education (3)

Credit Total: 16

**Spring Freshman (example)**

CRJS240: Law Enforcement (3)  
CRJS205: Drug Abuse (3)  
General Education (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Fall Sophomore (example)**

CRJS260: Criminal Law (3)  
CRJS302: Criminology (3)  
General Education (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Spring Sophomore(example)**

CRJS301: Juvenile Justice (3)  
CRJS210: Diversity in Criminal Justice (3)  
MATH107: Basic Statistics (3)  
General Education (3)  
Elective toward major (3)

Credit Total: 15

**Fall Junior (example)**

CRJS330: World Criminal Justice Systems (3)  
CRJS305: Corrections (3)  
General Education (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Spring Junior (example)**

CRJS360: Criminal Procedure (3)  
CRJS490: Criminal Justice Research (3)  
General Education (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Fall Senior (example)**

CRJS425: Senior Seminar (3)  
General Education (3)  
General Education (2)  
Elective toward major (3)  
Elective toward major (3)

Credit Total: 14

**Spring Senior (example)**

Elective toward major (3)  
Elective toward major (3)  
Elective toward major (3)  
Elective toward major (3)  
Elective toward major (3)

Credit Total: 15

# Criminal Justice: Conservation Law Enforcement - Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	3 sh
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	3 sh
<b>Mathematical and Computational Thinking</b>	3 sh
MATH107: Basic Statistics	
<b>Critical Thinking</b>	
CT Competency 1 CRJS 301	
CT Competency 2 CRJS 490	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	6 sh
Natural Science with Lab (BIOL102, CHEM101, or CHEM 105)	
Natural Science with or without Lab	
<b>Historical, Behavioral, and Social Science Inquiry</b>	6 sh
PSYC100: Introduction to Psychological Science	
SOCI101: Introduction to Sociology	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	9 sh
Aesthetics:	
Philosophy/Literature:	
PLA:	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	9 sh
GAC:	
GAC:	
GAC-H:	
<b>Wellness</b>	3 sh
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
CRJS119: Freshman Seminar	

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Required Courses</b>	36 sh
CRJS102: Introduction to Criminal Justice (min. grade C)	3 sh
#CRJS205: Drug Abuse	3 sh
#CRJS210: Diversity in Criminal Justice	3 sh
#CRJS240: Law Enforcement	3 sh
#CRJS260: Criminal Law	3 sh
#CRJS301: Juvenile Justice	3 sh
#CRJS302: Criminology	3 sh
#CRJS305: Corrections	3 sh
#CRJS330: World Criminal Justice Systems	3 sh
#CRJS360: Criminal Procedure	3 sh
#CRJS425: Senior Seminar	3 sh
#CRJS490: Criminal Justice Research	3 sh

<b>Track in Conservation Law Enforcement</b>	<b>15 sh</b>
#CRJS220: Conservation Law Enforcement	
#CRJS309: Environmental Justice	
ENVT101: Intro to Environmental Studies	
One of the following:	
#CRJS310: Criminal Investigation OR	
#CRJS304: Criminal Justice Ethics	
One of the following:	
#RECR320: Interpreting the Environment OR	
#RECR355: Outdoor Recreation	

<b>Electives toward the major</b>	<b>9 sh</b>
Elective	
Elective	
Elective	

42 sh must be # advanced coursework

**Conservation Law Enforcement Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
CRJS119: Freshman Seminar (1)  
CRJS102: Introduction to Criminal Justice (3)  
SOC1101: Introduction to Sociology (3)  
PSYC100: Introduction to Psychological Science (3)  
Wellness General Education (3)

Credit Total: 16

**Fall Sophomore (example)**

CRJS302: Criminology (3)  
CRJS260: Criminal Law (3)  
CRJS220: Conservation Law Enforcement (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Fall Junior (example)**

CRJS330: World Criminal Justice Systems (3)  
CRJS305: Corrections (3)  
CRJS304: Ethics OR  
CRJS310: Criminal Investigation (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Fall Senior (example)**

CRJS425: Senior Seminar (3)  
General Education (3)  
General Education (3)  
General Education (2)  
RECR320: Interpreting the Outdoors (3) OR  
RECR355: Outdoor Recreation (3)

Credit Total: 14

**Spring Freshman (example)**

CRJS240: Law Enforcement (3)  
CRJS205: Drug Abuse (3)  
General Education (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Spring Sophomore (example)**

CRJS360: Criminal Procedure (3)  
CRJS210: Diversity in Criminal Justice (3)  
MATH107: Basic Statistics (3)  
ENVT101: Intro to Environmental Studies (3)  
General Education (3)

Credit Total: 15

**Spring Junior (example)**

CRJS490: Criminal Justice Research (3)  
CRJS301: Juvenile Justice (3)  
CRJS309: Environmental Justice (3)  
General Education (3)  
General Education (3)

Credit Total: 15

**Spring Senior (example)**

General Education (3)  
General Education (3)  
Elective toward major (3)  
Elective toward major (3)  
Elective toward major (3)

Credit Total: 15

# Disability and Community Services - Bachelor of Science

Effective Fall 2018

<b>General Education Credit Total</b>		<b>42</b>
<b>Intellectual Foundation</b>	Min. Grade	<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition (3 sh)	C-	
WC: Assumed by major coursework		
WC: Assumed by major coursework		
<b>Oral Communication</b>		<b>3 sh</b>
COMM103 Recommended	C-	
<b>Mathematical and Computational Thinking</b>		<b>3 sh.</b>
<b>Critical Thinking</b>		
CT: Assumed by major coursework		
CT: Assumed by major coursework		

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry</b>		<b>6 sh</b>
<b>Historical, Beh., and Social Science Inquiry</b>		<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		<b>9 sh</b>

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		<b>9 sh</b>
SPEC202 required for the major	C	
SOCW110 Recommended		
<b>Wellness</b>		<b>3 sh</b>
<b>Experiential Learning</b>		
EL: Assumed by major coursework		
EL: Assumed by major coursework		

<b>Electives</b>		<b>17 sh</b>
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<b>Major Coursework Credit Total</b>		<b>61</b>
<b>First Year Student Seminar</b>	Min. Grade	<b>1 sh</b>
SPEC119 First Year Seminar	CR	<b>1</b>

<b>Major Area and Cognate Courses</b>		<b>60 sh</b>
<b>Required Special Education Courses</b>		<b>24</b>
SPEC105 Foundations of Special Education	C	
SPEC202 Cultural and Linguistic Diversity	C	GAC
SPEC215 High Incidence Disabilities Support*	C	
SPEC212 Low Incidence Disabilities Support*	C	
SPEC300 Comm. Dis. and Assist. Technology*	C	
SPEC310 Manual Communication and Signing*	C	
SPEC325 Infant/Preschool Special Needs*	C	
SPEC330 Physical Ed. & Rec. for the Disabled*	C	
SPEC338 Positive Behavior Support*	C	

<b>Required Social Work Courses</b>		<b>15</b>
SOCW102 Introduction to Social Work	C	
SOCW201 Human Beh. in the Social Environ. 1*	C	
SOCW203 Human Beh. in the Social Environ. 2*	C	
SOCW4xx Social Work Elective*	C	
SOCW4xx Social Work Elective*	C	

<b>Required Professional Courses</b>		<b>9</b>
SPEC400 Professional Skills and Technology*	C	
SPEC432 Assessing Needs and Transition Planning		
COMM320 Bus. Comm. Or ENGL345 Bus. Writing		

<b>Community Service Agency Field Experience</b>		<b>12</b>
SPEC450 Comm. Ser. Agency Based Field Exp.*	B	

Advising Notes:		
1. In GE requirements: one PLA course must be in philosophy or literature course.		
2. In GE requirements: one GAC course must be in historical foundations		
3. * represents Advanced coursework		



\*Denotes Advanced Coursework

**Disability and Community Services (BS)  
Suggested Course Sequence**

<b>Fall First Year</b>	<b>SH</b>	<b>Spring First Year</b>	<b>SH</b>
SPEC119 Freshman Seminar	1	SOCW102 Introduction to Social Work	3
ENGL100 Composition	3	SPEC 212 Low Incidence Disabilities Support	3
SPE 105 Foundations of Special Education	3	2 General Education Courses	6
3 General Education Courses	9	1 Elective	3
	-		-
	<b>16</b>		<b>15</b>
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
SPEC215 High Incidence Disabilities Support	3	SPEC202 Cultural and Linguistic Diversity	3
SOCW201 Human Beh. in the Social Environ. 1	3	SPEC330 P.E. and Rec for the Disabled	3
2 General Education Courses	6	SOCW203 Human Beh. in the Social Environ. 2	3
1 Elective	3	1 General Education Course	3
	-	1 Elective	3
	<b>15</b>		-
			<b>15</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
SPEC300 Comm. Disorders and Assistive Tech.	3	SPEC325 Infant Preschool Special Needs	3
SPEC310 Manual Communication and Signing	3	SPEC345 Literacy Skills for Students with Dis.	3
1 Social Work Elective	3	2 General Education Courses	6
SPEC338 Positive Behavior Support	3	1 Social Work Elective	3
1 General Education Course	3	1 Elective	3
	-		-
	<b>15</b>		<b>18</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
SPEC400 Professional Skills and Technology	3	SPEC450 Comm. Service Agency Based Field Exp	<b>12</b>
1 General Education Course	3		
COMM320 Business Communication	3		
2 Electives	6		
	-		
	<b>15</b>		

# Elementary Middle Level Education: English, Language Arts, and Reading - Bachelor of Science in Education

Effective Fall 2020

<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition	C	
WC Competency 1		☑
WC Competency 2		☑
<b>Oral Communication</b>	C	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>		<b>3 sh</b>
MATH102: Number Systems	C	
<b>Critical Thinking</b>		
CT Competency 1		☑
CT Competency 2		☑

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>		<b>6 sh</b>
BIOL101: Basic Biology	C-	
GEOS101: Earth Science OR GEOS130: Principles of Geology I	C-	
<b>Historical, Behavioral, and Social Science Inquiry</b>		<b>6 sh</b>
PSYC103: Adolescent Development	C	
HIST201: History of US I OR HIST202: History of US II	C-	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		<b>9 sh</b>
Aesthetics: Art/Music/Theater	C	
ENGL110: Introduction to Literature	C	
ENGL Literature	C	

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		<b>9 sh</b>
(at least one with GAC-Historical Foundation)		
HIST101: World History I or HIST102: World History II	C-	
POLI107: World Politics	C-	
GEOG101: World Regional Geography	C-	
<b>Wellness</b>	C	<b>3 sh</b>
<b>Experiential Learning</b>		
EL Competency 1		☑
EL Competency 2		☑

<b>First Year Student Seminar</b>		<b>1 sh</b>
EDUC119: Freshman Seminar	CR*	1

<b>Major Area and Cognate Courses</b>		<b>77 sh</b>
ELML105: Introduction to Middle Level Methods	C	2
ELML210: Learning Theory	C	3
# ELML330: Language Acquisition Theory	C	3
# ELML415: Advanced Middle Level Methods	C	3
# EDUC335: Assessment & Differentiation	C	3
# EDUC212: Classroom Management in the Elementary and Middle School Setting	C	2
# EDUC436: Disciplinary Literacy	C	3
SPEC204: Cognitive Devel. of Diverse Learners	C	3
# SPEC309: Effective Instructional Strategies for Students with Disabilities	C	3
# SPEC345: Literacy Skills for Students with Disabilities	C	3
Block I Content – ENGL206: Methods I	C	3
# Block II Content – ENGL312: Methods II	C	4
PSYC201: Educational Psychology	C	3
<b>Content Area</b>		
ENGL205: Introduction to Literary Studies	C	3
ENGL235: Teaching Adol & YA Literature	C	3
# ENGL315: Comp Usage and Editing	C	3
# ENGL405: Grammars of English	C	3
<b>Additional Content Area</b>		
CHEM101: Chemistry in the Environment OR CHEM105: Forensic Chemistry	C-	3
PHYS101: Matter & Energy, PHYS110: How Things Work, PHYS135: Meteorology, OR SCI110: Science, Technology, and Society	C-	3
MATH112: Intermediate Algebra	C	3
MATH115: Statistics and Geometry	C	3
MATH Elective	C-	3
<b>Student Teaching and Practicum</b>		
# ELML493: Elementary/Middle Level Student Teaching & Practicum	C	6
# ELML494: Elementary/Middle Level Student Teaching & Practicum	C	6

\*credit/ non credit course

☑ Met in course requirements

# Advanced level course

**Lock Haven University**  
**PreK-Grade 8 Education & Professional Studies**  
**Elementary/Middle Level – ELA**  
**Suggested Course Sequence**

**Fall Freshman**

ENGL100: Composition  
EDUC119: First Year Student Seminar  
MATH102: Number Systems

BIOL101: Basic Biology  
POLI107: World Politics  
HIST101/HIST102 (choose 1)

Credit Total 16

**Spring Freshman**

ENGL110: Introduction to Literature  
MATH115: Statistics & Geometry  
GEOS101: Earth Science or GEOS130: Principles of Geology I

PSYC103: Adolescent Development  
ELML105: Intro to Middle Level Methods  
CHEM101/CHEM105 (choose 1)

Credit Total 17

**Fall Sophomore**

MATH Elective  
HIST201/HIST202 (choose 1)  
PHYS101/PHYS110/PHYS135/SCI110  
(choose 1)  
GEOG101: World Regional Geography

ENGL205: Intro to Literary Studies

Credit Total 15

**Spring Sophomore**

Block I – ENGL206: Methods 1  
PSYC201: Educational Psychology  
ELML210: Learning Theory

SPEC204: Cognitive Development of Diverse Learners

ENGL235: Teaching Adolescent & YA Literature

Credit Total 15

**Fall Junior**

Art/Music/Theater Aesthetic PLA  
MATH112: Intermediate Algebra  
EDUC335: Assessment & Differentiation  
Literature Elective (PLA)  
Wellness

Credit Total 15

**Spring Junior**

ELML415: Adv Middle Level Methods  
Oral Communication  
EDUC436 Disciplinary Literacy  
ENGL315: Comp Usage and Editing  
ELML330: Language Acquisition

Credit Total 15

**Fall Senior**

Block II – ENGL312: Methods II  
SPEC345: Literacy Skills for Stud w/ Dis  
EDUC212: Classroom Management  
SPEC309: Eff. Instr. Strategies  
ENGL405: Grammars of English

Credit Total 15

**Spring Senior**

ELML493: Student Teaching & Practicum  
ELML494: Student Teaching & Practicum

Credit Total 12

# Elementary Middle Level Education: Mathematics - Bachelor of Science in Education

Effective Fall 2020

<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition (3 sh)	C	
WC Competency 1		☐
WC Competency 2		☐
<b>Oral Communication</b>	C	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>		<b>3 sh</b>
MATH102: Number Systems	C	
<b>Critical Thinking</b>		
CT Competency 1		☐
CT Competency 2		☐

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>		<b>6 sh</b>
BIOL101: Basic Biology	C-	
GEOS101: Earth Science or GEOS130: Principles of Geology I	C-	
<b>Historical, Behavioral, and Social Science Inquiry</b>		<b>6 sh</b>
PSYC103: Adolescent Development	C	
HIST201: History of US I or HIST202: History of US II	C-	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		<b>9 sh</b>
Aesthetics: Art/Music/Theater	C	
ENGL110: Introduction to Literature	C	
ENGL Literature	C-	

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b> (at least one with GAC-Historical Foundation)		<b>9 sh</b>
HIST101: World History I or HIST102: World History II	C-	
POLI107: World Politics	C-	
GEOG101: World Regional Geography	C-	
	C	
<b>Wellness</b>		<b>3 sh</b>
<b>Experiential Learning</b>		
EL Competency 1		☐
EL Competency 2		☐

<b>First Year Student Seminar</b>		<b>1 sh</b>
EDUC119: Freshman Seminar	CR*	1

<b>Major Area and Cognate Courses</b>		<b>77 sh</b>
ELML105: Introduction to Middle Level Methods	C	2
ELML210: Learning Theory	C	3
# ELML330: Language Acquisition Theory	C	3
# ELML415: Advanced Middle Level Methods	C	3
# EDUC335: Assessment & Differentiation	C	3
# EDUC212: Classroom Management in the Elementary and Middle School Setting	C	2
# EDUC436: Disciplinary Literacy	C	3
SPEC204: Cognitive Devel. of Diverse Learners	C	3
# SPEC309: Effective Instructional Strategies for Students with Disabilities	C	3
# SPEC345: Literacy Skills for Students with Disabilities	C	3
Block I Content - MATH200: Methods I	C	3
# Block II Content - MATH316: Methods II	C	4
PSYC201: Educational Psychology	C	3
<b>Content Area</b>		
MATH107: Basic Statistics I	C	3
MATH112: Intermediate Algebra	C	3
MATH113: Pre-Calculus	C	3
MATH141: Calculus I	C	3
MATH205: Foundations of Math	C	3
# MATH327: PCK in Sec. Mathematics 1	C	1
# MATH307: Foundations of Geometry	C	3
# MATH427: PCK in Sec. Mathematics 2	C	2
<b>Additional Content Area</b>		
CHEM101: Chemistry in the Environment or CHEM105: Forensic Chemistry	C-	3
PHYS101: Matter & Energy, PHYS110: How Things Work, PHYS135: Meteorology, or SCI110: Science, Technology, and Society	C-	3
<b>Student Teaching and Practicum</b>		
# ELML493: Elementary/Middle Level Student Teaching & Practicum	C	6
# ELML494: Elementary/Middle Level Student Teaching & Practicum	C	6

\*credit/ non credit course  
☐ Competencies met in the major  
# Advanced course



**Elementary/Middle Level – Math  
Suggested Course Sequence**

**Fall Freshman**

ENGL100: Composition (3)  
EDUC119: First Year Student Seminar (1)  
MATH112: Intermediate Algebra  
BIOL101: Basic Biology  
POLI107: World Politics  
HIST101: World History I or HIST102: World History II

Credit Total 16

**Spring Freshman**

ENGL110: Introduction to Literature  
MATH113: Pre-Calculus  
GEOS101 or GEOS130  
ELML105: Intro to Middle Level Methods  
Art/Music/Theater Aesthetic PLA  
PSYC103: Adolescent Development

Credit Total 17

**Fall Sophomore**

MATH107: Basic Statistics  
CHEM101/CHEM105 (choose 1)  
PHYS101/PHYS110/PHYS135/SCI110  
GEOG101: World Regional Geography  
MATH141: Calculus I

Credit Total 15

**Spring Sophomore**

Block I – MATH200: Secondary Methods 1  
PSYC201: Educational Psychology  
ELML210: Learning Theory  
SPEC204: Cognitive Development of Diverse Learn  
MATH205: Foundations of Math

Credit Total 14

**Fall Junior**

HIST201: Hist of US I or HIST202: Hist of US II  
MATH102: Number Systems  
Oral Communication  
SPEC309: Effective Instructional Strategies for Students with Disabilities  
EDUC335: Assessment & Differentiation

Credit Total 15

**Spring Junior**

ELML415: Advanced Middle Level Methods  
Literature Elective (PLA)  
EDUC436: Disciplinary Literacy  
ELML330: Language Acquisition

MATH327: PCK in Sec. Mathematics 1  
Wellness

Credit Total 16

**Fall Senior**

Block II - MATH316: Secondary Math Methods 2  
SPEC345: Literacy Skills for Students with Dis.  
EDUC212: Classroom Management  
MATH427: PCK in Sec. Mathematics 2  
MATH307: Foundations of Geometry

Credit Total 15

**Spring Senior**

ELML493: Student Teaching & Practicum  
ELML494: Student Teaching & Practicum

Credit Total 12

# Elementary Middle Level Education: Science - Bachelor of Science in Education

Effective Fall 2020

<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition (3 sh)	C	
WC Competency 1		☑
WC Competency 2		☑
<b>Oral Communication</b>	C	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>		<b>3 sh</b>
MATH102: Number Systems	C	
<b>Critical Thinking</b>		
CT Competency 1		☑
CT Competency 2		☑

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>		<b>6 sh</b>
BIOL102: Environmental Science	C	
GEOS101: Earth Science	C	
<b>Historical, Behavioral, and Social Science Inquiry</b>		<b>6 sh</b>
PSYC103: Adolescent Development	C	
HIST201: History of US I or HIST202: History of US II	C-	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		<b>9 sh</b>
Aesthetics: Art/Music/Theater	C	
ENGL110: Introduction to Literature	C	
ENGL Literature	C-	

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b> (at least one with GAC-Historical Foundation)		<b>9 sh</b>
HIST101: World History I or HIST102: World History II	C-	
POLI107: World Politics	C-	
GEOG101: World Regional Geography	C-	
<b>Wellness</b>	C	<b>3 sh</b>
<b>Experiential Learning</b>		
EL Competency 1		☑
EL Competency 2		☑

<b>First Year Student Seminar</b>		<b>1 sh</b>
EDUC119: Freshman Seminar	CR*	1

<b>Major Area and Cognate Courses</b>		<b>77 sh</b>
ELML105: Introduction to Middle Level Methods	C	2
ELML210: Learning Theory	C	3
# ELML330: Language Acquisition Theory	C	3
# ELML415: Advanced Middle Level Methods	C	3
# EDUC335: Assessment & Differentiation	C	3
# EDUC212: Classroom Management in the Elementary and Middle School Setting	C	2
# EDUC436: Disciplinary Literacy	C	3
SPEC204: Cognitive Devel. of Diverse Learners	C	3
# SPEC309: Effective Instructional Strategies for Students with Disabilities	C	3
# SPEC345: Literacy Skills for Students with Disabilities	C	3
Block I Content - SCI209: Science Methods 1	C	3
# Block II Content - SCI315: Science Methods II	C	4
MATH115: Statistics and Geometry	C	3
PSYC201: Educational Psychology	C	3
<b>Content Area</b>		
BIOL106: Principles of Biology I	C	3
BIOL107: Principles of Biology II	C	3
CHEM101: Chemistry in the Environment or CHEM105: Forensic Chemistry	C	3
PHYS101: Matter and Energy, PHYS135: Meteorology, or SCI110: Sci Tech	C	3
Physics OR Chemistry course; lab or non-lab	C	3
# BIOL309: Ecology, GEOS130, BIOL306 or any Physics or Chemistry course	C	3
<b>Additional Content Area</b>		
MATH112: Intermediate Algebra	C	3
MATH113: Pre-Calculus	C	3
<b>Student Teaching and Practicum</b>		
# ELML493: Elementary/Middle Level Student Teaching & Practicum	C	6
# ELML494: Elementary/Middle Level Student Teaching & Practicum	C	6

\*credit/ non credit course

☑ Competencies met in the major

# Advanced Course

**Elementary/Middle Level – Science  
Suggested Course Sequence**

**Fall Freshman**

ENGL100: Composition  
EDUC119: First Year Student Seminar (1)  
MATH102: Number Systems  
BIOL102: Environmental Science  
POLI107: World Politics  
HIST101 or HIST102: World History

Credit Total 16

**Spring Freshman**

ENGL110: Introduction to Literature  
MATH115: Statistics & Geometry  
CHEM101/CHEM105 (choose 1)  
PSYC103: Adolescent Development  
ELML105: Intro to Middle Level Methods (2 sh)  
Art/Music/Theater Aesthetic PLA

Credit Total 17

**Fall Sophomore**

ENGL Literature Elective  
MATH112: Intermediate Algebra  
GEOS101 or GEOS130 (Choose 1)  
PHYS101/PHYS135/SCI110 (choose 1)  
GEOG101: World Regional Geography  
Credit Total 15

**Spring Sophomore**

Block I – SCI209: Science Methods 1  
SPEC204: Cog Dev of Div. Learners  
PSYC201: Educational Psychology  
ELML210: Learning Theory  
MATH113: Pre-Calculus  
Credit Total 15

**Fall Junior**

Physics OR Chemistry course; lab or non-lab  
BIOL106: Principles of Biology I  
EDUC335: Assessment & Differentiation  
Literature Elective (PLA)  
Wellness

Credit Total 15

**Spring Junior**

ELML415: Advanced Middle Level Methods  
Oral Communication  
EDUC436: Disciplinary Literacy  
ELML330: Language Acquisition  
BIOL107: Principles of Biology II

Credit Total 15

**Fall Senior**

Block II SCI315: Science Methods II  
EDUC212: Classroom Management  
SPEC309: Effective Instructional Strategies for  
Students with Disabilities  
SPEC345: Literacy Skills for Students with Disabilities

Credit Total 15

**Spring Senior**

ELML493: Student Teaching & Practicum  
ELML494: Student Teaching & Practicum

Credit Total 12

# Elementary Middle Level Education: Social Studies - Bachelor of Science in Education

Effective Fall 2020

<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition (3 sh)	C	
WC Competency 1		☑
WC Competency 2		☑
<b>Oral Communication</b>	C	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>		<b>3 sh</b>
MATH102: Number Systems	C	
<b>Critical Thinking</b>		
CT Competency 1		☑
CT Competency 2		☑

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>		<b>6 sh</b>
BIOL101: Basic Biology	C-	
GEOS101: Earth Science or GEOS130: Principles of Geology I	C-	
<b>Historical, Behavioral, and Social Science Inquiry</b>		<b>6 sh</b>
PSYC103: Adolescent Development	C	
HIST201: History of US I or HIST202: History of US II	C	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		<b>9 sh</b>
Aesthetics: Art/ Music/ Theatre	C	
ENGL110: Introduction to Literature	C	
ENGL Literature	C-	

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b> (at least one with GAC-Historical Foundation)		<b>9 sh</b>
HIST111: Global History I or HIST112: Global History II	C	
POLI107: World Politics	C	
GEOG101: World Regional Geography	C	
<b>Wellness</b>	C	<b>3 sh</b>
<b>Experiential Learning</b>		
EL Competency 1		☑
EL Competency 2		☑

<b>First Year Student Seminar</b>		<b>1 sh</b>
EDUC119: Freshman Seminar	CR*	1

<b>Major Area and Cognate Courses</b>		<b>77 sh</b>
ELML105: Introduction to Middle Level Methods	C	2
ELML210: Learning Theory	C	3
# ELML330: Language Acquisition Theory	C	3
# ELML415: Advanced Middle Level Methods	C	3
# EDUC335: Assessment & Differentiation	C	3
# EDUC212: Classroom Management in the Elementary and Middle School Setting	C	2
# EDUC436: Disciplinary Literacy	C	3
SPEC204: Cognitive Devel. of Diverse Learners		3
# SPEC309: Effective Instructional Strategies for Students with Disabilities	C	3
# SPEC345: Literacy Skills for Students with Disabilities	C	3
Block I Content - SSED210: SS Methods I	C	3
# Block II Content - SSED316: SS Methods II	C	4
PSYC201: Educational Psychology	C	3
<b>Content Area</b>		
# HIST245: History of PA	C	3
# HIST 300/400: American History	C	3
# HIST 300/400: Non-Western History	C	3
ECON102: Principles of Macroeconomics OR ECON103: Principles of Microeconomics	C	3
<b>Additional Content Area</b>		
CHEM101: Chemistry in the Environment or CHEM105: Forensic Chemistry	C-	3
PHYS101: Matter & Energy, PHYS110: How Things Work, PHYS135: Meteorology, or SCI110: Science Technology	C-	3
MATH112: Intermediate Algebra	C	3
MATH115: Statistics and Geometry	C	3
MATH Elective	C-	3
<b>Student Teaching and Practicum</b>		
# ELML 493: Elementary/Middle Level Student Teaching & Practicum	C	6
# ELML 494: Elementary/Middle Level Student Teaching & Practicum	C	6

\*credit/ non credit course

☑ Met in course requirements

# Advanced level courses

**Elementary/Middle Level – Social Studies**  
**Suggested Course Sequence**

**Fall Freshman**

ENGL100: Composition  
EDUC119: First Year Student Seminar (1sh)  
MATH102: Number Systems  
BIOL101: Basic Biology  
POLI107: World Politics  
HIST111 or HIST112: Global History

Credit Total 16

**Spring Freshman**

ENGL110: Introduction to Literature  
MATH115: Statistics & Geometry  
CHEM101/CHEM105 (choose 1)  
PSYC103: Adolescent Development  
ELML105: Intro to Middle Level Methods (2sh)  
Art/Music/Theater Aesthetic PLA

Credit Total 17

**Fall Sophomore**

ENGL Elective  
HIST201/HIST202 (choose 1)  
PHYS101/PHYS110/PHYS135/SCI110 (choose 1)  
GEOS101: Earth Science or GEOS130: Principles of Geology I

Credit Total 15

**Spring Sophomore**

Block I – SSED210 SS Methods 1  
PYSC201: Educational Psychology  
ELML210: Learning Theory  
SPEC204: Cognitive Development of Diverse Learners  
HIST245: History of PA

Credit Total 15

**Fall Junior**

ECON102/ECON103 (Choose 1)  
MATH112: Intermediate Algebra  
EDUC335: Assessment & Differentiation  
Literature Elective (PLA)  
Wellness

Credit Total 15

**Spring Junior**

ELML415: Advanced Middle Level Methods  
Oral Communication  
EDUC436 Disciplinary Literacy  
HIST300/400 elective  
ELML330: Language Acquisition

Credit Total 15

**Fall Senior**

Block II – SSED316: SS Methods II  
EDUC212: Classroom Management  
SPEC345: Literacy skills for stud w/ dis  
SPEC309: Effective Instructional Strategies for Students with Disabilities  
HIST300/400

Credit Total 15

**Spring Senior**

ELML493: Student Teaching & Practicum  
ELML494: Student Teaching & Practicum

Credit Total 12

English: Literature Concentration - Bachelor of Arts

Effective Fall 2018

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC	
WC	
XX	XXXXXX
<b>Oral Communication</b>	<b>3 sh</b>
XX	XXXXXX
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
XX	XXXXXX
<b>Critical Thinking</b>	
CT	
CT	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (one w/ lab)</b>	<b>6 sh</b>
XX	XXXXXX
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
XXXX	XXXXXX
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Performing Arts course (3)	
Philosophy or Literature (3)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(one course: Historical Foundation)	
<b>Wellness</b>	<b>3 sh</b>
XX	XXXXXX
<b>Experiential Learning (2 units)</b>	

<b>Electives</b>	<b>17 sh</b>

First-Year Seminar	1sh
HUM 119	

<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
English Requirements (min. grade of C- required)	
ENGL205 Intro to Literary Studies (Fall)	
#ENGL220 World Literature (Spring)	
#ENGL225 Core Text/Western Trad (Fall)	
#ENGL230 Brit Lit Before 1800 (Fall)	
#ENGL231 Brit Lit After 1800 (Spring)	
#ENGL240 Amer Lit Before Civil War (Fall)	
#ENGL242 Amer Lit After Civil War (Spring)	
#ENGL336 Shakespeare (Spring)	
#Writing (Choose one)	
ENGL237, ENGL264, ENGL266, ENGL268,	
ENGL315, ENGL345, ENGL357, ENGL360,	
ENGL408	
#Literature electives (Choose five; topics courses can be taken up to 3x, with different topics)	
ENGL328, ENGL400, ENGL402, ENGL404	
ENGL425, ENGL435	
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
XX	XXXXXXXXXX
<b>Degree requirements:</b>	
<b>Seminars (2 of 3)##</b>	<b>6 sh</b>
Humanities 328	
Social Science 328	
Science/Math 328	
<b>Foreign Language Requirement (Level-IV proficiency) #</b>	<b>up to 12 sh</b>
<b>Total credit hours</b>	<b>120</b>

**BA in English: Literature Concentration**  
**Suggested Course Sequence**

**Abbreviations:** PLA (Philosophical, Literary and Aesthetic); HBSS (Historical, Behavioral and Social Sciences); NS (Natural Sciences); GAC (Global Awareness and Citizenship)

*Italics indicate course is offered only in fall or spring semester, as noted*

**Fall Freshman (example)**

*HUM119* (1)  
ENGL 100 (3)  
ENGL100: Composition (3)  
GAC-H (3)  
PLA Inquiry (Performing Arts) (3)  
HBSS Inquiry (3)  
Language 101 (3)

Credit Total: 16

**Spring Freshman (example)**

PLA Inquiry (Literature/Philosophy) (3)  
Natural Science Inquiry (3)  
  
HBSS Inquiry (3)  
Math/Computational Thinking (3)  
Language 102 (3)

Credit Total: 15

**Fall Sophomore (example)**

*ENGL 205* (3)  
*ENGL 225* (3)  
*ENGL 230* (3)  
PLA Inquiry (3)  
Language 201 (3)

Credit Total: 15

**Spring Sophomore(example)**

*ENGL 220* (3)  
*ENGL 231* (3)  
Natural Science (lab) (3)  
Wellness (3)  
Language 202 (3)

Credit Total: 15

**Fall Junior (example)**

*ENGL 240* (3)  
328 Seminar (3)  
ENGL writing (3)  
Free elective (3)  
Free elective (3)

Credit Total: 15

**Spring Junior (example)**

*ENGL 242* (3)  
*ENGL 336* (3)  
328 Seminar (3)  
Oral Communication (3)  
Free elective (3)

Credit Total: 15

**Fall Senior (example)**

ENGL300-400 (3)  
ENGL300-400 (3)  
ENGL300-400 (3)  
Free elective (3)  
Free elective (3)

Credit Total: 15

**Spring Senior (example)**

ENGL300-400 (3)  
ENGL300-400 (3)  
Free elective (3)  
Free elective (3)  
Free elective (2)

Credit Total: 14

# English: Writing Concentration - Bachelor of Arts

Effective Fall 2018

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC	
WC	
XX	XXXXXX
<b>Oral Communication</b>	<b>3 sh</b>
XX	XXXXXX
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
XX	XXXXXX
<b>Critical Thinking</b>	
CT	
CT	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b> (one w/ lab)	<b>6 sh</b>
XX	XXXXXX
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
XX	XXXXXX
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Performing Arts course (3)	
Philosophy or Literature course (3)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(One course: Historical Foundation)	
<b>Wellness</b>	<b>3 sh</b>
XX	XXXXXX
<b>Experiential Learning (2 units)</b>	

<b>Electives</b>	<b>17 sh</b>

First-Year Seminar	1 sh
HUM 119	

<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
English Requirements (min. grade of C-required)	
ENGL205 Intro to Literary Studies (Fall)	
#ENGL225 Core Texts/Western Tradition (Fall)	
#ENGL230 Brit Lit Before 1800 (Fall) or ENGL231 Brit Lit After 1800 (Spr)	
#ENGL240 Amer Lit Bef Civil War (Fall) or ENGL242 Amer Lit After Civil War (Spr)	
#Four 300- or 400-level literature courses	
Choose from ENGL336 (Spring); ENGL328; ENGL400, ENGL402, ENGL404, ENGL425, ENGL435 (Topics courses can be taken up to 3 times, with different topics)	
#ENGL315 Comp Usage & Editing (Spring)	
#ENGL357 Adv Comp, Rhetoric & Writing	
#Two writing courses (from the following: ENGL237, ENGL264, ENGL266, ENGL268, ENGL345, ENGL360, ENGL408)	
#Two English electives (200- to 400-level)	
XX	XXXXXX
XX	XXXXXX
XX	XXXXXX
XX	XXXXXX
XX	XXXXXX
XX	XXXXXX
XX	XXXXXX
<b>Degree requirements:</b>	
<b>Seminars (2 of 3) ##</b>	<b>6 sh</b>
Humanities 328	
Social Science 328	
Science/Math 328	
<b>Foreign Language Requirement (Level-IV proficiency) #</b>	<b>up to 12 sh</b>




<b>Total credit hours</b>	<b>120</b>

# = BOG Advanced Coursework

**BA in English: Writing Concentration  
Suggested Course Sequence**

**Abbreviations:** PLA (Philosophical, Literary and Aesthetic); HBSS (Historical, Behavioral and Social Sciences); NS (Natural Sciences); GAC (Global Awareness and Citizenship)  
*Italics indicate course is offered only in fall or spring semester, as noted*

**Fall Freshman (example)**

*HUM 119* (1)  
ENGL100: Composition (3)  
General Education (8)  
Language 101 (3)

Credit Total: 15

**Spring Freshman (example)**

PLA Inquiry (Literature or Philosophy) (3)  
HBSS (3)  
Math/Computational Thinking (3)  
Natural Science (3)  
Language 102 (3)

Credit Total: 15

**Fall Sophomore (example)**

*ENGL 205* (3)  
*ENGL225* (3)  
*ENGL230 or 240* (3)  
GAC-H (3)  
Language 201 (3)

Credit Total: 15

**Spring Sophomore (example)**

*ENGL 231* (3)  
*ENGL 242* (3)  
Natural Science (lab) (3)  
Language 202 (3)  
Free elective (3)

Credit Total: 15

**Fall Junior (example)**

ENGL 300-400 (3)  
ENGL 300-400 (3)  
*ENGL 230 or 240* (3)  
Wellness (3)  
Free elective (3)

Credit Total: 15

**Spring Junior (example)**

*ENGL315* (3)  
ENGL 300-400 (3)  
ENGL300-400 (3)  
328 Seminar (3)  
Oral Communication (3)

Credit Total: 15

**Fall Senior (example)**

ENGL 300-400 (3)  
ENGL writing (3)  
328 Seminar (3)  
Free elective (3)  
Free elective (3)

Credit Total: 15

**Spring Senior (example)**

*ENGL 357* (3)  
ENGL300-400 (3)  
ENGL elective (3)  
ENGL elective (3)  
Free elective (3)

Credit Total: 15

# Finance, Insurance and Risk Management – Bachelor of Science

Effective Fall 2021

GENERAL EDUCATION REQUIREMENTS (42 sh)		MAJOR CORE -- REQUIRED FOR ALL (42 sh)	
<b>INTELLECTUAL FOUNDATION</b> 9 sh Taken		<i>Note: A minimum GPA of 2.0 is required in the major</i>	
<b>Written Communication</b> 3 sh		<b>Recommended before Junior Year</b> 21 sh Taken	
ENGL100: Composition		MANG105: Introduction to Business 3 sh BUSINESS Co	
WC Competency 1: ENGL345		<i>Upper-level transfer students may substitute a major elective</i>	
WC Competency 2: MANG475		<i>Meets FY5 requirement</i>	
<b>Oral Communication</b> 3 sh		COMP150: Introduction to Computers 3 sh BUSINESS Co	
<b>Mathematical and Computational Thinking</b> 3 sh		ACCT110: Financial Accounting 3 sh BUSINESS Co	
MATH107: Basic Statistics I		ACCT115: Management Accounting # 3 sh BUSINESS Co	
<b>Critical Thinking</b>		<i>Prerequisite: ACCT110</i>	
CT Competency 1: PHIL102/425		ECON103: Principles of Microeconomics 3 sh BUSINESS Co	
CT Competency 2: MANG475		MRKT200: Introduction to Marketing 3 sh BUSINESS Co	
		COMP250: Advanced Microcomputer Apps # 3 sh BUSINESS Co	
		<i>Prerequisite: COMP150, &amp; grade "C" or better in MATH107</i>	
<b>KNOWLEDGE &amp; INQUIRY</b> 21 sh		<b>Recommended for Juniors &amp; Seniors</b> 15 sh	
<b>Natural Science Inquiry</b> (at least 1 lab science) 6 sh		MANG315: Management: Concepts & Strategi 3 sh BUSINESS Co	
		<i>Prerequisite: 45 semester hours when course begins</i>	
<b>Historical, Behavioral, and Social Science Inquiry</b> 6 sh		ECON340: Money and Banking # 3 sh FINANCE Core	
ECON102: Principles of Macroeconomics		<i>Prerequisite: ECON102</i>	
<b>Philosophical, Literary, and Aesthetic Inquiry</b> 9 sh		MANG325: Financial Management # 3 sh FINANCE Core	
(at least 1 Visual or Performing Arts.)		<i>Prerequisite: ECON102/ECON103 &amp; ACCT110</i>	
PHIL102: Ethics (or PHIL425 in GAC)		MANG302: Business Law I # 3 sh BUSINESS Co	
		<i>Prerequisite: 60 semester hours</i>	
		FINA (MANG) 307 EL: Budgeting 3 sh FINANCE Core	
		FINA NEW Course: Intro to Risk and Insuranc 3 sh FINANCE Core	
<b>PERSONAL &amp; SOCIAL RESPONSIBILITY</b> 12 sh		<b>For Seniors Only</b> 3 sh	
Global Awareness & Citizenship (at least 1 GAC #) 9 sh		MANG475: Capstone/Strategic Mgmt # 3 sh BUSINESS Core	
ENGL345: Business Writing #		<i>Prerequisites: MANG325</i>	
HIST101/HIST102: World History I or II		<i>Must have 75 sh to register and 90 when course begins.</i>	
<b>Wellness</b> 3 sh			
<b>Experiential Learning</b>		Major electives include any ACCT, COMP, ECON, MANG, OR MRKT course, as well as COMM333, GEOG440, HIST205, PHIL425, POLI260, POLI315, POLI322, POLI325, POLI330, POLI350, PSYC235 and PSYC313. Internships can count for up to 6 credits in the major.	
EL Competency 1 (1 unit)			
EL Competency 2 (1 unit)			
OR Internship (1 credit = 2 units)			
<b>ELECTIVES (Internships strongly advised!) (18 sh)</b>		<b>CONCENTRATIONS IN BUSINESS ADMINISTRATION</b>	
		<i>(Shown on the back of this sheet)</i>	
		To meet requirements for this degree, students MUST have a minimum of 18 credits beyond the core (above). Options include:	
		<ul style="list-style-type: none"> <li>• One concentration and additional major electives to make up the 18 total.</li> <li>• Two concentrations, using some of your Electives to meet the required number of courses for both concentrations.</li> </ul>	
		<i>Note: Students may double count 2 courses to meet requirements for 2 concentrations, but 2 concentrations require 30 business credits beyond the cc</i>	
<b>WARNING: MATH COURSES MAY BE REQUIRED IF math placement score is BELOW 9 in:</b>			
Cat. 1, MATH 009 is required as a 0 credit course			
Cat. 2, MATH100 is required as a gen ed elective			
Cat. 3, MATH112 is required as a gen ed elective			
# Designates advanced coursework			

FIRM - Finance, Insurance, and Risk Management - 18 SH									
REQUIRED CORE:					CONCENTRATION ELECTIVES (Select 3):				
FINA 331	NEW Course: Financial Risk Management	3 sh			ECON350	Comparative Economic Systems	3 sh	*	
	<i>Prerequisites: MANG325</i>				ECON355	International Trade and Finance	3 sh	*	
FINA 332	NEW Course: Property & Liability Insurance (Personal and Corp)	3 sh			ECON410	Econometrics	3 sh		
	<i>Prerequisites: NEW FINA Intro to Risk and Insurance</i>				FINA 334	Financial Modeling	3 sh	*	
FINA 333	NEW Course: Life and Health Insurance	3 sh			MANG 430	International Financial Management	3 sh	*	
	<i>Prerequisites: NEW FINA Intro to Risk and Insurance</i>				MANG326/FIN	Fundamentals of Investment Mgmt	3 sh	*	
					MANG360	Small Business Finance & Accounting (P	3 sh	*	
FIP - Finance, Investment, and Planning - 18 SH									
REQUIRED CORE:					CONCENTRATION ELECTIVES (Select 3)**:				
FINA 334	NEW Course: FINA Financial Modeling	3 sh			ACCT300	Cost Accounting			
	<i>Prerequisites: MANG325</i>				ACCT335	Intermediate Accounting 1			
FINA 326	MANG326 Fundamentals of Investment Management	3 sh			ACCT340	Intermediate Accounting 2			
	<i>Prerequisite: MANG325</i>				ACCT420	Auditing			
MANG305	Operations/Production Mgmt	3 sh			ECON350	Comparative Economic Systems			
	<i>Prerequisite: 45 COMPLETED semester hours when course begins</i>				MANG 430	International Financial Management			
** Students are required to participate in "Students' Investment Club" (SIC) and "Students' Investment Fund"(SIF). ?????					ECON360	Current Economic Problems			
					ECON410	Econometrics			
					FINA 331	NEW Course: Financial Risk Management			
					MANG360	Small Business Finance & Accounting (Prerequisite: MANG325 )			
Warning: *All courses on this page marked with an asterisk are taught less frequently than once a year.									

# Foreign Language: French – Bachelor of Arts

Effective Fall 2016

<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)		
WC competency 1		
WC competency 2		
<b>Oral Communication</b>		3 sh
<b>Mathematical and Computational Thinking</b>		3 sh.
<b>Critical Thinking</b>		
CT competency 1		
CT competency 2		

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry</b>		6 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>		6 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>		9 sh
Visual or Performing Arts course (3)		
Philosophy or Literature (3)		

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		9 sh
3 sh must provide an historical foundation		
<b>Wellness</b>		3 sh
<b>Experiential Learning (2 units)</b>		
<b>Total General Education Credits</b>		<b>42sh</b>

<b>Electives</b>		<b>32sh</b>

<b>First Year Seminar</b>	<b>1 sh</b>
HIST119: First Year Seminar	

<b>Major Area and Cognate Courses</b>	<b>39 sh</b>
<b>Core Requirements</b>	9 sh
#FREN203: French Civilization I OR FREN204: French Civilization II	
#FREN303: French Literature I OR FREN304: French Literature II	
#FREN320: Francophone Identities	
<b>Study Abroad</b>	6-9 sh
Summer Immersion Program and/or regular semester program. Must be scheduled with advisor and completed after FREN202. Additional courses, up to 15 credits total, may be transferred provided they have LHU equivalent courses.	
<b>French Electives</b>	6-9 sh
Choose from list of approved French courses beyond Level IV	
May include French courses taken abroad or through LHU distance education exchange agreements with other PASSHE universities.	
#####Study abroad and French electives should total 15 sh of coursework taught in French	
<b>Oral Proficiency Test (double majors exempt):</b> Students are required to take the OPI test administered by ACTFL (The American Council on the Teaching of Foreign Languages).	
<b>Area requirements (double majors exempt)</b>	15 sh
Four courses in a second foreign language as determined by placement test (12 sh)	
#	
#	
#	
Foreign Language Core Seminar: (3 sh)	
#LANG328: Francophone and Hispanic Cultures through Film	
<b>Degree requirements:</b>	<b>6 sh</b>
Foreign language Degree Requirements are absorbed in the major	
<b>##Seminars (2 of 3)</b>	
Humanities 328	
Social Science 328	
Science/Math 328	
<b>Total credit hours</b>	<b>120</b>

# denotes advanced course work

Rev 10/14

# Foreign Language: Spanish – Bachelor of Arts

Effective Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC competency 1	
WC competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT competency 1	
CT competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Visual or Performing Arts course (3)	
Philosophy or Literature (3)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST101: World History 1 or HIST102: World History 2	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning (2 units)</b>	
EL competency 1	
EL competency 2	
<b>Total General Education Credits</b>	<b>42sh</b>

<b>Electives</b>	<b>32sh</b>

<b>First Year Seminar</b>	<b>1 sh</b>
HIST119: First Year Seminar	

<b>Major Area and Cognate Courses</b>	<b>39 sh</b>
<b>Core Requirements</b>	<b>9 sh</b>
#SPAN203: Culture of Spain OR SPAN204: Hispanic American Culture	
#SPAN307: Intro. Spanish Literature	
#SPAN308: Intro. Spanish American Lit.	

<b>Study Abroad</b>	<b>6-9 sh</b>
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Must be scheduled with foreign language advisor. An additional 6 credits of Spanish may be transferred to LHU provided they are equivalent to 300 level courses at LHU.

<b>Spanish Electives</b>	<b>6-9 sh</b>
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Choose from list of upper-level Spanish courses at LHU.

##Study abroad and Spanish electives should total 15 sh of coursework taught in Spanish

**Oral Proficiency Test (double majors exempt):** Students are required to take the OPI test administered by ACTFL (The American Council on the Teaching of Foreign Languages).

<b>Area requirements (double majors exempt)</b>	<b>15 sh</b>
Four courses in a second foreign language as determined by placement test (12 sh)	

#	
#	
#	

Foreign Language Core Seminar: (3 sh)

#LANG328: Francophone and Hispanic Cultures through Film

<b>Degree requirements:</b>	<b>6 sh</b>
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**Foreign Language degree requirements are absorbed in the major**

<b>##Seminars (2 of 3)</b>	
Humanities 328	
Social Science 328	
Science/Math 328	

<b>Total credit hours</b>	<b>120</b>
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## Geology: Applied Geology - Bachelor of Science

Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH141: Calculus 1	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
GEOS130: Principles of Geology 1	3
GEOS131: Principles of Geology 2	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
GAC-H	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
BIOL106: Principles of Biology 1	3
BIOL107: Principles of Biology 2 #	3
CHEM120: Principles of Chemistry 1	4
CHEM121: Principles of Chemistry 2 #	4
PHYS130: Physics 1	4
PHYS131: Physics 2 #	4
GEOS213: Introduction to GIS	3
GEOS230: Geomorphology #	3
GEOS301: Invertebrate Paleontology #	3
GEOS305: Mineralogy and Petrology #	4
GEOS315: Sedimentology #	3
GEOS360: Hydrogeology #	4
GEOS415: Stratigraphy #	3
GEOS420: Geology of Energy and Mineral Resources #	4
GEOS430: Structural Geology #	4
GEOS490: Capstone Research Project #	2
Geology Field/Lab Experience	5
A combination of any of the courses below	
GEOS260: Geology Field Methods # (1-5 sh)	
GEOS369: Internship # (1-5 sh)	
GEOS499: Independent Study # (1-5 sh)	

# = Advanced Course Work

**Geology—Applied Geology Track  
Suggested Course Sequence**

<b>Fall Freshman (example)</b>	Credits
ENGL100: Composition	3
SCI119: First Year Student Seminar	1
GEOS130: Principles of Geology 1	3
BIOL106: Principles of Biology 1	3
MATH141: Calculus 1	3
General Education Course	3
Total Credits:	16

<b>Spring Freshman (example)</b>	Credits
GEOS131: Principles of Geology 2	3
BIOL107: Principles of Biology 2	3
General Education Course	3
General Education Course	3
General Education Course	3
Total Credits:	15

<b>Fall Sophomore (example)</b>	Credits
GEOS230: Geomorphology*	3
OR	
GEOS315: Sedimentology**	3
AND	
CHEM120: Principles of Chemistry 1	4
PHYS130: Physics 1	4
GEOS213: Introduction to GIS	3
Total Credits:	14

<b>Spring Sophomore (example)</b>	Credits
GEOS301: Invertebrate Paleontology**	3
OR	
GEOS415: Stratigraphy*	3
AND	
CHEM121: Principles of Chemistry 2	4
PHYS131: Physics 2	4
General Education Course	3
Total Credits:	14

<b>Fall Junior (example)</b>	Credits
GEOS230: Geomorphology*	3
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
OR	
GEOS315: Sedimentology**	3
General Education Courses	6
AND	
Electives	6
Total Credits:	15 or 17

<b>Spring Junior (example)</b>	Credits
GEOS301: Invertebrate Paleontology**	3
GEOS305: Mineralogy and Petrology**	4
OR	
GEOS420: Geology of Energy and Mineral Resources*	4
GEOS415: Stratigraphy*	3
AND	
General Education Courses	6
Geology Field/Lab Experience	2
Total Credits:	15

<b>Fall Senior (example)</b>	Credits
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
OR	
General Education Courses	6
AND	
GEOS490: Capstone Research Project	2
Geology Field/Lab Experience	1
Electives	5
Total Credits:	14 or 16

<b>Spring Senior (example)</b>	Credits
GEOS305: Mineralogy and Petrology**	4
OR	
GEOS420: Geology of Energy and Mineral Resources*	4
AND	
General Education Course	3
Electives	6
Geology Field/Lab Experience	2
Total Credits:	15

Upper Division Majors Courses are only offered every two years.

\* = Offered Only in Odd Ending Years

\*\* = Offered Only in Even Ending Years

# Geology: Engineering Geology - Bachelor of Science

Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH141: Calculus 1	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
GEOS130: Principles of Geology 1	3
GEOS131: Principles of Geology 2	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
GAC-H	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
CHEM120: Principles of Chemistry 1	4
CHEM121: Principles of Chemistry 2 #	4
PHYS170: Intermediate Physics 1	4
PHYS171: Intermediate Physics 2 #	4
PHYS105: Engineering Graphics	3
MATH142: Calculus 2	3
GEOS213: Introduction to GIS	3
GEOS230: Geomorphology #	3
GEOS305: Mineralogy and Petrology #	4
GEOS313: Advanced GIS #	3
GEOS315: Sedimentology #	3
GEOS360: Hydrogeology #	4
GEOS420: Geology of Energy and Mineral Resources #	4
GEOS430: Structural Geology #	4
GEOS450: Geophysics and Tectonics #	4
GEOS490: Capstone Research Project #	2
Geology Field/Lab Experience	4
A combination of any of the courses below	
GEOS260: Geology Field Methods # (1-4 sh)	
GEOS369: Internship # (1-4 sh)	
GEOS499: Independent Study # (1-4 sh)	

# = Advanced Course Work



**Geology—Engineering Geology Track  
Suggested Course Sequence**

<b>Fall Freshman (example)</b>	Credits
ENGL100: Composition	3
SCI119: First Year Student Seminar	1
GEOS130: Principles of Geology 1	3
MATH141: Calculus 1	3
General Education Courses	6
Total Credits:	16

<b>Spring Freshman (example)</b>	Credits
GEOS131: Principles of Geology 2	3
MATH142: Calculus 2	3
General Education Course	3
General Education Course	3
General Education Course	3
Total Credits:	15

<b>Fall Sophomore (example)</b>	Credits
GEOS230: Geomorphology*	3
OR	
GEOS315: Sedimentology**	3
AND	
CHEM120: Principles of Chemistry 1	4
PHYS105: Engineering Graphics	3
GEOS213: Introduction to GIS	3
General Education Course	3
Total Credits:	16

<b>Spring Sophomore (example)</b>	Credits
GEOS313: Advanced GIS**	3
OR	
GEOS415: Stratigraphy*	3
AND	
CHEM121: Principles of Chemistry 2	4
PHYS170: Intermediate Physics 1	4
Geology Field/Lab Experience	1
General Education Course	3
Total Credits:	15

<b>Fall Junior (example)</b>	Credits
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
OR	
GEOS315: Sedimentology**	3
GEOS450: Geophysics and Tectonics**	4
AND	
PHYS171: Intermediate Physics 2	4
Electives	6
Total Credits:	17 or 18

<b>Spring Junior (example)</b>	Credits
GEOS313: Advanced GIS**	3
GEOS305: Mineralogy and Petrology**	4
OR	
GEOS420: Geology of Energy and Mineral Resources*	4
General Education Course	3
AND	
General Education Courses	6
Geology Field/Lab Experience	1
Total Credits:	14

<b>Fall Senior (example)</b>	Credits
GEOS230: Geomorphology*	3
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
OR	
GEOS450: Geophysics and Tectonics**	4
Geology Field/Lab Experience	1
AND	
GEOS490: Capstone Research Project	2
Electives	5
Total Credits:	12 or 18

<b>Spring Senior (example)</b>	Credits
GEOS305: Mineralogy and Petrology**	4
OR	
GEOS420: Geology of Energy and Mineral Resources*	4
General Education Course	3
AND	
Electives	6
Geology Field/Lab Experience	1
Total Credits:	12 or 14

Upper Division Majors Courses are only offered every two years.

\* = Offered Only in Odd Ending Years

\*\* = Offered Only in Even Ending Years

# Geology: Geography and GIS - Bachelor of Science

Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH113: Pre-Calculus	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
GEOS130: Principles of Geology 1	3
GEOS131: Principles of Geology 2	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
GAC-H	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
BIOL106: Principles of Biology 1	3
BIOL107: Principles of Biology 2 #	3
GEOG100: Physical Geography	3
PHYS135: Meteorology	3
GEOS120: Oceanography	3
GEOS213: Introduction to GIS	3
GEOS215: Environmental Geology #	3
GEOS230: Geomorphology #	3
GEOS313: Advanced GIS #	3
GEOS360: Hydrogeology #	4
GEOS451: Coastal and Environmental Oceanography # (Summer course at Wallops Island, VA)	3
GEOS490: Capstone Research Project #	2
Geography Course	
These can be any course above GEOG100 #	15
200+ Level Non-Science supporting courses #	6
Geology Field/Lab Experience	3
A combination of any of the courses below	
GEOS260: Geology Field Methods # (1-3 sh)	
GEOS369: Internship # (1-3 sh)	
GEOS499: Independent Study # (1-3 sh)	

# = Advanced Course Work

**Geology—Geography and GIS Track  
Suggested Course Sequence**

<b>Fall Freshman (example)</b>	Credits
ENGL100: Composition	3
SCI119: First Year Student Seminar	1
GEOS130: Principles of Geology 1	3
BIOL106: Principles of Biology 1	3
MATH113: Pre-Calculus	3
General Education Course	3
Total Credits:	16

<b>Fall Sophomore (example)</b>	Credits
GEOS230: Geomorphology*	3
OR	
GEOS215: Environmental Geology**	3
AND	
GEOG100: Physical Geography	3
General Education Courses	6
GEOS213: Introduction to GIS	3
Total Credits:	15

<b>Fall Junior (example)</b>	Credits
GEOS230: Geomorphology*	3
GEOS360: Hydrogeology*	4
OR	
Geography Course	3
GEOS215: Environmental Geology**	3
AND	
Electives	6
Total Credits:	12 or 13

<b>Fall Senior (example)</b>	Credits
GEOS360: Hydrogeology*	4
Geography Course	3
OR	
GEOS215: Environmental Geology**	3
Geography Course	3
AND	
GEOS490: Capstone Research Project	2
Geology Field/Lab Experience	1
Electives	5

Total Credits:	14 or 15
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<b>Spring Freshman (example)</b>	Credits
GEOS131: Principles of Geology 2	3
BIOL107: Principles of Biology 2	3
General Education Course	3
General Education Course	3
General Education Course	3
Total Credits:	15

<b>Spring Sophomore (example)</b>	Credits
GEOS313: Advanced GIS **	3
OR	
Geography Course	3
AND	
Geography Course	3
GEOS120: Oceanography	3
General Education Course	6
Total Credits:	15

<b>Summer II Sophomore</b>	Credits
GEOS451: Coastal and Environmental Oceanography	3

<b>Spring Junior (example)</b>	Credits
GEOS313: Advanced GIS**	3
OR	
Geography Course	3
AND	
Geography Courses	6
General Education Courses	6
Geology Field/Lab Experience	1
Total Credits:	16

<b>Spring Senior (example)</b>	Credits
200+ Level Non-Science	6
Electives	6
Geology Field/Lab Experience	1
Total Credits:	13

Upper Division Majors Courses are only offered every two years.

\* = Offered Only in Odd Ending Years

\*\* = Offered Only in Even Ending Years

# Geology: Water and Environment - Bachelor of Science

Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH113: Pre-Calculus	3
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
GEOS130: Principles of Geology 1	3
GEOS131: Principles of Geology 2	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
GAC-H	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
BIOL106: Principles of Biology 1	3
BIOL107: Principles of Biology 2 #	3
CHEM120: Principles of Chemistry 1	4
CHEM121: Principles of Chemistry 2 #	4
GEOS120: Oceanography	3
GEOS213: Introduction to GIS	3
GEOS215: Environmental Geology #	3
GEOS230: Geomorphology #	3
GEOS301: Invertebrate Paleontology #	3
GEOS305: Mineralogy and Petrology #	4
GEOS313: Advanced GIS #	3
GEOS315: Sedimentology #	3
GEOS360: Hydrogeology #	4
GEOS361: Aqueous Environmental Geochemistry #	3
GEOS415: Stratigraphy #	3
GEOS430: Structural Geology #	4
GEOS451: Coastal and Environmental Oceanography # (Summer course at Wallops Island, VA)	3
GEOS490: Capstone Research Project #	2
Geology Field/Lab Experience	2
A combination of any of the courses below	
GEOS260: Geology Field Methods # (1-2 sh)	
GEOS369: Internship # (1-2 sh)	
GEOS499: Independent Study # (1-2 sh)	

# = Advanced Course Work

**Geology— Water and Environment Track  
Suggested Course Sequence**

<b>Fall Freshman (example)</b>	Credits
ENGL100: Composition	3
SCI119: First Year Student Seminar	1
GEOS130: Principles of Geology 1	3
BIOL106: Principles of Biology 1	3
MATH113: Pre-Calculus	3
General Education Course	3
Total Credits:	16

<b>Fall Sophomore (example)</b>	Credits
GEOS230: Geomorphology*	3
OR	
GEOS315: Sedimentology**	3
AND	
CHEM120: Principles of Chemistry 1	4
General Education Course	3
GEOS213: Introduction to GIS	3
Total Credits:	13

<b>Fall Junior (example)</b>	Credits
GEOS230: Geomorphology*	3
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
General Education Course	3
OR	
GEOS315: Sedimentology**	3
GEOS215: Environmental Geology**	3
AND	
Electives	6
Total Credits:	12 or 16

<b>Fall Senior (example)</b>	Credits
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
General Education Course	3
OR	
GEOS215: Environmental Geology**	3
AND	
GEOS490: Capstone Research Project	2
General Education Course	3
Geology Field/Lab Experience	1
Electives	3
Total Credits:	12 or 16

\* = Offered Only in Odd Ending Years

<b>Spring Freshman (example)</b>	Credits
GEOS131: Principles of Geology 2	3
BIOL107: Principles of Biology 2	3
General Education Course	3
General Education Course	3
General Education Course	3
Total Credits:	15

<b>Spring Sophomore (example)</b>	Credits
GEOS313: Advanced GIS **	3
GEOS301: Invertebrate Paleontology**	3
OR	
GEOS415: Stratigraphy*	3
AND	
CHEM121: Principles of Chemistry 2	4
GEOS120: Oceanography	3
Total Credits:	13

<b>Summer II Sophomore</b>	Credits
GEOS451: Coastal and Environmental Oceanography	3

<b>Spring Junior (example)</b>	Credits
GEOS313: Advanced GIS**	3
GEOS305: Mineralogy and Petrology**	4
GEOS361: Aqueous Environmental Geochemistry**	3
OR	
GEOS301: Invertebrate Paleontology**	3
General Education Course	3
AND	
General Education Courses	3
Electives	2
Total Credits:	12 or 18

<b>Spring Senior (example)</b>	Credits
GEOS305: Mineralogy and Petrology**	4
GEOS361: Aqueous Environmental Geochemistry**	3
General Education Course	6
AND	
Geology Field/Lab Experience	1
Electives	6
Total Credits:	14 or 17

Upper Division Majors Courses are only offered every two years.

# Health and Physical Education: Bachelor of Science in Education

Effective Fall 2021

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1: HPED493	
WC Competency 2: HPED494	
<b>Oral Communication</b>	<b>3 sh</b>
◆HPED115: Teaching Invasion Sports 1	3
<b>Mathematical and Computational Thinking</b>	<b>3sh</b>
MATH101: Topics in Math or higher (C- or above)	3
<b>Critical Thinking</b>	
CT Competency 1: HPED493	
CT Competency 2: HPED494	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	<b>6 sh</b>
◆HLTH122 Essentials of Anatomy & Phys. NS (lab)#	3
	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
PSYC102 Child Dev. <b>OR</b> PSYC103 Adolescent Dev.	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Aesthetics:	3
Literature:	3
PLA:	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(at least one with GAC-Historical Foundation)	
GAC: SPEC202 Cultural & Linguistic Diversity in Ed	3
GAC-H: HIST101 or HIST102	3
GAC:	3
<b>Wellness</b>	<b>3 sh</b>
@HPED255: Teaching Fitness in K-12 Schools#	3
<b>Experiential Learning</b>	
EL Competency 1: HPED493	
EL Competency 2: HPED494	
<b>General Education Courses</b>	<b>42</b>

<b>First Year Student Seminar</b>	<b>2 sh</b>
◆HPED102 Foundations of PE Seminar	2

<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
◆HPED115: Teaching Invasion Sports 1	OC
@HPED125: Teaching Invasion Sports 2	3
◆HPED130: Teaching Net Sports	3
@HPED210: Teaching Rhythmic Activ. & Dance	3
@HPED213: Teaching Elementary Physical Ed.#	3
@HPED214: Teaching Lifetime Activities	2
@HLTH245: Essentials of Movement #	3
@HPED302: Motor Learning Applied to P.E. #	3
@HLTH204: Foundations of Schl & Com. Hlt. Ed	3
◆HLTH214: Planning & Assessment in School Hlt	3
◆HLTH330: School Health Programs #	3
◆HLTH334: Teaching Nutrition & Con. Health#	3
@HLTH336: Teaching Drug Education#	3
@HLTH341: Teaching Human Sexuality#	3
<i>Select one Swim Course based on Swim Assessment: @HPED134 EWS, ◆HPED222 LGI, @HPED225 LGT, ◆HPED234: WSI</i>	1
<i>Select Coaching Course:</i>	
@HPED160 Coaching Methods & Applications <b>OR</b> ◆HPED162 Principles of Coaching	3
<b>Cognate Courses</b>	<b>12</b>
MATH101 or higher	3
SPEC204 Cognitive Devel. of Diverse Learners	3
PSYC201 Educational Psychology#	3
ENGL360 Technical Writing#	3
<b>◆Professional Semester</b>	<b>15</b>
◆HPED310 Techniques / Strategies of Tchn. PE#	3
◆HPED311 Teaching Health#	3
◆HPED312 Adapted Physical Education#	3
◆HPED314 Measurement for Eval. In HPE#	3
◆SPEC345 Literacy Instruct. for Students w/ Dis#	3
<b>#Student Teaching</b>	<b>12</b>
@HPED493 Elem. Student Teaching & Professional Practicum (IL, WC, EL, CT)#	6
@HPED494 Sec. Student Teaching & Professional Practicum (IL, WC, EL, CT)#	6
<b>Total Major and Cognate Courses</b>	<b>83 sh</b>

(#): BOG Advanced Coursework; (◆): Course offered in fall only;

(@): Course offered in spring only

**Fall Freshman (example)**

ENGL100: Composition (3)  
 HPED102: Foundations of PE Sem. (2)  
 HPED115: Teaching Invasion Sports 1 (3)  
 K&I GE: Historical, Beh, & SS Inq. (3)  
 PSYC102/103: Child Dev. or Ad. Dev. (3)

Credit Total: 14

**Spring Freshman (example)**

HLTH204: Found. Of School/Com Hlth (3)  
 HPED214: Teaching Lifetime Act. (2)  
 MATH GE: Math I (level 101 or higher) (3)  
 ENGL GE: Literature (3)  
 SPEC202: Cultural & Ling. Div in Ed (3)  
 PLA GE: Visual or Performing Art (3)

Credit Total: 17

**Fall Sophomore (example)**

HLTH122: Essentials of A&P (3)  
 HPED130: Teaching Net Sports (3)  
 HLTH214: Plan./Assess in Schl Hlth (2)  
 PLA GE (3)  
 GAC-H: World History 1 or II (3)  
 HPED Coaching Course: HPED160 or 162 (3)

Credit Total:17

**Spring Sophomore(example)**

HPED125: Teaching Invasion Sports 2 (3)  
 HLTH245: Essentials of Movement (3)  
 MATH GE: Math I (level 101 or higher) (3)  
 PSYC201: Educational Psychology (3)  
 HPED Swimming Course (1)  
 SPEC204: Cog. Dev. of Diverse Lrnrs (3)

Credit Total: 16

**Fall Junior (example)**

ENGL360: Technical Writing (3)  
 HPED210: Tchng Rhythmic Activ. & Dnc (3)  
 GAC GE: (3)  
 HLTH330: School Health Programs (2)  
 HLTH334: Teaching Nutrition & Con Hlth (3)  
 GE Natural Science (3)

Credit Total: 17

**Spring Junior (example)**

HPED213: Methods for Tchng Elem PE (3)  
 HPED255: Teaching Fitness in K12 Schls (3)  
 HPED302: Motor Learning App. to PE (3)  
 HLTH336: Teaching Drug Education (3)  
 HLTH341: Teaching Human Sexuality (3)

Credit Total: 15

**Fall Senior (example)**

HPED310: Techniques & Strat of Tch PE (3)  
 HPED311: Teaching Health (3)  
 HPED312: Adapted Physical Education (3)  
 HPED314: Measurement and Eval for HPE (3)  
 SPEC345: Literacy Skills for Studnts w/Dis (3)

Credit Total: 15

**Spring Senior (example)**

HPED493: Elementary Student Teaching (6)  
 HPED494: Secondary Student Teaching (6)

Credit Total: 12

## Health and Physical Education: Aquatics – Bachelor of Science

General Education information below is incorrect. The General Education requirements that became effective fall 2014 apply. Refer to the General Education section of the catalog.

Students must maintain a 2.0 major and overall GPA and at least a C in all courses.

Schedule	Grade		
<b>Required Core</b> <i>(credits)</i>	<b>(23.5)</b>	<b>Aquatics Track Suggested Electives</b> <i>(Select 9 credits)</i>	
_____ HLTH128 Anatomy and Physiology I (3)	_____	_____ HPED--- Teaching Activity courses not taken in Physical Education Core (.5-3.0)	_____
_____ HLTH130 Anatomy and Physiology II (3)	_____	_____ PSYC201 Educational Psychology (3)	_____
_____ HLTH353 Physiology of Exercise (3) HPED352 Kinesiology (2)	_____	_____ PSYC235 Interpersonal Skills and Leadership (3)	_____
_____ HPED016 Strength Training (1)	_____	_____ PSYC250 Social Psychology (3) RECR202 Outdoor Recreation Activities (3)	_____
_____ HPED102 Foundations of Physical Education Seminar (2) HPED103	_____	_____ RECR205 Nutrition for Wellness (3)	_____
_____ Teaching Soccer (.5) HPED105 Teaching	_____	_____ RECR244 Recreation Leadership and Supervision (3)	_____
_____ Basketball (.5) HPED111 Teaching Racquet Sports (1)	_____	_____ RECR301 Exercise Prescription (3) RECR325 Camp Counseling and Admin- istration (3)	_____
_____ HPED113 Teaching Volleyball (.5)	_____		
_____ HPED120 Teaching Baseball/Softball (.5)	_____	<b>General Education Requirements</b>	<i>(42 credits)</i>
_____ HPED210 Teaching Rhythmic Activities and Dance (1)	_____	<b>Wellness</b>	<i>(3 credits)</i>
_____ HPED213 Elementary Physical Education Activities (1)	_____	<b>Humanities</b>	<i>(18 credits)</i>
_____ HPED218 Teaching Tumbling/Gymnastics(.5)	_____	_____ Art/Music/Theatre/Dance (3)	_____
_____ HPED260 Principles and Practices of Conditioning (1)	_____	_____ Art/Music/Theatre/Dance (3)	_____
_____ HPED302 Motor Learning for Physical Education (3)	_____	_____ Literature (3)	_____
		_____ Philosophy (3)	_____
<b>Required Sport Core</b>	<i>(32 credits)</i>	_____ Composition (3)	_____
_____ HLTH320 Drug Education (3) <b>OR</b> HLTH336 Teaching Drug Education (3) SPRT106	_____	_____ Speech (3)	_____
_____ Introduction to Sport Adminis- tration (3)	_____	<b>Natural Sciences/Math</b>	<i>(9 credits)</i>
_____ SPRT305 Psychology of Coaching (3)	_____	_____ Lab Science (3)	_____
_____ SPRT323 Sport and Society (3)	_____	_____ Lab Science (3)	_____
_____ HPED350 Advanced Techniques/Coaching Swimming/Diving (2)	_____	_____ Math (3)	_____
_____ HPED351 Management of Aquatic Programs and Facilities (2)	_____	<b>History/Social Sciences</b>	<i>(12 credits)</i>
_____ HPED222 Lifeguarding Instructor (1) HPED225 Swimming/Lifeguard Training (1) HPED228	_____	_____ World History (3)	_____
_____ Synchronized Swimming (.5) HPED230 Aquacise (.5)	_____	_____ Government/Economics (3)	_____
_____ HPED234 Water Safety Instructor (1) HPED450	_____	_____ Psychology (3)	_____
_____ Professional Field Experience (12)	_____	_____ Sociology/Anthropology/Geography (3)	_____
		<b>Additional Requirements-Overlays</b>	
<b>Aquatics Track Support Courses</b>	<i>(Select 9 credits)</i>	Information Literacy (IL) _____ (2 Units)	
_____ HPED016 Strength Training (1)	_____	Writing Emphasis (WE) _____ Multi-	
_____ HPED228 Synchronized Swimming (.5)	_____	Cultural (MC) _____	
_____ HPED230 Aquacise (.5)	_____	<b>Free Electives</b> <i>(6 credits)</i>	
_____ HPED---Advanced Techniques/Coaching (Not taken in Core) (1-2)	_____	_____	
_____ HLTH202 Care & Prevention of Athletic Injuries (3)	_____	_____	
_____ HLTH301 CPR and Emergency Care (3)	_____	_____	
_____ EDTF300 Educational Technology for Specialized Disciplines (3)	_____	_____	

Check with your advisor to stay current with curriculum changes and options. This is only a guide. Revised 8-12



**Aquatics Track Support Courses**

(select 6.5 credits)

- \_\_\_\_\_ HPED200 Teaching Aerobics (.5) HPED016 \_\_\_\_\_
- \_\_\_\_\_ Strength Training (1) \_\_\_\_\_
- \_\_\_\_\_ HPED--- Advanced Techniques/Coaching \_\_\_\_\_
- \_\_\_\_\_ (Not taken in Core) (1-2) \_\_\_\_\_
- \_\_\_\_\_ HPED228 Synchronized Swimming (.5) HPED230 \_\_\_\_\_
- \_\_\_\_\_ Aquacise (.5) \_\_\_\_\_
- \_\_\_\_\_ HLTH202 Care & Prevention of Athletic Injuries (3) HLTH301 CPR \_\_\_\_\_
- \_\_\_\_\_ and Emergency Care (3) \_\_\_\_\_
- \_\_\_\_\_ HLTH332 Psychological Aspects of Injury and Illness (3) \_\_\_\_\_

**Aquatics Track Supporting Electives**

(select 12 credits)

- \_\_\_\_\_ HPED--- Teaching Activity courses not taken in \_\_\_\_\_
- \_\_\_\_\_ Physical Education Core (.5+) PSYC201 \_\_\_\_\_
- \_\_\_\_\_ Educational Psychology (3) \_\_\_\_\_
- \_\_\_\_\_ PSYC235 Interpersonal Skills and Leadership (3) PSYC250 \_\_\_\_\_
- \_\_\_\_\_ Social Psychology (3) \_\_\_\_\_
- \_\_\_\_\_ RECR202 Outdoor Recreation Activities (3) RECR205 \_\_\_\_\_
- \_\_\_\_\_ Nutrition for Wellness (3) \_\_\_\_\_
- \_\_\_\_\_ RECR244 Recreation Leadership and Supervision (3) \_\_\_\_\_
- \_\_\_\_\_ RECR301 Exercise Prescription (3) \_\_\_\_\_
- \_\_\_\_\_ RECR325 Camp Counseling and Administration (3) \_\_\_\_\_

**Suggested course sequence  
Effective Fall Semester 2012**

**FRESHMAN YEAR**

<b>Fall 1</b>		<b>Spring 2</b>	
HPED103 Teaching Soccer .5		HPED105 Teaching Basketball	.5
HPED102 Foundations of Physical Educ. Seminar 2		HPED120 Teaching Baseball/Softball	.5
HPED111 Teaching Racquet Sports 1		HLTH130 Anatomy and Physiology II	3
HPED113 Teaching Volleyball .5		<i>General Education Elective 3</i>	
HPED200 Teaching Aerobics .5		<i>General Education Elective 3</i>	
HLTH128 Anatomy and Physiology I 3		<i>General Education Elective 3</i>	
<i>General Education Elective 3</i>		<i>General Education Elective 3</i>	
<i>General Education Elective 3</i>			
<b>Total 16.5</b>		<b>Total 16</b>	

**SOPHOMORE YEAR**

<b>Fall 3</b>		<b>Spring 4</b>	
HPED218 Teaching Tumbling/Gymnastics .5		SPRT106 Intro. to Sport Administration	3
HPED260 Practices/Principles of Conditioning 1		SPRT305 Psychology of Coaching	3
HPED302 Motor Learning Applied to Phy. Edu. 3		SPRT323 Sport and Society	3
HLTH320 Drug Education/ <b>OR</b> HLTH336 Teaching Drug Education 3		<i>General Education Elective 3</i>	3
<i>General Education Elective 3</i>		<i>General Education Elective 3</i>	3
<i>General Education Elective 3</i>			
<b>Total 16.5</b>		<b>Total 15</b>	

**JUNIOR YEAR**

<b>Fall 5</b>		<b>Spring 6</b>	
HLTH353 Physiology of Exercise 3		HPED213 Teaching Elem. Phy. Edu. Act.	1
HPED234 Water Safety Instructor 1		HPED222 Lifeguarding Instructor	1
HPED350 Advanced Techniques/Coaching Swimming/Diving 2		HPED225 Swimming/Lifeguard Training	1
HPED351 Management of Aquatic Programs and Facilities 2		Aquatics Track Support	3
HPED352 Kinesiology 2		Aquatics Track Support	.5 or 1
Supporting Elective 3		Supporting Electives	3
<i>General Education Elective 3</i>		<i>General Education Elective 3</i>	3
		<i>Free Elective</i>	2-3
<b>Total 16</b>		<b>Total 14.5 or 16</b>	

**SENIOR YEAR**

<b>Fall 7</b>		<b>Spring 8</b>	
Aquatics Track Support	3	HPED450 Field Experience	12
Aquatics Track Support	3		
Supporting Elective	3		
Free Elective	3		
Free Elective	3		
<b>Total</b>	<b>15</b>		

## Health and Physical Education: Coaching – Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication (WC)</b>	<b>3 sh</b>
ENGL100: Composition	
WC Competency 1 (HPED450)	WC
WC Competency 2 (HPED452)	WC
<b>Oral Communication</b>	<b>3 sh</b>
◆ HPED115: Teaching Invasion Sports I	3
<b>Mathematical and Computational Thinking (MCT)</b>	<b>3 sh</b>
MATH: Level 101 or higher	3
<b>Critical Thinking (CT)</b>	
CT Competency 1 (HPED450)	CT
CT Competency 2 (HPED452)	CT

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (NS)</b>	<b>6 sh</b>
◆ HLTH122: Essentials of Anatomy and Physiology	3
Natural Science GE	
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry (PLA)</b>	<b>9 sh</b>
Philosophy OR Literature	
Visual OR Performing Arts	
Additional PLA course	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship (GAC)</b>	<b>9 sh</b>
<i>One course must meet the historical foundation competency</i>	
HIST 101/102: World History 1 or II	3
<b>Wellness (WEL)</b>	<b>3 sh</b>
HPED140: Wellness for Life	3
<b>Experiential Learning (EL) (2 units)</b>	
EL Competency 1 (HPED450)	EL
EL Competency 2 (HPED452)	EL

<b>General Education</b>	<b>42 sh</b>
<b>Electives</b>	<b>11 sh</b>
<b>Total General Education &amp; Electives</b>	<b>53 sh</b>

<b>First Year Student Seminar</b>	<b>2 sh</b>
◆ HPED102: Foundations of Physical Education	2

<b>Major and Cognate Courses</b>	<b>35 sh</b>
#HPED125: Teaching Invasion Sports 2	3
◆ HPED130: Teaching Net Sports	3
Swimming/Lifeguard Training ( <u>Select 1</u> )	1
◆ HPED134: Swimming/Emergency Water Safety	
#HPED222: Lifeguard Instructor	
#HPED225: Swimming/Lifeguard Training	
◆ HPED234: Water Safety Instructor	
◆ HPED210: Teaching Rhythmic Activities & Dance	2
#HPED255: Teaching Fitness in K12 Schools *	3
#HPED213: Methods of Teaching Elementary PE *	3
#HLTH204: Foundations of Schl & Comm Hlth Ed	3
#HPED214: Teaching Lifetime Activities	2
#HLTH245: Essentials of Movement *	3
◆ HPED302: Motor Learning for Physical Education *	3
◆ HLTH334 Teaching Nutrition *	3
◆ HLTH320: Drug Education OR *	3
◆ HLTH336: Teaching Drug Education *	
#HLTH341: Teaching Human Sexuality *	3

<b>Required Professional Core</b>	<b>30 sh</b>
◆ HPED160: Coaching Methods & Applications	3
#HPED162: Principles of Coaching	3
SPRT305: Psychology of Coaching *	3
SPRT323: Sport and Society *	3
#ENGL360: Technical Writing *	3
RECR200: Personal Training & Aerobic Leadership * OR	3
RECR302: Supervision of Strength Training *	
HPED450: HPE Professional Field Experience 1 *	6
HPED452: HPE. Professional Field Experience 2 *	6
<i>Current CPR/First Aid certification is required for graduation</i>	
<b>Major, Cognate, and Professional Total Credits</b>	<b>67 sh</b>

(\*): BOG Advanced Course work; (◆): Course offered in fall only; (#): Course offered in spring only



# Health and Physical Education: Sport in Correctional Settings – Bachelor of Science

Effective Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication (WC)</b>	<b>3 sh</b>
ENGL100: Composition	
WC Competency 1: HPED450	WC
WC Competency 2: HPED452	WC
<b>Oral Communication</b>	<b>3 sh</b>
◆ HPED115 Teaching Invasion Sports I	3 sh
<b>Mathematical and Computational Thinking (MCT)</b>	<b>3 sh</b>
MATH101 or higher (C- or above)	
<b>Critical Thinking (CT)</b>	
CT Competency 1: HPED 450	CT
CT Competency 2: HPED 452	CT

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (NS)</b>	<b>6 sh</b>
◆ HLTH122 Essentials of Anatomy and Physiology NS-L	3
	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
PSYC100 Introduction to Psychological Science	3
SOCI101 Introduction to Sociology	3
<b>Philosophical, Literary, and Aesthetic Inquiry (PLA)</b>	<b>9 sh</b>
Philosophy <b>OR</b> Literature	3
Visual <b>OR</b> Performing Arts	3
	3

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship (GAC)</b>	<b>9 sh</b>
(One course must meet the historical foundation competency)	
<b>Wellness (WEL)</b>	<b>3 sh</b>
HPED140 Wellness for Life	3
<b>Experiential Learning (EL) (2 units)</b>	
EL Competency 1: HPED450	EL
EL Competency 2: HPED452	EL
<b>Electives (3 sh must be 300 level or higher)</b>	<b>7 sh</b>

<b>Total General Education Credit Hours</b>	<b>42 sh</b>
<b>Total General Education and Elective Credit Hours</b>	<b>49 sh</b>

<b>First Year Student Seminar</b>	<b>2 sh</b>
◆ HPED102 Foundations of Physical Education	2

<b>Required Physical Education Core (HPED/HLTH)</b>	<b>36 sh</b>
#HPED125 Teaching Invasion Sports II	3
◆ HPED130 Teaching Net Sports	3
#HPED160 Coaching Methods and Applications	3
◆ HPED162 Principles of Coaching	3
#HPED214 Teaching Lifetime Activities	2
#HPED255 Teaching Fitness in K-12 Schools *	3
◆ HPED302 Motor Learning in Physical Education *	3
#HLTH245 Essentials of Movement *	3
HPED134 or HPED225 or HPED234 or HPED222 (select 1 swimming course: EWS, LGT, WSI, LGI)	1
◆ HPED450 Physical Education Professional Field Experience 1 *	6
◆ HPED452 Physical Education Professional Field Experience 2 *	6
• Current CPR/First Aid Certification	N.A.

<b>Required Professional Core</b>	<b>30 sh</b>
◆ CRJS102 Introduction to Criminal Justice	3
PSYC322 Drugs and Human Behavior * <b>OR</b>	3
#HLTH320 Drug Education*	
#CRJS301 Juvenile Justice *	3
#CRJS302 Criminology *	3
◆ CRJS305 Corrections *	3
◆ CRJS320 Topics in Criminal Justice *	3
SPRT323 Sport and Society *	3
#RECR200 Princip. of Pers. Trng / Aerobic Leadrshp <b>OR</b>	<b>3</b>
#RECR302 Supervision of Strength Trn programs *	
#RECR244 Recreation Leadership & Supervision	3
#ENGL360 Technical Writing *	3

<b>Support Course (choose 3 sh below)</b>	<b>3 sh</b>
HLTH325 Death Education *	3
HLTH470 Sex Education *	3
CRJS215 American Gangs: History, Ident. & Interdict.	3
SOCI203 Social Problems *	3
SOCI205 Racial & Ethnic Relations	3
SOCI300 Sociology of Deviance *	3
PSYC212 Forensic Psychology	3
PSYC250 Social Psychology	3
PSYC307 Abnormal Psychology *	3

<b>Major, Professional and Support Core Total</b>	<b>71 SH</b>
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- HPED102: Foundations of Physical Education meets First Year Seminar requirement
- (\*): BOG Advanced Course work; (◆): Course offered in fall only; (#): Course offered in spring only
- Total credit hours = 120

**BS in PE & Sport in Correctional Settings Concentration**  
*Effective Fall Semester 2020 or Later*

**FRESHMAN YEAR**

Fall 1		Spring 2	
HPED102: Foundations of Physical Educ. Seminar	2	HPED214: Teaching Lifetime Activities	2
HPED115: Teaching Invasion Sports I OC	3	General Ed: PLA – Visual & Performing Art	3
General Ed: ENGL100 Composition	3	RECR244: Recreation Leadership & Supervision	3
PSYC100: Introduction to Psychology	3	General Ed: HPED140 Wellness for Life	3
CRJS102: Introduction to Criminal Justice	3	General Ed: HBSS	3
		HPED160: Coaching Methods & Applications	3
<b>Total</b>	<b>14</b>	<b>Total</b>	<b>17</b>

**SOPHOMORE YEAR**

Fall 3		Spring 4	
HPED130: Teaching Net Sports	3	HLTH245: Essentials of Movement	3
HLTH122: Essentials of A & P (lab) NS	3	HPED125: Teaching Invasion Sports II	3
General Ed: Math 101 or higher	3	HLTH320: Drug Ed <b>OR</b> PSYC322: Drugs & Hum Behavior	3
CRJS305: Corrections	3	CRJS301: Juvenile Justice	3
General Ed: PLA	3	General Ed: PLA Philosophy OR Literature	3
Elective: (early field experience or other course)	1	<b>HPED134/225 234 or 222 (select 1: EWS, LGT, WSI, or LGI)</b>	<b>1</b>
<b>Total</b>	<b>16</b>	<b>Total</b>	<b>16</b>

**JUNIOR YEAR**

Fall 5		Spring 6	
HPED302: Motor Learning Applied to Phys. Edu.	3	RECR200/302: Choose Aerobic <b>OR</b> Strength Course	3
HPED162: Principles of Coaching	3	General Ed: Global Awareness and Citizenship (GAC)	3
CRJS320: Topics in Criminal Justice	3	HPED255: Teaching Fitness in K12 Schools	3
General Ed: Global Awareness & Citizenship (GAC)	3	General Ed: GAC-H World History 1 or II	3
Elective	3	Support Core Course	3
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>

**SENIOR YEAR**

Fall 7		Spring 8	
ENGL360: Technical Writing	3	HPED450: HPE Field Experience 1	6
General Ed: Natural Science	3	HPED452: HPE Field Experience 2	6
SPRT323: Sport and Society	3		
Elective	3		
CRJS302: Criminology	3		
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>12</b>



# Health Science: Community and Public Health Education - Bachelor of Science

Effective Fall 2017

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH107: Basic Statistics I	3 sh
<b>Critical Thinking</b>	
CT Competency 1:	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Sciences Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology 1	3 sh
#BIOL107: Principles of Biology 2	3 sh
<b>Historical, Behavioral, and Social Sciences Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Visual Performing Arts	
Philosophy or Literature	
Any of the above	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
Historical Foundation	
Historical Foundation or other	
Historical Foundation or other	
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health	3 sh
<b>Experiential Learning</b>	
EL Competency 1: HLTH485: Field Experience	
EL Competency 2: HLTH485: Field Experience	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
HLTH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Health Science Required Courses</b>	
HLTH115: Human Anatomy & Physiology 1	4 sh
#HLTH120: Human Anatomy & Physiology 2	4 sh
#HLTH200: Introduction to Disease	3 sh
<b>Community Health Required Courses</b>	
HLTH140: Introduction to Public Health	3 sh
#HLTH204: Found of School/Comm Health Edu	3 sh
#HLTH218: Public Health and the Environment	3 sh
#HLTH235: Community Health Strategies	3 sh
#HLTH240: Introduction to Epidemiology	3 sh
#HLTH307: Cultural Aspects of Health	3 sh
#HLTH330: School Health Programs	2 sh
#HLTH350: Health Program Planning	3 sh
#HLTH401: Current Health Issues	3 sh
#HLTH402: Evaluation in Health Education/Prom.	3 sh
#HLTH410: Applied Community & Public Health	3 sh
#HLTH485: Field Experience in Health Science	9 sh
<b>#Community Health Electives</b>	<b>8 sh</b>
HLTH208: Stress Mngt/Life Skills Health Prom	3 sh
HLTH214: Plan/Assessment in School Health Edu	2 sh
HLTH315: Consumer Health	3 sh
HLTH325: Death Education	3 sh
HLTH320: Drug Education	3 sh
HLTH353: Physiology of Exercise	3 sh
HLTH415: Introduction to Pharmacology	3 sh
HLTH430: Women's Health Issues	3 sh
HLTH440: Research in Health Science	3 sh
HLTH470: Sex Education	3 sh
HLTH485: Field Experience in Health Science	3 sh
HLTH499: Independent Study	3 sh
POLI260: Introduction to Public Administration	3 sh
POLI335: Politics of Global Health	3 sh
RECR205: Nutrition for Wellness	3 sh



**Community and Public Health Education**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
BIOL106: Principles of Biology 1 (3)  
HLTH105: Introduction to Health (3)  
HLTH119: First Year Student Seminar (1)  
HLTH115: Anatomy and Physiology 1 (4)  
HLTH204: Foundations of School and Community Health Education (3)

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**Spring Freshman (example)**

BIOL107: Principles of Biology 2 (3)  
HLTH120: Anatomy and Physiology 2 (4)  
HLTH140: Introduction to Public Health (3)  
HLTH Elective (2)  
PSYC100: Introduction to Psychological Science (3)

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**Fall Sophomore (example)**

HLTH200: Introduction to Disease (3)  
HLTH218: Public Health and the Environment (3)  
MATH107: Basic Statistics I (3)

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**Spring Sophomore (example)**

HLTH240: Introduction to Epidemiology (3)  
HLTH235: Community Health Strategies (3)  
HLTH Elective (3)

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**Fall Junior (example)**

HLTH350: Health Program Planning (3)  
HLTH402: Evaluation in Health Education and Health Promotion (2)

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**Spring Junior (example)**

HLTH307: Cultural Aspects of Health (3)  
HLTH330: School Health Programs (2)  
  
HLTH410: Applied Community & Public Health (3)  
HLTH Elective (3)

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**Fall Senior (example)**

HLTH401: Current Health Issues (3)  
HLTH Elective (3)

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**Spring Senior (example)**

HLTH485: Field Experience in Health Science (9)

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# Health Science: Exercise Science (Pre-AT) - Bachelor of Science

Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH112: Intermediate Algebra OR	3 sh
MATH113: Precalculus OR	
MATH141: Calculus 1	
<b>Critical Thinking</b>	
CT Competency 1:	
CT Competency 2:	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Sciences Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology 1	3 sh
#BIOL107: Principles of Biology 2	3 sh
<b>Historical, Behavioral, and Social Sciences Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Visual Performing Arts	3 sh
Philosophy or Literature	3 sh
Any of the above	3 sh

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
Historical Foundation	3 sh
Historical Foundation or Other	3 sh
Historical Foundation or Other	3 sh
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health	3 sh
<b>Experiential Learning</b>	
EL Competency 1:	
EL Competency 2:	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
HLTH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
*HLTH115: Human Anatomy and Physiology 1	4 sh
#*HLTH120: Human Anatomy and Physiology 2	4 sh
#HLTH200: Introduction to Disease	3 sh
#HLTH305: Biomechanics	3 sh
#HLTH353: Physiology of Exercise	3 sh
#HLTH363: Applied Sport & Exercise	3 sh
#HLTH414: Current Issues in Exercise Science	3 sh
#HLTH425: Clinical Exercise Physiology	3 sh
#HLTH440: Research Methods in Health Science	3 sh
CHEM120: Principles of Chemistry 1	4 sh
#CHEM121: Principles of Chemistry 2	4 sh
MATH107: Basic Statistics 1	3 sh
#RECR205: Nutrition for Wellness OR	3 sh
CHEM111: Chemistry of Nutrition	
<b>Major Area Electives (from page 2)</b>	<b>17 sh</b>

#BOG Advanced Coursework  
 \*Grade of C or higher required

<b>Major Area Electives</b>	
#ATTR202: Care & Prevention of Athletic Injuries	3 sh
HLTH108: Medical Terminology	3 sh
HLTH110: Orientation to Athletic Training	1 sh
HLTH140: Introduction to Public Health	3 sh
#HLTH218: Public Health and the Environment	3 sh
#HLTH240: Introduction to Epidemiology	3 sh
#HLTH301: CPR & Emergency Care	3 sh
#HLTH320: Drug Education	3 sh
#HLTH332: Psychology of Injury & Illness	3 sh
#HLTH401: Current Health Issues	3 sh
#HLTH406: Biomechanics of Injury	3 sh
#HLTH407: Advanced Human Physiology	4 sh
#HLTH415: Introduction to Pharmacology	3 sh
#HLTH420: Clinical Evaluation & Rehabilitation	3 sh
#HLTH430: Women's Health Issues	3 sh
#HLTH451: Advanced Human Anatomy	4 sh
#HLTH470: Sex Education	3 sh
#HLTH485: Field Experience in Health Science	1-6 sh
#HLTH498: Health Science Seminar	1-3 sh
#HLTH499: Independent Study	1-3 sh
PHYS130: Physics 1	4 sh
#PHYS131: Physics 2	4 sh
#PSYC240: Lifespan Development	3 sh
#PSYC307: Abnormal Psychology	3 sh
#PSYC315: Health Psychology	3 sh
#RECR200: Principles of Personal Training	3 sh
#RECR301: Exercise Prescription	3 sh
#RECR302: Supervision of Strength Training Programs	3 sh
#RECR303: Sports Nutrition	3 sh
#RECR312: Teaching Conditioning Principles	3 sh
SPAN110: Basic Spanish for Medical Personnel	3 sh
#SPRT206: Introduction to Sport & Exercise Psychology	3 sh

**Exercise Science Track  
Suggested Course Sequence**

**Fall Freshman**

ENGL100: Composition (3)  
BIOL106: Principles of Biology 1 (3)  
HLTH105: Introduction to Health (3)  
HLTH115: Anatomy and Physiology 1 (4)  
HLTH119: First Year Student Seminar (1)

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**Spring Freshman**

BIOL107: Principles of Biology 2 (3)  
HLTH120: Anatomy and Physiology 2 (4)  
PSYC100: Introduction to Psychology (3)  
MATH (3)

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**Fall Sophomore**

CHEM120: Principles of Chemistry 1 (4)  
HLTH200: Introduction to Disease (3)  
HLTH353: Physiology of Exercise (3) OR  
HLTH305: Biomechanics (3)  
MATH107: Basic Statistics 1 (3)

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**Spring Sophomore**

CHEM121: Principles of Chemistry 2 (4)  
RECR205: Nutrition for Wellness (3)  
HLTH353: Physiology of Exercise (3) OR  
HLTH305: Biomechanics (3)

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**Fall Junior**

HLTH363: Applied Sport/Exercise Sci (3)

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**Spring Junior**

HLTH425: Clinical Exercise Physiology (3)  
HLTH440: Research Methods in Health Science (3)

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**Fall Senior**

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**Spring Senior**

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## Health Science: Exercise Science 3+2 – Bachelor of Science

Effective Fall 2017

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH112: Intermediate Algebra OR	3 sh
MATH113: Precalculus OR	
MATH141: Calculus I	
<b>Critical Thinking</b>	
CT Competency 1:	
CT Competency 2:	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Sciences Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology I**	3 sh
#BIOL107: Principles of Biology II**	3 sh
<b>Historical, Behavioral, and Social Sciences Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science**	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Visual Performing Arts	3 sh
Philosophy or Literature	3 sh
Any of the above	3 sh

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
Historical Foundation	3
Historical Foundation or other	3
Historical Foundation or other	3
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health**	3 sh
<b>Experiential Learning</b>	
EL Competency 1:	
EL Competency 2:	

<b>First Year Student Seminar</b>	<b>1 sh</b>
HLTH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>77 sh</b>
HLTH115: Human Anatomy and Physiology 1**	4 sh
#HLTH120: Human Anatomy and Physiology 2**	4 sh
#HLTH200: Introduction to Disease	3 sh
#HLTH305: Biomechanics**	3 sh
#HLTH353: Physiology of Exercise**	3 sh
#HLTH425: Clinical Exercise Physiology	3 sh
#HLTH440: Research Methods in Health Science	3 sh
#HLTH485: Field Experience in Health Science	2 sh
MATH107: Basic Statistics 1	3 sh
CHEM120: Principles of Chemistry 1**	4 sh
#CHEM121: Principles of Chemistry 2**	4 sh
#RECR205: Nutrition for Wellness**	3 sh
<b>Major Area Electives (from page 2)</b>	<b>14 sh</b>
<b>First year MS-AT courses</b>	<b>24 sh</b>

#: BOG Advanced Coursework

\*: Suggested Major Area Elective

\*\* : Core course: grade of C or higher required  
3.0 cumulative GPA required

<b>Major Area Electives</b>	
#ATTR202: Care & Prevention of Athletic Injuries*	3 sh
HLTH108: Medical Terminology	3 sh
HLTH110: Orientation to Athletic Training	1 sh
HLTH140: Introduction to Public Health	3 sh
#HLTH218: Public Health and the Environment	3 sh
#HLTH240: Introduction to Epidemiology	3 sh
#HLTH301: CPR & Emergency Care*	3 sh
#HLTH320: Drug Education	3 sh
#HLTH401: Current Health Issues	3 sh
#HLTH406: Biomechanics of Injury	3 sh
#HLTH407: Advanced Human Physiology	4 sh
#HLTH420: Clinical Evaluation & Rehabilitation	3 sh
#HLTH430: Women's Health Issues	3 sh
#HLTH451: Advanced Human Anatomy	4 sh
#HLTH470: Sex Education	3 sh
#HLTH485: Field Experience	1-4 sh
#HLTH498: Health Science Seminar	1-3 sh
#HLTH499: Independent Study	1-3 sh
PHYS130: Physics 1	4 sh
#PHYS131: Physics 2	4 sh
#PSYC240: Lifespan Development	3 sh
#PSYC307: Abnormal Psychology	3 sh
#PSYC315: Health Psychology	3 sh
RECR200: Principles of Personal Training	3 sh
#RECR301: Exercise Prescription	3 sh
#RECR302: Supervision of Strength Training Programs	3 sh
#RECR303: Sports Nutrition	3 sh
#RECR312: Teaching Conditioning Principles	3 sh
SPAN110: Basic Spanish for Medical Personnel	3 sh
#SPRT206: Introduction to Sport and Exercise Psychology	3 sh

**Health Science: Exercise Science 3+2**  
**Suggested Course Sequence**

**Fall Freshman**

BIOL106: Principles of Biology 1 (3)  
HLTH105: Introduction to Health (3)  
HLTH110: Orientation to AT (1)  
HLTH115: Anatomy & Physiology 1 (4)  
HLTH119: First Year Student Seminar (1)  
General Education (3)  
Total (15)

**Spring Freshman**

BIOL107: Principles of Biology 2 (3)  
ENGL100: Composition (3)  
HLTH120: Anatomy & Physiology 2 (4)  
PSYC100: Intro to Psychology (3)  
MATH (3)  
Total (16)

**Fall Sophomore**

CHEM120: Principles of Chemistry 1 (4)  
HLTH200: Introduction to Disease (3)  
HLTH353: Physiology of Exercise (3) OR  
HLTH305: Biomechanics (3)  
MATH107: Basic Statistics 1 (3)  
General Education (3)  
Total (16)

**Spring Sophomore**

CHEM121: Principles of Chemistry 2 (4)  
RECR205: Nutrition for Wellness (3)  
HLTH353: Physiology of Exercise (3) OR  
HLTH305: Biomechanics (3)  
Major Elective (6)  
Total (16)

**Fall Junior**

General Education (9)  
Major Elective (7)  
Total (16)

**Spring Junior**

HLTH425: Clinical Exercise Phys (3)  
HLTH440: Research Methods (3)  
HLTH485: Field Experience (2)  
Major Elective (3)  
General Education (6)  
Total (17)

**GRADUATE PROGRAM**

**Summer First Year (4 credits)**

ATTR600: Fundamentals of Athletic Training (4)

**Fall First Year (15 credits)**

ATTR630: Evidence Based Medicine (1)  
ATTR622: Functional Anatomy 1 (4)  
ATTR664: Evaluation Techniques 1 (3)  
ATTR653: Clinical Experience 1 (3)  
ATTR672: Therapeutic Interventions 1 (4)

**Spring First Year (17 credits)**

ATTR660: General Medical Conditions (3)  
ATTR642: Functional Anatomy 2 (4)  
ATTR665: Evaluation Techniques 2 (3)  
ATTR654: Clinical Experience 2 (3)  
ATTR673: Therapeutic Interventions 2 (4)

**Fall Second Year (15 credits)**

ATTR604: Administration & Organization (3)  
ATTR655: Clinical Experience 3 (3)  
HLTH632: Psychology of Injury and Illness (3)  
HLTH663: Applied Sport & Exercise Science (3)  
HLTH615: Intro to Pharmacology (3)

**Spring Second Year (9 credits)**

ATTR615: Current Issues in Athletic Training (3)  
ATTR656: Clinical Experience 4 (6)

## Health Science: Physician Assistant 3+2 - Bachelor of Science

Effective Fall 2014

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology I	3 sh
BIOL107: Principles of Biology II	3 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health	3 sh
<b>Experiential Learning</b>	
EL Competency 1: HLTH485	
EL Competency 2: HLTH485	

<b>Major Area and Cognate Courses</b>	<b>69 sh</b>
HLTH115: Human Anatomy and Physiology I	4 sh
HLTH120: Human Anatomy and Physiology II	4 sh
#HLTH407: Advanced Human Physiology	4 sh
#HLTH415: Introduction to Pharmacology	3 sh
#HLTH451: Advanced Anatomy	4 sh
#HLTH485: Field Experience in Health Science	1 sh
#HLTH Designated Electives	6 sh
-HLTH305: Introduction to Biomechanics (3)	
-HLTH315: Consumer Health (3)	
-HLTH320: Drug Education (3)	
-HLTH325: Death Education (3)	
-HLTH353: Physiology of Exercise (3)	
-HLTH401: Current Issues in Health (3)	
-HLTH430: Women's Health Issues (3)	
-HLTH440: Research in Health Science (3)	
-HLTH470 Sex Education (3)	
-BIOL310: Immunology (3)	
-PSYC307: Abnormal Psychology (3)	
#BIOL225: Human Genetics	3 sh
#BIOL340: Microbiology	4 sh
#CHEM111: Chemistry of Nutrition	3 sh
CHEM120: Principles of Chemistry I	4 sh
CHEM121: Principles of Chemistry II	4 sh
#CHEM205: Introduction to Organic Chemistry	4 sh
#CHEM410: Biochemistry	4 sh
#MATH107: Basic Statistics	3 sh
#PHYS130: Physics I	4 sh
#PHYS131: Physics II	4 sh
#PSYC240: Life Span Development	3 sh
#PYAS300: Introduction to Phys. Asst. Studies	3 sh

#: BOG Advanced coursework



**3+2 Physician Assistant Track  
Suggested Course Sequence**

**Fall Freshman**

BIOL106: Principles of Biology I (3)  
CHEM120: Principles of Chemistry I (4)  
HLTH115: Anatomy and Physiology I (4)  
HLTH105: Introduction to Health (3)  
General Education (3)

**Spring Freshman**

BIOL107: Principles of Biology II (3)  
CHEM121: Principles of Chemistry II (4)  
HLTH120: Anatomy and Physiology II (4)  
MATH113: Pre-calculus (3)  
PSYC100: Introduction to Psychological Sciences (3)

**Summer Session: General Education (6 sh)**

**Fall Sophomore**

CHEM205: Introduction to Organic Chemistry (4)  
MATH107: Basic Statistics (3)  
PHYS130: Physics I (4)  
PYAS300: Introduction to Physician Assistant Studies (3)  
General Education (3)

**Spring Sophomore**

BIOL225: Human Genetics (3)  
HLTH407: Advanced Human Physiology (4)  
PHYS131: Physics II (4)  
PSYC240: Life Span Development (3)  
HLTH Designated Electives (3)

**Summer Session: General Education (6 sh); HLTH485: Field Experience (1 sh)**

**Fall Junior**

BIOL340 Microbiology (4)  
CHEM111: Chemistry of Nutrition (3)  
HLTH Designated Elective (3)  
General Education (6)

**Spring Junior**

HLTH415: Introduction to Pharmacology (3)  
HLTH451: Advanced Anatomy (4)  
CHEM410: Biochemistry (4)  
General Education (3)

**Summer Session: Master of Health Science in Physician Assistant Studies**

**Fall Senior**

PYAS Module 1  
PYAS Module 2  
PYAS Module 3  
PYAS Module 4  
PYAS Module 5

**Spring Senior**

PYAS Module 6  
PYAS Module 7  
PYAS Module 8  
PYAS Module 9  
PYAS Module 10

**Summer Session: Clinical Rotations**

**Fall Senior**

Clinical Rotations

**Spring Senior**

Clinical Rotations

# Health Science: Pre-Physician Assistant - Bachelor of Science

Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
<b>Critical Thinking</b>	
CT Competency 1:	
CT Competency 2:	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
*BIOL106: Principles of Biology I	3 sh
*BIOL107: Principles of Biology II	3 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
GACH:	
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health	3 sh
<b>Experiential Learning</b>	
EL Competency 1:	
EL Competency 2:	

<b>Electives</b>	<b>17-19 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
HLTH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>58 -60 sh</b>
*HLTH115: Human Anatomy and Physiology I	4 sh
*HLTH120: Human Anatomy and Physiology II	4 sh
#HLTH200: Introduction to Disease	3 sh
#HLTH353: Physiology of Exercise	3 sh
#HLTH407: Advanced Human Physiology OR	4 sh
#BIOL410: Organismal Physiology	3 sh
#HLTH415: Introduction to Pharmacology	3 sh
#HLTH451: Advanced Anatomy	4 sh
#HLTH485: Field Experience in Health Science	3 sh
#*BIOL225: Human Genetics	3 sh
#*BIOL340: Microbiology OR	4 sh
#*BIOL215: Basic Microbiology	3 sh
*CHEM120: Principles of Chemistry I	4 sh
*CHEM121: Principles of Chemistry II	4 sh
#CHEM205: Introduction to Organic Chemistry	4 sh
#CHEM410: Biochemistry	4 sh
#*MATH107: Basic Statistics I	3 sh
#PSYC240: Lifespan Development	3 sh
#RECR205: Nutrition for Wellness OR	3 sh
#CHEM111: Chemistry of Nutrition	

<b>4+2 Program Interview</b>
<b>Minimum Requirements</b>
GPA: 3.2 or better
B or better in courses identified by *
GRE: 300 combined score and 4/6 Writing
Complete application using <a href="http://caspaonline.org">caspaonline.org</a>

**Pre-Physician Assistant Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
BIOL106: Principles of Biology I (3)  
HLTH105: Introduction to Health (3)  
HLTH115: Anatomy and Physiology I (4)  
HLTH119: First Year Student Seminar (1)

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**Fall Sophomore (example)**

CHEM120: Principles of Chemistry I (4)  
HLTH200: Introduction to Disease (3)  
HLTH353: Physiology of Exercise (3)  
MATH107: Basic Statistics I (3)

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**Fall Junior (example)**

CHEM205: Introduction to Organic Chemistry (4)

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**Fall Senior (example)**

BIOL340: Microbiology (4)  
HLTH407: Advanced Human Physiology (4)

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**Spring Freshman (example)**

BIOL107: Principles of Biology II (3)  
HLTH120: Anatomy and Physiology II (4)  
MATH113: Pre-calculus (3)  
PSYC100: Introduction to Psychological Sciences (3)

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**Spring Sophomore (example)**

CHEM121: Principles of Chemistry II (4)  
PSYC240: Life Span Development (3)  
CHEM111: Chemistry of Nutrition OR RECR205:  
Nutrition for Wellness (3)

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**Spring Junior (example)**

HLTH415: Introduction to Pharmacology (3)  
BIOL225: Human Genetics (3)

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**Spring Senior (example)**

CHEM410: Biochemistry (4)  
HLTH451: Advanced Anatomy (4)

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## Health Science: Pre-Physical Therapy – 3+3 Bachelor of Science

For Students entering LHU Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH112: Intermediate Algebra OR	
MATH113: Precalculus	
<b>Critical Thinking</b>	
CT Competency 1: <i>Widener</i>	
CT Competency 2: <i>Widener</i>	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology I *	3 sh
BIOL107: Principles of Biology II *	3 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science *	3 sh
SOCI101: Introduction to Sociology (recommended)	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health	3 sh
<b>Experiential Learning</b>	
EL Competency 1: <i>Widener</i>	
EL Competency 2: <i>Widener</i>	

<b>Electives</b>	<b>18 sh</b>
Widener Transfer Credits (18)	

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
HLTH119: First Year Student Seminar	1 sh
HLTH115: Anatomy and Physiology I *	4 sh
HLTH120: Anatomy and Physiology II *	4 sh
#HLTH200: Introduction to Disease	3 sh
#HLTH305: Introduction to Biomechanics	3 sh
#HLTH353: Physiology of Exercise	3 sh
#HLTH420: Clinical Evaluation and Rehab.	3 sh
#HLTH451: Advanced Anatomy	4 sh
#PSYC215: Foundations of Biopsychology	3 sh
CHEM120: Principles of Chemistry I *	4 sh
CHEM121: Principles of Chemistry II *	4 sh
MATH107: Basic Statistics I *	3 sh
#PHYS130: Physics I *	4 sh
#PHYS131: Physics II *	4 sh
#PSYC240: Lifespan Development *	3 sh
#Widener Transfer Credits	10 sh

#: BOG Advanced coursework

\*: Widener DPT required course

**Lock Haven University**  
**Health Science**  
**Physical Therapy 3+3 Widener Track**  
**Course Sequence**

**Fall Freshman**

ENGL100: Composition (3)  
BIOL106: Principles of Biology I (3)  
HLTH119: First Year Student Seminar (1)  
HLTH105: Introduction to Health (3)  
HLTH115: Anatomy and Physiology I (4)  
MATH112/113: Mathematics Gen. Ed. (3)

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**Spring Freshman**

BIOL107: Principles of Biology II (3)  
HLTH120: Anatomy and Physiology II (4)  
HLTH305: Introduction to Biomechanics (3)  
PSYC100: Intro. Psychological Sciences (3)

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**Fall Sophomore**

CHEM120: Principles of Chemistry I (4)  
HLTH200: Introduction to Disease (3)  
HLTH353: Physiology of Exercise (3)  
MATH107: Basic Statistics I (3)

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**Spring Sophomore**

CHEM121: Principles of Chemistry II (4)  
PSYC215: Found. of Biopsychology (3)

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**Fall Junior**

PHYS130: Physics I (4)  
PSYC240: Lifespan Development (3)

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**Spring Junior**

HLTH420: Clinical Eval. and Rehab. (3)  
HLTH451: Advanced Anatomy (4)  
PHYS130: Physics II (4)

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**Fall Senior**

Widener Graduate Courses (14)

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**Spring Senior**

Widener Graduate Courses (14)

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**Pre-Physical Therapy Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
BIOL106: Principles of Biology I (3)  
HLTH105: Introduction to Health (3)  
HLTH119: First Year Student Seminar (1)  
HLTH115: Anatomy and Physiology I (4)  
MATH112/113: Mathematics Gen. Ed. (3)

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**Spring Freshman (example)**

BIOL107: Principles of Biology II (3)  
HLTH120: Anatomy and Physiology II (4)  
MATH113: Pre-calculus(3)  
PSYC100: Introduction to Psychological Sciences (3)

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**Fall Sophomore (example)**

CHEM120: Principles of Chemistry I (4)  
HLTH200: Introduction to Disease (3)  
HLTH305: Introduction to Biomechanics (3)

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**Spring Sophomore (example)**

CHEM121: Principles of Chemistry II (4)  
HLTH353: Physiology of Exercise (3)  
MATH107: Basic Statistics (3)  
PSYC240: Life Span Development (3)

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**Fall Junior (example)**

PHYS130: Physics I (4)  
PSYC307: Abnormal Psychology (3)

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**Spring Junior (example)**

HLTH420: Clinical Evaluation and Rehabilitation (3)  
PHYS130: Physics II (4)

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**Fall Senior (example)**

HLTH440: Research Methods in Health Science (3)  
HLTH485: Field Experience in Health Science (3)

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**Spring Senior (example)**

HLTH451: Advanced Anatomy (4)

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# Health Science: Pre-Professional - Bachelor of Science

Effective Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1:	
WC Competency 2:	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT Competency 1:	
CT Competency 2:	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL106: Principles of Biology I	3 sh
BIOL107: Principles of Biology II	3 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
PSYC100: Introduction to Psychological Science	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
HLTH105: Introduction to Health	3 sh
<b>Experiential Learning</b>	
EL Competency 1:	
EL Competency 2:	

<b>Electives</b>	<b>17 sh</b>

#: BOG advanced coursework

<b>NATURAL SCIENCE</b>	<b>6 sh</b>
BIOL215: Basic Microbiology	4 sh
BIOL220: DNA Methods in Biology	1 sh
BIOL225: Human Genetics <b>OR</b>	3 sh
BIOL202: Genetics	
BIOL302: Developmental Biology	3 sh
BIOL303: Vertebrate Endocrinology	2 sh

<b>First Year Student Seminar</b>	<b>1 sh</b>
HLTH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
HLTH115: Human Anatomy and Physiology I	4 sh
HLTH120: Human Anatomy and Physiology II	4 sh
#HLTH200: Introduction to Disease	3 sh
#HLTH485: Field Experience in Health Science	3 sh
CHEM120: Principles of Chemistry I	4 sh
CHEM121: Principles of Chemistry II	4 sh
#MATH107: Basic Statistics 1	3 sh
#PHYS130: Physics I	4 sh
#PHYS131: Physics II	4 sh
#RECR205: Nutrition for Wellness <b>OR</b>	
#CHEM111: Chemistry of Nutrition	3 sh
<b>#Natural Science Designated Electives</b>	<b>6 sh</b>
(See page 2)	
<b>#Psychology Designated Electives</b>	<b>6 sh</b>
(See page 2)	
<b>#HLTH Designated Electives</b>	<b>12 sh</b>
(See page 2)	

<b>HEALTH SCIENCE</b>	<b>12 sh</b>
HLTH100: Medical Terminology	1 sh
HLTH102: Orientation to Health Science	1 sh
HLTH140: Introduction to Public Health	3 sh
HLTH204: Foundation School/Comm. Health	3 sh
HLTH208: Stress Management/Life Skills	3 sh
HLTH214: Plan/Assessment in School Health	2 sh



BIOL309: Ecology	3 sh
BIOL310: Immunology	3 sh
BIOL315: Comparative Vertebrate Anatomy	3 sh
BIOL317: Mycology	3 sh
BIOL323: Bioinformatics and Genomics	3 sh
BIOL330: Cellular and Molecular Biology	4 sh
BIOL340: Microbiology	4 sh
BIOL345: Advanced DNA Methods	3 sh
BIOL402: Biological Evolution	3 sh
BIOL410: Organismal Physiology	3 sh
BIOL425: Environmental Toxicology	3 sh
CHEM105: Forensic Chemistry	3 sh
CHEM111: Chemistry of Nutrition (May be used if RECR205 is completed)	3 sh
CHEM205: Introduction to Organic Chemistry	4 sh
CHEM220: Organic Chemistry I	4 sh
CHEM221: Organic Chemistry II	4 sh
CHEM301: Inorganic Chemistry	3 sh
CHEM316: Quantitative Analysis	4 sh
CHEM320: Physical Chemistry	4 sh
CHEM410: Biochemistry	4 sh
CHEM415: Biochemistry 2	4 sh

<b>PSYCHOLOGY</b>	<b>6 sh</b>
PSYC102: Child Development	3 sh
PSYC103: Adolescent Development	3 sh
PSYC111: Psychology of Early Childhood	3 sh
PSYC202: Research Methods in Psychology	3 sh
PSYC212: Forensic Psychology	3 sh
PSYC215: Foundation of Biopsychology	3 sh
PSYC235: Interpersonal Leadership Skills	3 sh
PSYC240: Life Span Development	3 sh
PSYC250: Social Psychology	3 sh
PSYC307: Abnormal Psychology	3 sh
PSYC310: Cognitive Psychology	3 sh
PSYC315: Health Psychology	3 sh
PSYC322: Drugs and Human Behavior	3 sh
PSYC330: Adult Development and Aging	3 sh
PSYC410: Physiological Psychology	3 sh
PSYC412: Human Neuropsychology	3 sh
PSYC205: Applied Psychological Statistics	3 sh
PSYC425: Psychology of Women	3 sh

HLTH218: Public Health and the Environment	3 sh
HLTH235: Community Health Strategies	3 sh
HLTH240: Introduction to Epidemiology	3 sh
HLTH301: CPR and Emergency Care	3 sh
HLTH305: Introduction to Biomechanics	3 sh
HLTH307: Cultural Aspects of Health	3 sh
HLTH315: Consumer Health	3 sh
HLTH320: Drug Education	3 sh
HLTH325: Death Education	3 sh
HLTH330: School Health Programs	2 sh
HLTH332: Psychological Aspects Inj./Illness	3 sh
HLTH350: Health Program Planning	3 sh
HLTH353: Physiology of Exercise	3 sh
HLTH363: Applied Sport and Exercise Science	3 sh
HLTH401: Current Issues In Health	3 sh
HLTH402: Evaluation In Health Ed. Programs	3 sh
HLTH406: Biomechanics of Mus./Skel. Injury	3 sh
HLTH407: Advanced Human Physiology	4 sh
HLTH414: Current Issues in Exercise Science	3 sh
HLTH415: Introduction to Pharmacology	3 sh
HLTH420: Clinical Evaluation and Rehab.	3 sh
HLTH425: Clinical Exercise Physiology	3 sh
HLTH430: Women's Health Issues	3 sh
HLTH440: Research in Health Science	3 sh
HLTH451: Advanced Human Anatomy	4 sh
HLTH470: Sex Education in Health Science	3 sh
HLTH485: Field Experience in Health Science	1-9 sh
HLTH498: Health Science Seminar	1-3 sh
HLTH499: Independent Study	1-3 sh

**Pre-Professional Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
BIOL106: Principles of Biology I (3)  
HLTH105: Introduction to Health (3)  
HLTH115: Anatomy and Physiology I (4)  
HLTH119: First Year Student Seminar (1)

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**Spring Freshman (example)**

BIOL107: Principles of Biology II (3)  
HLTH120: Anatomy and Physiology II (4)  
MATH112/113: Mathematics Gen. Ed.(3)  
PSYC100: Introduction to Psychological Sciences (3)

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**Fall Sophomore (example)**

CHEM120: Principles of Chemistry I (4)  
HLTH200: Introduction to Disease (3)

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**Spring Sophomore (example)**

CHEM121: Principles of Chemistry II (4)  
RECR205: Nutrition for Wellness (3) **OR**  
CHEM111: Chemistry of Nutrition (3)

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**Fall Junior (example)**

PHYS130: Physics I (4)  
MATH107: Basic Statistics (3)

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**Spring Junior (example)**

PHYS131: Physics II (4)

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**Fall Senior (example)**

HLTH451: Advanced Anatomy (4)  
HLTH485: Field Experience in Health Science (3)

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**Spring Senior (example)**

HLTH407: Advanced Human Physiology (4)

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# Healthcare Professions – Associate of Applied Science

Effective Fall 2019

<b>General Education Courses</b>	<b>21 sh</b>
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<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3</b>
ENGL100: Composition	
<b>Oral Communication</b>	<b>3</b>
<b>Mathematical and Computational Thinking</b>	<b>3</b>
<b>Critical Thinking</b>	
CT Competency 1	

<b>Knowledge and Inquiry</b>	<b>9 sh</b>
<b>Natural Science Inquiry (Lab)</b>	<b>3 sh</b>
<b>Historical, Behavioral, &amp; Social Science Inquiry</b>	<b>3 sh</b>
SOCI101: Introduction to Sociology	
<b>Philosophical, Literary, &amp; Aesthetic Inquiry</b>	<b>3 sh</b>

<b>Personal and Social Responsibility</b>	<b>3 sh</b>
<b>Global Awareness and Citizenship</b>	<b>3</b>
GAC-Historical Foundation course	

<b>Electives</b>	<b>8 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
xxxx119 (any freshman seminar)	1

<b>Major Area and Cognate Courses *</b>	<b>30 sh</b>
BIOL101: Basic Biology	3
BIOL215: Basic Microbiology	4
HLTH105: Introduction to Health	3
HLTH108: Medical Terms for Health Professions	3
HLTH115: Human Anatomy and Physiology 1	4
HLTH120: Human Anatomy and Physiology 2	4
PSYC100: Introduction to Psychological Science	3
RECR205: Nutrition for Wellness	3
COMP150: Introduction to Computers	3

\*Students with certifications in a healthcare profession may receive variable credit for prior learning depending on the certification and the content delivered in the certification.

## Healthcare Professions: Social Services – Associate of Applied Science

The General Education requirements that became effective fall 2014 apply.  
Refer to the General Education section of the catalog.

SOCIAL SERVICES TRACK	31sh	Gr	Sem
SOCW102: Introduction to Social Work(3sh)			
SOCW110 Diverse Populations and Groups (3sh)			
PSYC235: Interpersonal and Leadership Skills (3sh)			
PSYC240: Lifespan Development (3sh)			
COMP 150: Introduction to Computers (3sh)			
HLTH 100: Medical Terminology (1sh)			
Electives (15sh)- must be selected from the list below	15	See below	See below

ELECTIVES (must choose 5) (15sh)	15 sh	Gr	Sem
HLTH307: Cultural Aspects of Health (3sh)			
HLTH320: Drug Education (3sh)			
HLTH325/SOCW360: Death Education/Death and Dying (3sh)			
HLTH470: Sex Education for the Health Sciences (3sh)			
HLTH498: Health Science Seminar (3sh)			
PSYC102: Child Development (3sh)			
PSYC103: Adolescent Development (3sh)			
PSYC201: Educational Psychology (3sh)			
SOCW450: Topics in Social Work (3sh)			
SOCI203: Social Problems (3sh)			
SPEC204: Cognitive Development of Diverse Learners (3sh)			
SPEC212: Low Incidence Disabilities Support (3sh)			
SPEC338: Positive Behaviors Support (3sh)			

# History – Bachelor of Arts

Effective Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	3 sh
ENGL100: Composition (3 sh)	
WC competency 1	
WC competency 2	
<b>Oral Communication</b>	3 sh
<b>Mathematical and Computational Thinking</b>	3 sh.
<b>Critical Thinking</b>	
CT competency 1	
CT competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	6 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	6 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	9 sh
Visual or Performing Arts course (3)	
Philosophy or Literature (3)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	9 sh
Historical Foundation: HIST101, 102, 111, or 112*	
*Students who become history majors after taking HIST101 may substitute this course for HIST111; similarly, HIST102 may substitute for HIST112	
<b>Wellness</b>	3 sh
<b>Experiential Learning (2 units)</b>	
EL competency 1	
EL competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Seminar</b>	<b>1 sh</b>
HIST119: First Year Seminar	

<b>Major Area and Cognate Courses</b>	<b>42 sh*</b>
<b>Supporting Social Science Courses</b>	12 sh
Economics	
Geography	
Political Science	
Sociology or Anthropology	
# Anthropology 200+	
# Soci., Pol Sci, Geog. or Econ. 200+	

<b>Foundation History Courses</b>	9 sh
HIST111 Global History I	(GAC-H)
HIST112 Global History II	(GAC-H)
HIST201 U.S. History I	
HIST202 U.S. History II	
# HIST200 Historical Thinking and Writing	

<b>Advanced History Courses (200-400 level)</b>	21 sh
# US	
# Europe	
# Non-west (non-US or Europe)	
# Non-west (non-US or Europe)	
# Elective	
# Elective	
# Capstone (Senior Project)	

Students are encouraged to use advanced history electives to focus on a particular area in preparation for the Capstone

\*A minimum of 12 sh of the major also fulfill requirements in the general education program:  
 Global Awareness and Citizenship (6 sh)  
 Hist. Behav. And Soc. Sci Inquiry (6 sh)

<b>Degree requirements:</b>	<b>up to 18sh</b>
<b>##Arts &amp; Sciences Seminars (2 of 3)</b>	6sh
Humanities 328	
Social Science 328	
Science/Math 328	
<b>###Foreign Language Requirement (Level-IV proficiency)</b>	up to 12sh

<b>Total credit hours</b>	<b>120</b>
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Effective: Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	3 sh
ENGL100: Composition (3 sh)	
WC competency 1	
WC competency 2	
<b>Oral Communication</b>	3 sh
<b>Mathematical and Computational Thinking</b>	3 sh.
<b>Critical Thinking</b>	
CT competency 1	
CT competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	6 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	6 sh
Absorbed by the major	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	9 sh
Visual or Performing Arts course (3)	
Philosophy or Literature (3)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	9 sh
(6 sh absorbed by the major)	
<b>Wellness</b>	3 sh
<b>Experiential Learning</b>	
EL competency 1	
EL competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
HIST119: First Year Seminar	

<b>Major Area and Cognate Courses</b>	<b>42 sh*</b>
<b>Supporting Social Science Courses</b>	15 sh
Economics, Geography, Political Science, Sociology, or Anthropology	HBS HBS
1	
2	
3	
#POLI260: Public Administration	
#Anthropology 200+	
<b>Foundation History Courses</b>	9 sh
HIST111: Global History I	GAC-H
HIST112: Global History II	GAC-H
HIST201: U.S. History I	
HIST202: U.S. History II	
# HIST200: Historical Thinking and Writing	
<b>Advanced History Courses (200-400 level)</b>	12 sh
# US	
# Europe	
# Non-west (non-US or Europe)	
# Non-west (non-US or Europe)	
<b>Public History Concentration</b>	12 sh
# HIST203: Intro. Public History	
# Elective:	
HIST314: Oral History or	
HIST338: Hist. and Pres. Am. Architecture	
## Internship (6 sh)	
*12 sh of the major also fulfill requirements for general education: 6 sh Global Awareness and Citizenship and 6 sh Historical Behavioral and Social Science	
<b>Degree requirements:</b>	<b>up to 18sh</b>
<b>##Seminars (2 of 3)</b>	6sh
Humanities 328	
Social Science 328	
Science/Math 328	
<b>###Foreign Language Requirement (Level-IV proficiency)</b>	up to 12sh
<b>Total credit hours</b>	<b>120</b>

# Interdisciplinary Studies - Bachelor of Science

Effective Fall 2014

<b>Intellectual Foundation</b>	
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	
<b>Knowledge and Inquiry</b>	
<b>Natural Science Inquiry</b>	<b>6 sh</b>
At least one course must be a lab course.	
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
One course must be a literature course and one course must come from visual or performing arts.	
<b>Personal and Social Responsibility</b>	
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
One course must meet the historical foundations competency.	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	
<b>Electives</b>	<b>47 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
<b>Major Area and Cognate Courses</b>	<b>30 sh</b>
<b>Academic Area 1 (6 sh upper division)</b>	<b>18sh</b>
These credits cannot be reused to fulfill a minor.	
<b>Academic Area 2</b>	<b>12sh</b>
These credits can be reused to fulfill a minor.	
<b>Final Portfolio Project</b>	
This will include the following components:	
1. Resume	
2. Personal Vision Statement (this document will describe how Interdisciplinary Studies defines your unique academic identity, based on Academic Disciplines 1 and 2, your General Education courses, and your electives.	
3. Student samples of demonstrable proficiencies:	
a. Sample paper demonstrating writing ability:	
b. Sample paper demonstrating critical thinking:	
c. Sample speech critique	
Verification of Portfolio Project Completion:	
Students must complete 42 credits of advanced course work.	
<b>Total Credits</b>	<b>120sh</b>

## International Studies – Bachelor of Arts

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	3 sh
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	3 sh
<b>Mathematical and Computational Thinking</b>	3 sh
MATH107: Basic Statistics I (3 sh)	
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	6 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	6 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	9 sh
Visual or Performing Arts course (3 sh)	
Philosophy or Literature (3 sh)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	9 sh
HIST102, HIST112 or HONR102 REQUIRED	
<b>Wellness</b>	3 sh
<b>Experiential Learning (2 units)</b>	
EL Competency 1	
EL Competency 2	
<b>Total General Education Credits</b>	<b>42</b>

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
POLI119: First Year Student Seminar	

<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
<b>Core Requirements (take 4 of the following):</b>	12 sh*
POLI107: World Politics	
ANTH102: Cultural Anthropology	
ECON102: Introduction to Macroeconomics	
ECON103: Introduction to Microeconomics	
GEOG101: World Regional Geography	
HIST101: World History I OR	
HIST111: Global History I	
<b>Track Concentration</b>	30 sh
Please choose from the following tracks (requirements listed on back): Cultural Studies, Governance and Conflict, Global Economy	
#	
#	
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#	
<b>Non-credit Requirements</b>	
<b>Study Abroad experience **</b>	
Country:	
**minimum 10 days out of US. Credits will be applied to the track concentration as appropriate	
<b>Portfolio (must be approved by academic advisor)</b>	
Review 1	
Review 2	
Capstone (end of senior year)	
<b>Degree requirements:</b>	<b>up to 18 sh</b>
<b>##Seminars (2 of 3)</b>	6 sh
Humanities 328	
Social Science 328	
Science/Math 328	
<b>Foreign Language Requirement</b>	up to 12sh
<b>###(Level-IV proficiency)</b>	
<b>Total credit hours</b>	<b>120</b>



**Cultural Studies Track**

<p>Language and culture (9 sh)          May be met by taking language courses beyond level IV in the first foreign language; culture or politics courses in the country/region of the first foreign language; or by language (any level) or culture course in a second language; or by a combination of the foregoing.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fine arts (6 sh) – must be non-US Art, Theatre or Music</p> <p>_____</p> <p>_____</p>	<p>Non-US Literature: 200 level or above (6 sh)</p> <p>_____</p> <p>_____</p> <p>Ethnography (3 sh) _____ (choose from below)          ANTH328 Anthropology of Women          ANTH422 Anthropology of Latin America          ANTH424 Anthropology of the Middle East</p> <p>Non-US History (6 sh)</p> <p>_____</p> <p>_____</p>
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**Governance and Conflict Track**

<p>History – non-US (6 sh) _____</p> <p>_____</p> <p>POLI205 Comparative Politics (3sh)          POLI250 American Foreign Policy (3 sh)          POLI350 Internat’l Relations (3 sh)</p> <p>ECON355 Int’l Trade &amp; Fin. (3 sh) OR          POLI322 International Political Economy</p> <p>International Relations Electives (12 sh) (see electives right)</p> <p>_____</p> <p>_____</p>	<p>Electives:</p> <p>Non-US History          GEOG212 Geography of the Developing World          GEOG315 Political Geography          POLI105 American National Government          POLI308 African Politics          POLI315 Politics in Developing Nations          POLI320 Latin American Politics          POLI335 Politics of Global Health          POLI370 UN and International Organizations</p>
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**Global Economy Track**

<p>History – non-US (3 sh) _____</p> <p>ECON102 Introduction to Macroeconomics (3 sh) OR          ECON103 Introduction to Microeconomics (3 sh)  <i>(if not taken as a core course)</i></p> <p>GEOG440 Economic Geography (3 sh)          ECON340 Money and Banking (3 sh)</p> <p>ECON355 Int’l Trade &amp; Finance (3 sh) OR          POLI322 Int’l Political Economy (3 sh)</p> <p>Global Econ. Electives (12 sh) (see electives right)</p> <p>_____</p> <p>_____</p>	<p>Electives:</p> <p>HIST311 International Business History          HIST390 Contemporary World Problems          POLI205 Comparative Politics          POLI308 African Politics          POLI315 Politics in Developing Nations          POLI320 Latin American Politics          POLI350 International Relations          ECON310 Intermediate Macroeconomics          ECON315 Intermediate Microeconomics          ECON330 Economic Development          ECON350 Comparative Economic Systems          GEOG212 Geography of the Developing World          GEOG305 Conservation of Natural Resources</p>
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# Mathematics – Bachelor of Science

Effective Fall 2017

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1 suggested: (MATH225: History of Mathematics)	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH141: Calculus 1	
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	
<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b> (at least one lab)	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Aesthetics:	
Philosophy/Literature:	
PLA:	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b> (at least one with GAC-Historical Foundation)	<b>9 sh</b>
GAC:	
GAC:	
GAC-H:	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>26 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
MATH119: First-Year Student Seminar	1sh

<b>Major Area and Cognate Courses</b>	<b>51 sh</b>
# COMP160: Programming 1	3 sh
# MATH142: Calculus 2	3 sh
# MATH205: Foundations of Mathematics	3 sh
# MATH243: Calculus 3	3 sh
# MATH244: Calculus 4	3 sh
# MATH310: Modern Algebra 1	3 sh
# MATH311: Elements of Linear Algebra	3 sh
# MATH401: Real Analysis 1	3 sh
<b>Students must take at least 27 sh from the Pure and Applied Discipline</b>	
<b>Pure Discipline</b> (at least 6 sh)	
# MATH225: History of Mathematics	3 sh
# MATH302: Number Theory	3 sh
# MATH307: Foundations of Geometry	3 sh
# MATH402: Real Analysis 2	3 sh
# MATH405: Complex Analysis	3 sh
# MATH410: Introduction to Topology	3 sh
# MATH420: Modern Algebra 2	3 sh
MATHX59: Special Topics in Mathematics	3 sh
<b>Applied Discipline</b> (at least 6 sh)	
# COMP161: Programming 2	3 sh
# MATH301: Differential Equations	3 sh
# MATH312: Probability and Statistics	3 sh
# MATH313: Mathematical Statistics 1	3 sh
# MATH320: Linear Programming	3 sh
# MATH350: Numerical Methods	3 sh
# MATH403: Biomathematics	3 sh
# MATH404: Applied Mathematics	3 sh
# MATH422: Applied Statistics	3 sh
# MATH412: Actuarial Mathematics	3 sh

# BOG Advanced Coursework

**Mathematics – Bachelor of Science**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
MATH119: First Year Student Seminar (1)  
MATH141: Calculus 1 (3) [MCT]  
Hist., Behav., and Soc. Sci. (3) [HBS]  
Natural Science (3) [NS]  
Philos., Literary, and Aesth. (3) [PLA]

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Credit Total: 16

**Spring Freshman (example)**

#MATH142: Calculus 2 (3)  
#MATH205: Foundations of Math (3)  
Philos., Literary, and Aesth. (3) [PLA]  
Oral Communication (3) [OC]  
Wellness (3) [WEL]

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Credit Total: 15

**Fall Sophomore (example)**

#MATH243: Calculus 3 (3)  
#COMP160: Programming 1 (3)  
Natural Science with Lab (3) [NS]  
Elective (3) [CT]  
Global Aware. And Citiz. (3) [GAC]

Credit Total: 15

**Spring Sophomore (example)**

#MATH244: Calculus 4 (3)  
#MATH225: History of Math (3) [WC]  
#MATH311: Elem. of Linear Alg (3)  
#COMP161: Programming 2 (3)  
Global Aware. And Citiz. (3) [GAC]

Credit Total: 15

**Fall Junior (example)**

#MATH302: Number Theory (3)  
#MATH307: Foundations of Geom. (3)  
Philos., Literary, and Aesth. (3) [PLA]  
Global Aware. And Citiz. (3) [GAC]  
Elective (3) [CT]

Credit Total: 15

**Spring Junior (example)**

#MATH310: Modern Algebra 1 (3)  
#MATH320: Linear Programming (3)  
Elective (3) [WC]  
Elective (3) [EL]  
Elective (3)

Credit Total: 15

**Fall Senior (example)**

#MATH401: Real Analysis 1 (3)  
#MATH301: Differential Equations (3)  
Elective (2) [EL]  
Hist., Behav., and Soc. Sci. (3) [HBS]  
#MATH313: Mathematical Stats (3)

Credit Total: 14

**Spring Senior (example)**

#MATH3XX or 4XX elective (3)  
#MATH312: Prob and Stats (3)  
Elective (3)  
Elective (3)  
Elective (3)

Credit Total: 15

# Mathematics: Actuarial Science - Bachelor of Science

Effective Fall 2017

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3 sh
WC Competency 1 suggested: (MATH225: History of Mathematics)	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
#MATH141: Calculus 1	3 sh
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
ECON102: Principles of Macroeconomics	3 sh
ECON103: Principles of Microeconomics	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Aesthetics:	
Philosophy/Literature:	
PLA:	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(at least one with GAC-Historical Foundation)	
GAC:	
GAC:	
GAC-H:	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>18 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
MATH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>59 sh</b>
<b>Major Required Courses</b>	<b>36 sh</b>
#COMP160: Programming 1	3 sh
#MATH142: Calculus 2	3 sh
#MATH205: Foundations of Mathematics	3 sh
#MATH243: Calculus 3	3 sh
#MATH244: Calculus 4	3 sh
#MATH301: Differential Equations	3 sh
#MATH311: Elements of Linear Algebra	3 sh
#MATH312: Probability and Statistics	3 sh
#MATH313: Mathematical Statistics	3 sh
#MATH412: Actuarial Mathematics	3 sh
#MATH422: Applied Statistics	3 sh
#ACCT110: Financial Accounting	3 sh
<b>One of the Following Courses</b>	<b>2 sh</b>
#MATH369: Internship	2 sh
#MATH499: Independent Study	2 sh
<b>Three of the Following Courses</b>	<b>9 sh</b>
#MATH302: Number Theory	3 sh
#MATH307: Foundations of Geometry	3 sh
#MATH310: Modern Algebra 1	3 sh
#MATH320: Linear Programming	3 sh
#MATH350: Numerical Methods	3 sh
MATHX59: Special Topics in Mathematics	3 sh
#MATH401: Real Analysis 1	3 sh
<b>Four of the Following Courses</b>	<b>12 sh</b>
#ACCT335: Intermediate Accounting 1	3 sh
#ACCT340: Intermediate Accounting 2	3 sh
#ECON310: Intermediate Macroeconomics	3 sh
#ECON315: Intermediate Microeconomics	3 sh
#ECON320: American Public Finance	3 sh
#ECON330: Economic Development	3 sh
#ECON340: Money and Banking	3 sh
#ECON355: International Trade and Finance	3 sh
#ECON360: Current Economic Problems	3 sh
#ECON410: Econometrics	3 sh
#ECON415: Mathematical Economics	3 sh
#MANG325: Financial Management	3 sh
#MANG326: Fundamentals of Investment Management	3 sh

# BOG Advanced Coursework

**Actuarial Science Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
MATH119: First Year Student Seminar (1)  
MATH141: Calculus 1 (3) [MCT]  
ECON102: Principles of Macro. (3) [HBS]  
Natural Science (3) [NS]  
Philos., Lit., and Aesth. (3) [PLA]

Credit Total: 16

**Spring Freshman (example)**

MATH142: Calculus 2 (3)  
MATH205: Foundations of Math. (3)  
Philos., Lit., and Aesth. (3) [PLA]  
Oral Communication (3) [OC]  
Wellness (3) [WEL]

Credit Total: 15

**Fall Sophomore (example)**

MATH243: Calculus 3 (3)  
COMP160: Programming 1 (3)  
ECON103: Principles of Micro. (3) [HSB]  
ACCT110: Financial Accounting (3)  
Global Aware. And Citiz. (3) [GAC-H]  
Credit Total: 15

**Spring Sophomore(example)**

MATH244: Calculus 4 (3)  
MATH312: Prob. and Stat. (3)  
MATH311: Elem. Of Linear Alg. (3)  
Philos., Lit., and Aesth. (3) [PLA]  
MATH225: History of Math. (3) [WC]  
Credit Total: 15

**Fall Junior (example)**

MATH313: Mathematical Stat. (3)  
Natural Science (with Lab) (3) [NS]  
Math Elective (3)  
Global Awareness and Citiz (3) [GAC]  
Elective (3) [WC]  
Credit Total: 15

**Spring Junior (example)**

MATH412: Actuarial Mathematics (3)  
MATH422: Applied Statistics (3)  
ACCT, ECON, MANG (3)  
Elective (3) [CT]  
ACCT, ECON, MANG (3)  
Credit Total: 15

**Fall Senior (example)**

ACCT, ECON, MANG (3)  
ACCT, ECON, MANG (3)  
MATH301: Differential Equations (3)  
MATH401:Real Analysis 1 (3)  
Elective (3) [EL]  
Credit Total: 15

**Spring Senior (example)**

Global Aware. And Citiz. (3) [GAC]  
MATH369 Internship (2) [EL]  
Elective (3) [CT]  
ACCT, ECON, MANG (3)  
Elective (3)  
Credit Total: 14



**3+2 BS in Mathematics / MS in Actuarial Science**  
**Suggested Course Sequence**

**Undergraduate Program**

**Fall Freshman**

ENGL100: Composition [WC] (3)  
MATH119: First Year Student Seminar (1)  
MATH141: Calculus 1 [MCT] (3)  
ECON102: Princ. of Macroecon. [HBS] (3)  
Natural Science [NS] (3)  
Philos., Literacy, and Aesthetics [PLA] (3)  
Elective (2)

Credit Total: 18

**Spring Freshman**

MATH142: Calculus 2 (3)  
MATH205: Foundations of Math. (3)  
Philos. Literacy, and Aesthetics [PLA] (3)  
Wellness [WEL] (3)  
Natural Science [NS] (3)  
Global Aware. and Citizenry [GAC] (3)

Credit Total: 18

**Fall Sophomore**

MATH243: Calculus 3 (3)  
COMP160: Programming 1 (3)  
ECON103: Princ. Of Microecon. [HBS] (3)  
ACCT110: Financial Accounting (3)  
Global Aware. And Citizenry [GAC-H] (3)  
Elective [EL] (3)

Credit Total: 18

**Spring Sophomore**

MATH244: Calculus 4 (3)  
MATH312: Prob. And Stat. (3)  
MATH412: Act. Math OR  
MATH311: Elem. of Lin. Algebra (3)  
Philos., Literacy and Aesthetics [PLA] (3)  
ACCT, ECON, MANG Elective [CT] (3)

Credit Total: 18

**Fall Junior**

Global Aware. and Citizenry [GAC] (3)  
MATH301: Diff. Equations (3)  
ACCT, ECON, MANG (3)  
MATH Elective (3)  
ACCT, ECON, MANG (3)  
Elective [WC] (3)

Credit Total: 18

**Spring Junior**

MATH412: Actuarial Math OR  
MATH311: Elem. of Linear Algebra (3)  
MATH225: History of Math. [WC] (3)  
ACCT, ECON, MANG (3)  
Oral Communication [OC] (3)  
Elective [EL] (3)  
Elective [CT] (3)

Credit Total: 18

**Graduate Program**

**Fall 4<sup>th</sup> Year**

MATH605: Probability (3)  
MATH610: Financial Mathematics (3)  
ACCT6XX: Financial and Man. Acct. (3)

Credit Total: 9

**Spring 4<sup>th</sup> Year**

MATH6XX: Mathematical Statistics (3)  
MATH6XX: Regression Analysis and Statistical Models (3)

FINA6XX: Corporate Finance (3)

Credit Total: 9

B.S. Degree awarded

**Fall 5<sup>th</sup> year**

MATH6XX: Time Series and For. (3)  
MATH6XX: Actuarial Models and Life Data Analysis (3)  
FINA6XX: Financial Risk Management (3)

Credit Total: 9

**Spring 5<sup>th</sup> year**

MATH6XX: Internship /  
Capstone Project (3)

Credit Total: 3

# Music - Bachelor of Arts

Effective Fall 2014

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	
<b>Knowledge and Inquiry</b>	<b>21sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
MUSI 101 Intro to Music	3 sh
MUSI 103 Basic Musicianship	3 sh
Choose one Additional Course from PLA	3 sh
<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship - One course must satisfy the historical foundations competency.</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	
<b>Total Gen Ed Requirements</b>	<b>42 sh</b>
<b>Seminars- Two of three required from the following:</b>	
<b>Humanities (328)</b>	<b>6 sh</b>
<b>Social Sciences (328)</b>	
<b>Science/Math (328)</b>	
<b>Foreign Language Requirement</b>	<b>12 sh</b>
<b>Electives</b>	<b>18 sh</b>
<b>Total University Requirements</b>	<b>78 sh</b>

<b>First Year Student Seminar (VAPA119)</b>	<b>1 sh</b>
<b>(or equivalent)</b>	
<b>Major Area Courses</b>	<b>42 sh</b>
<b>Applied Music*</b>	<b>8 sh</b>
<b>Major Performance Area</b>	
MUSI 121 Applied Music	1 sh per semester
<b>Music History and Literature</b>	<b>6 sh</b>
MUSI 312 Music from 1450-1800	2 sh
MUSI 313 Music of the Romantic Period	2 sh
MUSI 314 Twentieth Century Music	2 sh
<b>Music Theory</b>	<b>7 sh</b>
MUSI 203 Music Theory I	2 sh
MUSI 204 Music Theory II	2 sh
MUSI 322 Music Theory III	3 sh
<b>REQUIRED SUPPORTING COURSES - 7 required</b>	<b>7 sh</b>
MUSI 205 Music Technology	3 sh
MUSI 109 Group Piano I	2 sh
MUSI 210 Group Piano II	2 sh
<b>ELECTIVES – 6 required</b>	<b>6 sh</b>
MUSI 105 Exploring Contemporary Trends	3 sh
MUSI 108 Music Explorations	2 sh
MUSI 120 Music Literature	1 sh
MUSI 305 Jazz Studies	2 sh
MUSI 308 Music Marketing	2 sh
MUSI 315 American Music	3 sh
MUSI 319 Symphonic Music	3 sh
MUSI 320 Music for the Theatre	3 sh
MUSI 328 Seminar: Ethnic Music	3 sh
MUSI 343 Orchestration	3 sh
MUSI XXX Applied Pedagogy	3 sh
Independent Study	1/2/3 sh
<b>Total Required Courses</b>	<b>42 sh</b>

**Additional requirements:** \*As an extension of the Applied Music/Major Performance Area, each BA Music Major will be required to attend and perform in student recitals. Students may also be required by their instructor to attend other concerts. Also, every BA major must present a Senior Recital featuring a minimum of 30 minutes' worth of music which has been learned during their study at LHU. Approval of the Recital is conditional upon successful completion of a pre-recital Jury performance for the music faculty, no later than one month before the intended recital date.



## Music: Marketing – Bachelor of Arts

### General Education Requirements

The General Education requirements that became effective fall 2014 apply. Refer to the General Education section of the catalog.

### Major Requirements

Marketing	15.0 sh
MRKT200 Introduction to Marketing	3.0 sh
MRKT300 Consumer Marketing	3.0 sh
MRKT305 Internet Marketing and e-Commerce	3.0 sh
MRKT310 Entrepreneurial and Small Business Marketing	3.0 sh
MRKT410 Marketing Research	3.0 sh
Music History Literature	4.0 sh
MUSI400 Music History after 1750	2.0 sh
MUSI312 Music History to 1750	2.0 sh
Applied Instruction	8.0 sh
MUSI121 or a combination of MUSI121/122	8.0 sh
Methods Courses	7.0 sh
MUSI124 Percussion Methods	1.0 sh
MUSI128 String Methods – Upper Strings	1.0 sh
MUSI118 String Methods – Lower Strings	1.0 sh
MUSI119 Woodwind Methods – Concert Winds	1.0 sh
MUSI129 Woodwind Methods – Transposing Winds	1.0 sh
MUSI326 Brass Methods – Lower Brass	1.0 sh
MUSI336 Brass Methods – Upper Brass	1.0 sh
Required Supporting Courses	23.0 sh
MUSI108 Music Explorations	2.0 sh
MUSI109 Group Piano 1	1.0 sh
MUSI109 Group Piano 2	1.0 sh
MUSI203 Theory 1	2.0 sh
MUSI204 Theory 2	2.0 sh
MUSI111-116 Ensembles	8.0 sh
MUSI205 Music Technology	1.0 sh
MUSI105 Contemporary Trends	3.0 sh
MUSI3 – Music Marketing	3.0 sh

A pretest will be given to those enrolled in the Music Marketing major to see if there are deficiencies in music history or music theory or both. Those students showing such deficiency will need to enroll in either MUSI101 Introduction to Music or MUSI103 Basic Musicianship or both.

# Music: Popular Music and Jazz – Bachelor of Arts

For Students entering LHU Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
MUSI101: Introduction to Music	3 sh
MUSI105: Exploring Contemporary Trends	3 sh
PLA Course: Literature or philosophy	3 sh
<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship – One course must satisfy the historical foundation competency.</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	
<b>Total Gen Ed Requirements</b>	<b>42 sh</b>

<b>Electives</b>	<b>17 sh</b>

<b>Total University Requirements</b>	<b>77 sh</b>
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<b>First Year Student Seminar</b>	<b>1 sh</b>
VAPA119: First Year Student Seminar	

<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
<b>Applied Music</b>	<b>8</b>
<b>Major performance area.....</b>	
<b>Music History and Literature</b>	<b>6</b>
MUSI308: Jazz Studies	3
MUSI309: History Rock Music	3
<b>Music Theory</b>	<b>8</b>
MUSI103: Basic Musicianship.	3
MUSI203: Music Theory I	2
MUSI306: Popular Music and Jazz Theory	3
<b>ENSEMBLES - 8 required</b>	<b>8</b>
MUSI111-116: Music Ensemble Performance	
<b>REQUIRED SUPPORTING COURSES – 8 required</b>	<b>8</b>
MUSI109: Group Piano I	2
MUSI205: Music Technology	
MUSI308: Music Marketing	3
<b>ELECTIVES – 4 required</b>	<b>4</b>
MUSI108: Music Explorations	2
MUSI120: Music Literature	1
MUSI204: Music Theory II	2
MUSI210: Group Piano II	2
MUSI314: 20th Century Music	3
MUSI315: American Music	3
MUSI320: Music for the Theatre	3
MUSI322: Music Theory III	3
MUSI328: Seminar: Ethnic Music	3
MUSI343: Orchestration	3

<b>Seminars: Two required from the following: Humanities, Social Science, Science/Math</b>	<b>6 sh</b>
<b>Foreign Language Requirement</b>	<b>12 sh</b>
<b>Total Credits</b>	<b>120</b>

## Music - Bachelor of Fine Arts

Effective Fall 2014

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	
<b>Knowledge and Inquiry</b>	<b>21sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
MUSI 101 Intro to Music	3 sh
MUSI 103 Basic Musicianship	3 sh
Choose one Additional Course from PLA	3 sh
<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship - One course must satisfy the historical foundations competency.</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	
<b>Total Gen Ed Requirements</b>	<b>42 sh</b>
<b>Seminars - Two of three required from the following:</b> <b>Humanities (328)</b> <b>Social Sciences (328)</b> <b>Science/Math (328)</b>	<b>6 sh</b>
<b>Foreign Language Requirement</b>	<b>12 sh</b>
<b>Electives</b>	<b>18 sh</b>
<b>Total University Requirements</b>	<b>78 sh</b>

<b>First Year Student Seminar (VAPA119)</b>	<b>1 sh</b>
<b>(or equivalent)</b>	

<b>Major Area Courses</b>	<b>54 sh</b>
<b>Applied Music*</b>	<b>16 sh</b>
<b>Major Performance Area</b>	
MUSI 122 Applied Music	2 sh per semester
<b>Music History and Literature</b>	<b>6 sh</b>
MUSI 312 Music from 1450-1800	2 sh
MUSI 313 Music of the Romantic Period	2 sh
MUSI 314 Twentieth Century Music	2 sh
<b>Music Theory</b>	<b>12 sh</b>
MUSI 203 Music Theory I	2 sh
MUSI 204 Music Theory II	2 sh
MUSI 206 Sight Singing	2 sh
MUSI 322 Music Theory III	3 sh
MUSI 323 Music Theory IV	3 sh
<b>ENSEMBLES - 8 required, minimum one per semester</b>	<b>8 sh</b>
MUSI 111-116 Music Ensemble Performance	
<b>Group Piano</b>	<b>4 sh</b>
MUSI 109 Group Piano II	2 sh
MUSI 210 Group Piano II	2 sh
<i>With permission of instructor, MUSI 121 02 (applied piano) may serve as a substitute for Group Piano</i>	
<b>MAJOR ELECTIVES – 8 required</b>	<b>8 sh</b>
MUSI 105 Exploring Contemporary Trends	3 sh
MUSI 120 Music Literature	1 sh
MUSI 205 Music Technology	3 sh
MUSI 305 Jazz Studies	2 sh
MUSI 306 Popular Music and Jazz Theory	3 sh
MUSI 308 Music Marketing	2 sh
MUSI 315 American Music	3 sh
MUSI 319 Symphonic Music	3 sh
MUSI 320 Music for the Theatre	3 sh
MUSI 328 Seminar: Ethnic Music	3 sh
MUSI 343 Orchestration	3 sh
MUSI XXX Applied Pedagogy	3 sh
Independent Study	1/2/3 sh
<b>Total Required Courses</b>	<b>54 sh</b>

**Additional Rquirements**

\*As an extension of the Applied Music/Major Performance Area, each BFA Music Major will be required to attend and perform in student recitals. Students may also be required by their instructor to attend other concerts. Also, every BFA major must present a Senior Recital featuring a minimum of 45 minutes' worth of music which has been learned during their study at LHU. Approval of the Recital is conditional upon successful completion of a pre-recital Jury performance for the music faculty, no later than one month before the intended recital date.





# Physics: Applied Physics (Nanotechnology) - Bachelor of Science

Effective Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
Math141: Calculus I	3 sh
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Sciences Inquiry</b>	<b>6 sh</b>
PHYS170: Intermediate General Physics I	4 sh
PHYS171: Intermediate General Physics II	4 sh
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
SCI119: First Year Student Seminar	

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<i>PHYS170/PHYS171 NSI credits</i>	2 sh
NANO105: Intro to Nanoscale Science	3 sh
#NANO210: Tools & Techniques	3 sh
#NANO304: Generation & Modification	3 sh
#NANO3XX: Characterization	3 sh
#PHYS290: Electronics	4 sh
#NANO458: Advanced Applied Nanotechnology Laboratory	6 sh
<b>total</b>	<b>22</b>
MATH142: Calculus II	3 sh
#MATH243: Calculus III	3 sh
CHEM120: Principles of Chemistry I	4 sh
<b>total</b>	<b>10</b>
#PHYS315: Modern Physics	4 sh
#PHYS330: Mechanics I	3 sh
#PHYS350: Quantum Mechanics	3 sh
#PHYS370: Electricity & Magnetism	3 sh
<b>total</b>	<b>13</b>
<i>Physics/Nano/Technical Electives (13 sh from the list of courses below)</i>	
#PHYS250: Heat	3 sh
#PHYS325: Optics	4 sh
#PHYS331: Mechanics II	3 sh
#PHYS345: Math. Methods of Physics	2 sh
#PHAP400: Modern Optoelectronics	3 sh
#PHAP410: Material Science	3 sh
#MATH301: Differential Equations	3 sh
<b>total</b>	<b>13</b>
# advanced level courses	

**Applied Physics (Nanotechnology) Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
MATH141: Calculus I (3)  
NANO105: Intro to Nanoscale Science (3)  
CHEM120: Principles of Chemistry I (4)

Credit Total: 14

**Spring Freshman (example)**

MATH142: Calculus II (3)  
Wellness (3)  
PHYS170: Intermed. General Physics I (4)  
NANO210: Tools & Techniques (3)  
Elective (4)

Credit Total: 17

**Fall Sophomore (example)**

PHYS171: Intermed. General Physics II (4)  
NANO304: Generation & Modification (3) or NANO 3XX  
Characterization (3)  
MATH243: Calculus III (3)  
Philosophical, Literary, and Aesthetic Inquiry (3)  
Historical, Behavioral, and Social Science Inquiry (3)

Credit Total: 16

**Spring Sophomore (example)**

PHYS330: Mechanics I (3)  
PHYS290: Electronics (4)  
Historical, Behavioral, and Social Science Inquiry (3)  
Philosophical, Literary, and Aesthetic Inquiry (3)  
Global Awareness and Citizenship (3)

Credit Total: 16

**Fall Junior (example)**

PHYS315: Modern Physics (4)  
NANO3XX: Characterization (3) or NANO304: Generation  
& Modification (3)  
Philosophical, Literary, and Aesthetic Inquiry (3)  
Elective (3)

Credit Total: 13

**Spring Junior (example)**

PHYS350: Quantum Mechanics (3)  
NANO458: Advanced Applied Nanotechnology  
Laboratory (3)  
Physics/Nano/Technical Elective (3)  
Electives (6)

Credit Total: 15

**Fall Senior (example)**

PHYS370 Electricity & Magnetism (3)  
NANO458: Advanced Applied Nanotechnology  
Laboratory (3)  
Physics/Nano/Technical Elective (3)  
Physics/Nano/Technical Elective (3)  
Global Awareness and Citizenship (3)

Credit Total: 15

**Spring Senior (example)**

Physics/Nano/Technical Elective (4)  
Global Awareness and Citizenship (3)  
  
Oral Communication (3)  
Elective (4)

Credit Total: 14





**PHYSICS: PRE-ENGINEERING Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
MATH141: Calculus I (3)  
CHEM120: Principles of Chemistry (4)

PHYS105: Engineering Graphics (3)  
General Education (3)

Credit Total: 17

**Spring Freshman (example)**

CHEM121: Principles of Chemistry II (4)  
MATH142: Calculus II (3)  
PHYS170: Intermediate General Physics I (4)  
ECON102: Principles of Macroeconomics or  
ECON103: Principles of Microeconomics (3)  
General Education (3)

Credit Total: 17

**Fall Sophomore (example)**

MATH211: Linear Methods (3)  
MATH243: Calculus III (3)

PHYS171: Intermediate General Physics II (4)  
COMP160: Programming I (3)  
General Education (3)

Credit Total: 16

**Spring Sophomore (example)**

MATH244: Calculus IV (3)  
PHYS290: Electronics (4)  
or PHYS325: Optics (4)  
PHYS330: Mechanics I (3)  
General Education (6)

Credit Total: 16

**Fall Junior (example)**

MATH301: Differential Equations (3)  
PHYS315: Modern Physics (4)  
PHYS331: Mechanics II (3)  
PHYS370: Electricity and Magnetism (3)  
General Education (3)

Credit Total: 16

**Spring Junior (example)**

PHYS250: Heat (3)  
PHYS345: Math. Methods of Physics (2)  
PHYS350: Quantum Mechanics (3)  
General Education (9)

Credit Total: 17

**Fall Senior (example)**

\_\_\_\_\_ at the engineering school  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Credit Total: \_\_\_\_\_

**Spring Senior (example)**

\_\_\_\_\_ at the engineering school  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Credit Total: \_\_\_\_\_



**Physics Major: Traditional Physics Track**  
**Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SCI119: First Year Student Seminar (1)  
MATH141: Calculus 1(3)  
CHEM120: Principles of Chemistry I (4)  
COMP160: Programming I (3)

Credit Total: 14

**Spring Freshman (example)**

MATH142: Calculus II (3)  
PHYS170: Intermed. Gen. Physics I (4)  
General Education (9)

Credit Total: 16

**Fall Sophomore (example)**

PHYS171: Intermed. Gen. Phys II (4)  
MATH243: Calculus III (3)  
MATH211: Lin. Methods (3)  
General Education (6)

Credit Total: 16

**Spring Sophomore(example)**

PHYS290: Electronics I (4)  
PHYS330: Mechanics I (3)  
MATH244: Calculus IV (3)  
General Education (6)

Credit Total: 16

**Fall Junior (example)**

MATH301: Differential Equations (3)  
PHYS315: Modern Physics (4)  
PHYS331: Mechanics II (3)  
General Education (4)

Credit Total: 14

**Spring Junior (example)**

PHYS250: Heat (3)  
PHYS345: Math Methods of Phys (2)  
PHYS350: Quantum Mechanics (3)  
General Education (6)

Credit Total: 14

**Fall Senior (example)**

PHYS370: Electricity & Magnetism (3)  
PHYS431: Advanced Lab (3)  
General Education (8)

Credit Total: 14

**Spring Senior (example)**

PHYS325: Optics (4)  
PHYS371: Electrodynamics (3)  
General Education (8)

Credit Total: 15

# Political Science – Bachelor of Arts

Effective: Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100 Composition (3 sh)	
WC competency 1	
WC competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH107 Basic Statistics I (3 sh)	
<b>Critical Thinking</b>	
CT competency 1	
CT competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
Lab Science (3 sh)	
Lab Science (3 sh)	
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
ECON102 Principles of Macroeconomics (3 sh) OR ECON103 Principles of Microeconomics (3 sh)	
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Performing Arts course (3 sh)	
Philosophy or Literature (3 sh)	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST102 World History II (3 sh)	GAC-H
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning (2 units)</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
POLI119: First Year Seminar	

<b>Major Area and Cognate Courses</b>	<b>42 sh</b>
<b>Major Core</b>	<b>12 sh</b>
POLI105 American National Government	
POLI107 World Politics	
#POLI200 Political Inquiry	
#POLI205 Comparative Politics	
<b>Major Electives</b>	<b>15 sh</b>
#POL200+ _____	
#POLI200+ _____	
#POLI200+ _____	
#POLI200+ _____	
#POLI200+ _____	
<b>#Independent Research/Experiential Learning</b>	<b>3 sh</b>
Choose from one of the following:	
POLI369 Internship	
POLI400 Junior Senior Research Seminar	
POLI499 Independent Study	
<b>Cognate Courses</b>	<b>12 sh</b>
#328 Seminar (in area not fulfilled for BA req.)	
#PHIL (in addition to Gen. Ed.) or POLI390 or POLI391	
#HIST/PHIL/ECON/SOCI/ANTH/GEOG/PSYC 300+	
#HIST/PHIL/ECON/SOCI/ANTH/GEOG/PSYC 300+	
<b>BA Degree requirements:</b>	<b>Up to 18sh</b>
<b>##Arts &amp; Sciences Seminars (2 of 3)</b>	<b>6sh</b>
Humanities 328	
Social Science 328	
Science/Math 328	
<b>Foreign Language Requirement Level-IV proficiency</b>	<b>up to 12 sh</b>
<b>Total credit hours</b>	<b>120</b>

# denotes advanced course work

# PreK-Grade 4 - Bachelor of Science in Education

Effective Fall 2021

<b>General Education Credit Total</b>	Min Grade	<b>42 sh</b>
<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100 Composition (3 sh)	C-	
WC Competency 1 – ECED 150		☐
WC Competency 2		☐
<b>Oral Communication</b>		<b>3 sh</b>
#ECED415 Integrating Curr & Instr	C	
<b>Math &amp; Computational Thinking</b>		<b>3 sh</b>
MATH102 Number Systems	C-	
<b>Critical Thinking</b>		
CT Competency 1 – ECED493		☐

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry (one w/ a lab)</b>		<b>6 sh</b>
	C-	
	C-	
<b>Hist., Behav., &amp; Social Science Inquiry</b>		<b>6 sh</b>
PSYC102 Child Development	C	
<b>Phil., Literary, &amp; Aesthetic Inquiry</b>		<b>9 sh</b>
ENGL110 Introduction to Literature	C-	
3sh in Visual & Performing Art required		

<b>Major Coursework Credit Total</b>	Min Grade	<b>72 sh</b>
<b>First Year Student Seminar</b>		<b>1 sh</b>
EDUC119 First Year Seminar	CR*	

<b>Major Area and Cognate Courses</b>	Min Grade	
<b>Professional Education</b>		<b>15 sh</b>
MATH115 Statistics and Geometry	C	
PSYC201 Educational Psychology	C	
SPEC204 Cognitive Dev of Diverse Learners	C	
#SPEC309 Effective Instructional Strategies	C	
#SPEC345 Lit Instruction for Stud w/Dis	C	
<b>Required PreK-Grade 4/ECED Coursework</b>		<b>32 sh</b>
ECED100 Intro. Early Childhood Education	C	
ECED200 Observing and Assessing Young Children	C	
ECED204 Primary Reading	C	
ECED212 Language Development	C	
ECED220 Emerging Mathematics & Science	C	
ECED225 Beginning Literacy	C	
ECED230 Prof. Comm. and Family Collab.	C	
ECED240 Special Topics in ECED (2 s.h)	C	
#EDUC335 Assessment & Evaluation	C	
#ECED326 Positive Class Culture: Guid/Class Mgmt	C	
#EDUC346 Disciplinary Literacy	C	
<b>PreK-Grade 4/ECED Professional Semester</b>		<b>12 sh</b>
#ECED431 Science for Young Children	C	
#ECED432 Lang. Arts & Reading for Yng Children	C	
#ECED433 Math Methods for Grades K-4	C	

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		<b>9 sh</b>
ECED150 Diversity in ECED	C	☐
3sh Historical Foundations Competency		
<b>Wellness</b>		<b>3 sh</b>
HPED245 Health and PE Elem School		
<b>Experiential Learning</b>		
EL Competency 1 – ECED493		☐
EL Competency 2 – ECED494		☐

#ECED436 Social Studies for Young Children	C	
<b>Student Teaching</b>		<b>12 sh</b>
#ECED493 Student Teaching and Practicum (6 s.h.)	C	
#ECED494 Student Teaching and Practicum (6 s.h.)	C	

\* Credit/no credit

# Upper division courses

☐ Met in course requirements

<b>Electives</b>		<b>6 sh</b>

PreK-Grade 4 Major Suggested Course Sequence
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<b>Fall Freshman</b>	<b>Spring Freshman</b>
ENGL100 Composition ECED119 First Year Student Seminar PSYC102 Child Development MATH102 or MATH115  2 General Education Courses	ECED100 Intro. to Early Childhood Education ECED150 Diversity in Early Childhood Education MATH 102 or MATH115 ENGL110 Introduction to Literature  1 General Education Course
<b>Credit Total: 16</b>	<b>Credit Total: 15</b>

<b>Fall Sophomore</b>	<b>Spring Sophomore</b>
ECED212 Language Development ECED220 Emergent Math and Science PSYC201 Educational Psychology ECED225 Emerging Literacy  1 General Education Course	ECED200 Observing and Assessing Yng Children ECED204 Primary Reading ECED230 Professional Communication ECED240 Topics in Early Childhood (spring only) SPEC204 Cognitive Development  1 General Education Course
<b>Credit Total: 15</b>	<b>Credit Total: 17</b>

<b>Fall Junior</b>	<b>Spring Junior</b>
EDUC335 Assessment & Evaluation ECED326 Positive Classroom Culture: Guidance and Classroom Mgmt. SPEC309 Effective Instructional Strategies  2 General Education Courses	EDUC346 Disciplinary Literacy SPEC345 Literacy Instruction  3 General Education Courses
<b>Credit Total: 15</b>	<b>Credit Total: 15</b>

<b>Fall Senior</b> <i>Professional Semester</i>	<b>Spring Senior</b> <i>Student Teaching</i>
ECED415 Curriculum & Instruction ECED431 Science for Early Childhood ECED432 Language Arts for Early Childhood ECED433 Math Methods for Grades K-4 ECED436 Social Studies for Early Childhood	ECED493 Student Teaching and Practicum ECED494 Student Teaching and Practicum
<b>Credit Total: 15</b>	<b>Credit Total: 12</b> <b>Major Total: 120</b>



## PreK-Grade 4 ECED with Special Education – Bachelor of Science in Education

Effective Fall 2020

<b>General Education Credit Total</b>	Min Grade	<b>42 sh</b>
<b>Intellectual Foundation</b>		<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition	C-	
WC Competency 1 – #SPEC430		✓
WC Competency 2 - #SPEC325		✓
<b>Oral Communication</b>	C	<b>3 sh</b>
#SPEC441: Strat. for High Incidence		✓
<b>Math &amp; Computational Thinking</b>		<b>3 sh</b>
MATH102: Number Systems	C	
<b>Critical Thinking</b>		
CT Competency 1 – #SPEC493		✓
CT Competency 2 – #SPEC494		✓

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry (one w/ a lab)</b>	C-	<b>6 sh</b>
<b>Hist., Behav., &amp; Social Science Inquiry</b>		<b>6 sh</b>
PSYC102: Child Development	C	
PSYC103: Adolescent Development	C	
<b>Phil., Literary, &amp; Aesthetic Inquiry</b>		<b>9 sh</b>
Aesthetics:		
Philosophy/Literature: ENGL110: Introduction to Literature	C-	
PLA:		

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		<b>9 sh</b>
GAC: SPEC202: Cultural and Linguistic Diversity	C	✓
GAC:		
GAC-H:		
<b>Wellness</b>		<b>3 sh</b>
HPED245: Health and PE Elem School		
<b>Experiential Learning</b>		
EL Competency 1 – #SPEC440		✓
EL Competency 2 – #SPEC441		✓

<b>Major Coursework Credit Total</b>	Min Grade	<b>93 sh</b>
<b>First Year Student Seminar</b>		<b>1 sh</b>
SPEC119 First Year Seminar*	CR	

<b>Major Area and Cognate Courses</b>	Min Grade	
<b>Professional Education</b>		<b>8 sh</b>
MATH115 Statistics and Geometry	C	
PSYC201 Educational Psychology	C	
EDUC212: Classroom Management	C	2sh
<b>Required Early Childhood Education Courses</b>		<b>24 sh</b>
ECED100: Intro. Early Childhood Education	C	
ECED212: Language Development	C	
ECED204: Primary Reading	C	
ECED225: Beginning Literacy	C	
ECED230: Prof. Comm. and Family Collaboration	C	
#ECED326: Child Guidance and Classroom Mgt.	C	
#EDUC335: Assessment and Differentiation	C	
#EDUC346: Disciplinary Literacy	C	
<b>Required Special Education Coursework</b>		<b>24 sh</b>
SPEC105: Foundations of Special Education	C	
SPEC202: Cultural and Linguistic Diversity	C	GAC
SPEC212: Low Incidence Disabilities Support	C	
SPEC215: High Incidence Disabilities Support	C	
#SPEC300: Comm. Dis. and Assist. Technology	C	
#SPEC309: Effective Instructional Strategies	C	
#SPEC325: Infant/Preschool Special Needs	C	
#SPEC338: Positive Behavior Support	C	
#SPEC345: Lit. Instruction for Students with Dis.	C	
<b>ECED Professional Semester</b>		<b>15 sh</b>
#ECED415: Integrating Curriculum & Instruction*	C	
#ECED431: Science for Young Children*	C	
#ECED432: Lang. Arts & Reading for Young Child.*	C	
#ECED433: Math for Early Childhood*	C	
#ECED436: Social Studies for Young Children	C	
<b>Special Education Professional Semester</b>		<b>9 sh</b>
#SPEC425: Law and Collaborative Practices	C	
#SPEC440: Strat. for Teach. St. with Low Inc. Dis.	C	
#SPEC441: Strat. for Teach. St. with High Inc. Dis.	C	OC
#SPEC430: Assess. Ed. Needs & Plan. for Inst.	C	
<b>Student Teaching</b>		<b>12 sh</b>
#ECED493/494: PreK-4 Student Teaching and Practicum	C	

#SPEC494: Student Teaching and Practicum	C	
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- ✓ Met in course requirements
- \* Credit/No Credit
- # Upper division courses

**PreK- Grade 4 ECED /Special Education Dual Certification (BSED)  
Suggested Course Sequence**

<b>Fall Freshman</b>	<b>Spring Freshman</b>
ENGL100 Composition SPEC119 First Year Student Seminar PSYC102 Child Development MATH102 Number Systems SPEC105 Foundations of Special Education 1 General Education course  <p align="center"><b>Credit Total: 16</b></p>	ECED100 Intro. to Early Childhood Education SPEC212 Low Incidence Disabilities Support PSYC103 Adolescent Development MATH115 Statistics and Geometry ENGL110 Introduction to Literature 1 General Education course  <p align="center"><b>Credit Total: 18</b></p>

<b>Fall Sophomore</b>	<b>Spring Sophomore</b>
SPEC215 High Incidence Disabilities Support SPEC202 Cultural and Linguistic Diversity ECED212 Language Development ECED225 Beginning Literacy 2 General Education courses  <p align="center"><b>Credit Total: 18</b></p>	PSYC201 Educational Psychology ECED204 Primary Reading ECED230 Professional Comm. and Fam. Coll. SPEC325 Infant/Preschool Special Needs 2 General Education courses  <p align="center"><b>Credit Total: 18</b></p>

<b>Fall Senior</b>	<b>Spring Senior</b>
<p align="center"><i>SPEC Professional Semester</i></p> SPEC425 Law and Collaborative Practices SPEC430 Assessing Ed. Needs and Planning for Instruction SPEC440 Strat. for Teaching Students with Low Inc. Dis. SPEC441 Strat. for Teaching Students with High Inc. Dis. EDUC212 Classroom Management 1 General Education course  <p align="center"><b>Credit Total: 17</b></p>	<p align="center"><i>Student Teaching</i></p> ECED493/494: PreK-4 Student Teaching & Practicum SPEC 494: Secondary Student Teaching & Practicum  <p align="center"><b>Credit Total: 12</b></p>

Advising Notes: 1. GE: PLA- one course must be from visual or performing arts 2. GE: GAC- one course must meet the historical foundations competency #Denotes Advanced Coursework	<p><b>Additional coursework may be completed in the summer or during winter intersession if a reduced load is desired per the recommended sequence.</b></p> <p><b>Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b></p>
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**Fall Junior**

SPEC300 Comm. Disorders and Asst. Tech  
SPEC309 Effective Instructional Strategies  
SPEC345 Literacy Instruction  
SPEC338 Positive Behavior Supports  
EDUC335 Assessment and Differentiation  
EDUC346 Disciplinary Literacy

**Credit Total: 18**

**Spring Junior**

*ECED Professional Semester*

ECED415 Integrating Curriculum and Instruction  
ECED431 Science for Young Children  
ECED432 Lang. Arts & Reading for Young Children  
ECED433 Math Methods for Grades K-4  
ECED436 Social Studies for Young Children  
ECED326 Child Guidance and Classroom Management

**Credit Total: 18**

# Psychology - Bachelor of Arts

Effective Fall 2020

<b>Intellectual Foundation (9 sh)</b>	
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1: PSYC204	
WC Competency 2: PSYC409	
<b>Oral Communication</b>	<b>3 sh</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
#MATH107: Basic Statistics I	3
<b>Critical Thinking</b>	
CT Competency 1: PSYC202	
CT Competency 2: PSYC409	

<b>Knowledge and Inquiry (21 sh)</b>	
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL101: Basic Biology1 (or BIOL106)	3
Additional lab or non-lab science	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART, MUSI, or THEA	3
PHIL or Literature (e.g., ENGL110)	3
(Any of the above areas)	3

<b>Personal and Social Responsibility (12sh)</b>	
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST101 or HIST102	3
	3
	3
<b>Wellness</b>	<b>3 sh</b>
	3
<b>Experiential Learning (2 units required)</b>	
Recommended: PSYC369 or PSYC499 (2 units each)	

<b>Electives</b>	<b>17 sh</b>
PSYC207: Careers in Psych (Strongly Recommended)	2

<b>First Year Student Seminar</b>	<b>1 sh</b>
PSYC119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>45 sh</b>
<b>Major Core (21 sh) Minimum grade of C-</b>	
PSYC100: Introduction to Psychological Science	3
# PSYC202: Research Methods in Psychology	3
# PSYC204: Writing for Psychology	3
# PSYC205: Applied Psychological Statistics	3
# PSYC250: Social Psychology	3
# PSYC215: Foundations of Biopsychology	3
# PSYC409: Applying Research Methods in Psych	3

<b>Supplemental Core (9 sh)</b>	
PSYC102: Child Dev, PSYC103: Adol. Dev, or PSYC240: Lifespan Dev	3
# PSYC305: Theories of Learning or PSYC310: Cognitive Psych	3
# PSYC307: Abnormal or 308: Personality	3

<b>PSYCHOLOGY ELECTIVES (300 or 400 level)</b> PSYC electives should be carefully selected, in consultation with your academic advisor, to prepare you for your specific career goals (At least 9 sh must be 300 or 400 level courses #)	<b>12 sh</b>
	3
#	3
#	3
#	3

<b>BA Degree Specific Requirements (18 sh)</b>	
<b>Completion of Level 4 of a Foreign Language</b>	<b>3-12 sh</b>
FREN101 or SPAN101*	3
# FREN102 or SPAN102*	3
# FREN201 or SPAN201*	3
# FREN202 or SPAN202	3
*If lower levels are waived, credits become electives	
<b>Liberal Arts Seminars</b>	<b>6 sh</b>
Must take from 2 of the 3 areas (Social Science; Humanities; Science/Math)	
# _____ 328	3
# _____ 328	3

# Advanced coursework (must be at least 42 sh)

**Psychology Bachelor of Arts  
Suggested Course Sequence**

**Fall Freshman (example)**

PSYC119: First Year Student Seminar (1)  
PSYC100: Introduction to Psychology (3)  
ENGL100: Composition (3)  
Language 101 (3)  
Wellness course (3)  
HBSS course (3)  
Credit Total: 16

**Spring Freshman (example)**

PSYC102, PSYC103, or PSYC240 (3)  
Language 102 (3)  
PLA course (3)  
PSYC250 (3)  
Elective (may choose PSYC207) (2)  
  
Credit Total: 14

**Fall Sophomore (example)**

Language 201 (3)  
PSYC202 (3)  
Major supplemental core/major elective (3)  
MATH100 (if needed) or elective (3)  
BIOL101 (3)  
  
Credit Total: 15

**Spring Sophomore (example)**

Language 202  
MATH107 (3)  
PSYC204 (3)  
PSYC215 (3)  
Major supplemental core/major elective (3)  
  
Credit Total: 15

**Fall Junior (example)**

Lab or non-lab science course (3)  
PSYC205 (3)  
OC course (3)  
Major elective (3)  
HBSS course  
  
Credit Total: 15

**Spring Junior (example)**

Elective (3)  
PSYC409 (3)  
Major elective (3)  
GAC course (3)  
PLA course (3)  
  
Credit Total: 15

**Fall Senior (example)**

PSYC369 or major electives (6)  
328 Seminar course (3)  
Major supplemental core or elective (3)  
GAC course (3)  
  
Credit Total: 15

**Spring Senior (example)**

Major supplemental core or elective (3)  
328 Seminar course (3)  
GAC course (3)  
PLA (3)  
Elective (3)  
  
Credit Total: 15

EL = Experiential Learning; GAC = Global Awareness & Citizenship; HBSS = Historical, Behavioral, and Social Sciences Inquiry; OC = Oral Communication; PLA = Philosophical, Literary, and Aesthetic Inquiry. *At least 9 credits PSYC electives must be 300-400 level courses.*

Psychology – Bachelor of Arts: Accelerated to Clinical Mental Health Counseling Master of Science

Effective Fall 2021

<b>Intellectual Foundation (9 sh)</b>	
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1: PSYC204	
WC Competency 2: PSYC409	
<b>Oral Communication</b>	<b>3 sh</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
#MATH107: Basic Statistics I	3
<b>Critical Thinking</b>	
CT Competency 1: PSYC202	
CT Competency 2: PSYC409	

<b>Knowledge and Inquiry (21 sh)</b>	
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL101: Basic Biology (or BIOL106)	3
Additional lab or non-lab science	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART, MUSI, or THEA	3
PHIL or Literature (e.g., ENGL110)	3
(Any of the above areas)	3

<b>Personal and Social Responsibility (12sh)</b>	
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST101 or HIST102	3
	3
	3
<b>Wellness</b>	<b>3 sh</b>
	3
<b>Experiential Learning (2 units required)</b>	
Recommended: PSYC369 or PSYC499 (2 units each)	

<b>Electives</b>	<b>17 sh</b>
SPRT208: Intro to Sport & Exercise Psychology (rec.)	
SPRT318: Adv Theory Appl Sport/Exer Psych (rec.)	
SPRT600: Research Methods in Sport Science	
SPRT601: Sport in American Culture	
SPRT610: Foundations of Sport & Exercise Psych	
SPRT617: Multicultural/Ethnic Div for Sport Psych	

<b>First Year Student Seminar</b>	<b>1 sh</b>
PSYC119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>45 sh</b>
<b>Major Core (21 sh) Minimum grade of C-</b>	
PSYC100: Introduction to Psychological Science	3
# PSYC202: Research Methods in Psychology	3
# PSYC204: Writing for Psychology	3
# PSYC205: Applied Psychological Statistics	3
# PSYC215: Foundations of Biopsychology	3
# PSYC250: Social Psychology	3
# PSYC409: Applying Research Methods in Psych	3

<b>Supplemental Core</b>	<b>9 sh.</b>
PSYC102: Child Dev, PSYC103: Adol. Dev, or PSYC240: Lifespan Dev	3
# PSYC305: Theories of Learning or PSYC310: Cognitive Psych	3
# PSYC307: Abnormal or PSYC308: Personality	3

<b>PSYCHOLOGY ELECTIVES (300 or 400 level)</b> PSYC electives should be carefully selected, in consultation with your academic advisor to prepare you for your specific career goals (At least 9 sh must be 300 or 400 level courses #)	<b>12 sh</b>
	3
#	3
#	3
#	3

<b>BA Degree Specific Requirements (18 sh)</b>	
<b>Completion of Level 4 of a Foreign Language</b>	<b>3-12 sh</b>
FREN101 or SPAN101*	3
# FREN102 or SPAN102*	3
# FREN201 or SPAN201*	3
# FREN202 or SPAN202	3
*If lower levels are waived, credits become electives	

<b>Liberal Arts Seminars</b> Must take from 2 of the 3 areas (Social Science; Humanities; Science/Math)	<b>6 sh</b>
# 328	3
# 328	3

# Advanced coursework (must be at least 42 sh)

**Fall Freshman (example)**

PSYC119 (1)  
 PSYC100 (3)  
 ENGL100 (3)  
 PLA course (3)  
 Wellness course (3)  
 GAC course (3)

Credit Total: 16

**Spring Freshman (example)**

PSYC102, PSYC103, or PSYC240 (3)  
 BIOL101 (3)  
 PLA course (3)  
 PSYC250 (3)  
 MATH107 (3)

Credit Total: 15

**Fall Sophomore (example)**

Language 101 (3)  
 PSYC202 (3)  
 PSYC307 or PSYC308 (3)  
 Elective (3) [SPRT 208 recommended]  
 Lab or non-lab Science course (3)

Credit Total: 15

**Spring Sophomore (example)**

Language 102  
 Elective (3) [SPRT318 recommended]  
 PSYC204 (3)  
 PSYC215 (3)  
 PSYC Elective (3)

Credit Total: 15

**Fall Junior (example)**

Language 201 (3)  
 PSYC205 (3)  
 OC course (3)  
 PSYC Elective (3)  
 HBSS course (3)

Credit Total: 15

**Spring Junior (example)**

Language 202 (3)  
 PSYC409 (3)  
 GAC course (3)  
 HBSS course (3)  
 PLA course (3)

Credit Total: 15

**Fall Senior (example)**

PSYC Elective (3)  
 328 Seminar Course (3)  
 PSYC310 or Elective (3)  
 GAC-H course (3)  
 SPRT600

Credit Total: 15

**Spring Senior (example)**

328 Seminar course (3)  
 PSYC305 or Elective  
 SPRT601  
 SPRT610  
 SPRT617

Credit Total: 15

EL = Experiential Learning; GAC = Global Awareness & Citizenship; HBSS = Historical, Behavioral, and Social Sciences Inquiry; OC = Oral Communication; PLA = Philosophical, Literary, and Aesthetic Inquiry. *At least 9 credits PSYC electives must be 300-400 level courses.*



**Psychology – Bachelor of Arts: Accelerated to Sport Science Master of Science**

<b>Intellectual Foundation (9 sh)</b>	
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1: PSYC204	
WC Competency 2: PSYC409	
<b>Oral Communication</b>	<b>3 sh</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
#MATH107: Basic Statistics I	3
<b>Critical Thinking</b>	
CT Competency 1: PSYC202	
CT Competency 2: PSYC409	

<b>Knowledge and Inquiry (21 sh)</b>	
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL101: Basic Biology (or BIOL106)	3
Additional lab or non-lab science	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART, MUSI, or THEA	3
PHIL or Literature (e.g., ENGL110)	3
(Any of the above areas)	3

<b>Personal and Social Responsibility (12sh)</b>	
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST101 or HIST102	3
	3
<b>Wellness</b>	<b>3 sh</b>
	3
<b>Experiential Learning (2 units required)</b>	
Recommended: PSYC369 or PSYC499 (2 units each)	

<b>Electives</b>	<b>17 sh</b>
SPRT208: Intro to Sport & Exercise Psychology (rec.)	
SPRT318: Adv Theory Appl Sport/Exer Psych (rec.)	
SPRT600: Research Methods in Sport Science	
SPRT601: Sport in American Culture	
SPRT610: Foundations of Sport & Exercise Psych	
SPRT617: Multicultural/Ethnic Div for Sport Psych	

<b>First Year Student Seminar</b>	<b>1 sh</b>
PSYC119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>45 sh</b>
<b>Major Core (21 sh) Minimum grade of C-</b>	
PSYC100: Introduction to Psychological Science	3
# PSYC202: Research Methods in Psychology	3
# PSYC204: Writing for Psychology	3
# PSYC205: Applied Psychological Statistics	3
# PSYC215: Foundations of Biopsychology	3
# PSYC250: Social Psychology	3
# PSYC409: Applying Research Methods in Psych	3

<b>Supplemental Core</b>	<b>9 sh</b>
PSYC102: Child Dev, PSYC103: Adol. Dev, or PSYC240: Lifespan Dev	3
# PSYC305: Theories of Learning or PSYC310: Cognitive Psych	3
# PSYC307: Abnormal or PSYC308: Personality	3

<b>PSYCHOLOGY ELECTIVES (300 or 400 level)</b> PSYC electives should be carefully selected, in consultation with your academic advisor to prepare you for your specific career goal: (At least 9 sh must be 300 or 400 level courses #)	<b>12 sh</b>
	3
#	3
#	3
#	3

<b>BA Degree Specific Requirements (18 sh)</b>	
<b>Completion of Level 4 of a Foreign Language</b>	<b>3-12 sh</b>
FREN101 or SPAN101*	3
# FREN102 or SPAN102*	3
# FREN201 or SPAN201*	3
# FREN202 or SPAN202	3
*If lower levels are waived, credits become electives	

<b>Liberal Arts Seminars</b> Must take from 2 of the 3 areas (Social Science; Humanities; Science/Math)	<b>6 sh</b>
# 328	3
# 328	3

# Advanced coursework (must be at least 42 sh)

**Fall Freshman (example)**

PSYC119 (1)  
 PSYC100 (3)  
 ENGL100 (3)  
 PLA course (3)  
 Wellness course (3)  
 GAC course (3)

Credit Total: 16

**Spring Freshman (example)**

PSYC102, PSYC103, or PSYC240 (3)  
 BIOL101 (3)  
 PLA course (3)  
 PSYC250 (3)  
 MATH107 (3)

Credit Total: 15

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**Fall Sophomore (example)**

Language 101 (3)  
 PSYC202 (3)  
 PSYC307 or PSYC308 (3)  
 Elective (3) [SPRT 208 recommended]  
 Lab or non-lab Science course (3)

Credit Total: 15

**Spring Sophomore (example)**

Language 102  
 Elective (3) [SPRT318 recommended]  
 PSYC204 (3)  
 PSYC215 (3)  
 PSYC Elective (3)

Credit Total: 15

**Fall Junior (example)**

Language 201 (3)  
 PSYC205 (3)  
 OC course (3)  
 PSYC Elective (3)  
 HBSS course (3)

Credit Total: 15

**Spring Junior (example)**

Language 202 (3)  
 PSYC409 (3)  
 GAC course (3)  
 HBSS course (3)  
 PLA course (3)

Credit Total: 15

**Fall Senior (example)**

PSYC Elective (3)  
 328 Seminar Course (3)  
 PSYC310 or Elective (3)  
 GAC-H course (3)  
 SPRT600

Credit Total: 15

**Spring Senior (example)**

328 Seminar course (3)  
 PSYC305 or Elective  
 SPRT601  
 SPRT610  
 SPRT617

Credit Total: 15

EL = Experiential Learning; GAC = Global Awareness & Citizenship; HBSS = Historical, Behavioral, and Social Sciences Inquiry; OC = Oral Communication; PLA = Philosophical, Literary, and Aesthetic Inquiry. *At least 9 credits PSYC electives must be 300-400 level courses.*

# Psychology - Bachelor of Science

Effective Fall 2022

<b>Intellectual Foundation (9 sh)</b>	
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1: PSYC204	
WC Competency 2: PSYC409	
<b>Oral Communication</b>	<b>3 sh</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH107: Basic Statistics I	3
<b>Critical Thinking</b>	
CT Competency 1: PSYC202	
CT Competency 2: PSYC409	

<b>Knowledge and Inquiry (21 sh)</b>	
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL101: Basic Biology (or BIOL106)	3
Additional lab or non-lab science	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART, MUSI, or THEA	3
PHIL or Literature (e.g., ENGL110)	3
(Any of the above areas)	3

<b>Personal and Social Responsibility (12sh)</b>	
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST101, HIST102, or HONR102	3
	3
	3
<b>Wellness</b>	<b>3 sh</b>
	3
<b>Experiential Learning (2 units required)</b>	
PSYC499 (2 units)	

<b>Electives</b>	<b>21 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
PSYC119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>56 sh</b>
<b>Major Core (26 sh) Min. grade of C-</b>	
PSYC100: Introduction to Psychological Science	3
# PSYC202: Research Methods in Psychology	3
# PSYC204: Writing for Psychology	3
# PSYC205: Applied Psychological Statistics	3
# PSYC207: Careers in Psychology	2
# PSYC215: Foundations of Biopsychology	3
# PSYC250: Social Psychology	3
# PSYC409: Applying Research Methods in Psych	3
# PSYC499: Independent Study	3

<b>Supplemental Core (12 sh)</b>	
PSYC102: Child Dev, PSYC103: Adol Dev, or PSYC240: Lifespan Development	3
# PSYC305: Theories of Learning or PSYC310: Cognitive Psychology	3
# PSYC307: Abnormal or PSYC308: Personality	3
# PSYC402: Sensation & Perception, PSYC410: Physio Psych, or PSYC412: Human Neuropsych	3

<b>Psychology Electives (18 sh)</b>	
(At least 9 sh must be 300 or 400 level courses #)	
#	3
#	3
#	3
	3
	3
	3

# Advanced coursework (must be at least 42 sh)

**Bachelor of Science-Psychology**  
**Suggested Course Sequence**

**Fall Freshman (example)**

PSYC119: First Year Student Seminar (1)  
PSYC100: Introduction to Psychology (3)  
ENGL100: Composition (3)  
PLA course (3)  
Wellness course (3)  
GAC course (3)

Credit Total: 16

**Spring Freshman (example)**

PSYC102, PSYC103, or PSYC240 (3)  
BIOL101 or BIOL106 (3)  
PSYC250 (3)  
PSYC207 (2)  
MATH100 or MATH107 (3)

Credit Total: 14

**Fall Sophomore (example)**

PSYC205 (3)  
PSYC307 or PSYC308 (3)  
OC course (3)  
PLA course (3)  
HBSS Course (3)

Credit Total: 15

**Spring Sophomore (example)**

PSYC202 (3)  
PSYC215 (3)  
MATH107 or elective (3)  
PLA course (3)  
GAC course (3)

Credit Total: 15

**Fall Junior (example)**

PSYC204 (3)  
PSYC310 or PSYC elective  
HBSS course (3)  
Lab or non-lab Science course (3)  
Elective (3)

Credit Total: 15

**Spring Junior (example)**

PSYC409 (3)  
PSYC305 or PSYC elective (3)  
PSYC elective (3)  
GAC course (3)  
Elective (3)

Credit Total: 15

**Fall Senior (example)**

PSYC499 (fulfills EL; 3)  
Electives (6)  
PSYC electives (6)

Credit Total: 15

**Spring Senior (example)**

PSYC369 (fulfills EL) or PSYC electives (6)  
PSYC402, PSYC410, or PSYC412 (3)  
Electives (6)

Credit Total: 15

EL = Experiential Learning; GAC = Global Awareness & Citizenship; HBSS = Historical, Behavioral, and Social Sciences Inquiry; OC = Oral Communication; PLA = Philosophical, Literary, and Aesthetic Inquiry. *At least 9 credits PSYC electives must be 300-400 level courses.*

# Psychology – Bachelor of Science: Accelerated to Sport Science Master of Science

Effective Fall 2021

<b>Intellectual Foundation (9 sh)</b>	
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3
WC Competency 1: PSYC204	
WC Competency 2: PSYC409	
<b>Oral Communication</b>	<b>3 sh</b>
	3
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
#MATH107: Basic Statistics I	3
<b>Critical Thinking</b>	
CT Competency 1: PSYC202	
CT Competency 2: PSYC409	

<b>Knowledge and Inquiry (21 sh)</b>	
<b>Natural Science Inquiry</b>	<b>6 sh</b>
BIOL101: Basic Biology (or BIOL106)	3
Additional lab or non-lab science	3
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
	3
	3
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART, MUSI, or THEA	3
PHIL or Literature (e.g., ENGL110)	3
(Any of the above areas)	3

<b>Personal and Social Responsibility (12sh)</b>	
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
HIST101 or 102	3
	3
	3
<b>Wellness</b>	<b>3 sh</b>
	3
<b>Experiential Learning (2 units required)</b>	
PSYC499 (2 units)	

<b>Electives</b>	<b>18 sh</b>
SPRT208: Intro to Sport & Exercise Psychology (rec.)	
SPRT318: Adv Theory Appl Sport/Exer Psych (rec.)	
SPRT600: Research Methods in Sport Science	
SPRT601: Sport in American Culture	
SPRT610: Foundations of Sport & Exercise Psych	
SPRT617: Multicultural/Ethnic Div for Sport Psych	

<b>First Year Student Seminar</b>	<b>1 sh</b>
PSYC119: First Year Seminar	1

<b>Major Area and Cognate Courses</b>	<b>59 sh</b>
<b>Major Core (26 sh) Min. grade of B-</b>	
PSYC100: Introduction to Psychological Science	3
# PSYC202: Research Methods in Psychology	3
# PSYC204: Writing for Psychology	3
# PSYC205: Applied Psychological Statistics	3
# PSYC207: Careers in Psychology	2
# PSYC215: Foundations of Biopsychology	3
# PSYC250: Social Psychology	3
# PSYC409: Applying Research Methods in Psych	3
# PSYC499: Independent Study	3

<b>Supplemental Core (12 sh) Min. grade of C+</b>	
PSYC102: Child Dev, PSYC103: Adol Dev, or PSYC240: Lifespan Dev	3
# PSYC305: Theories of Learning or PSYC310: Cognitive Psych	3
# PSYC307: Abnormal or PSYC308: Personality	3
# PSYC402: Sensation & Perception, PSYC410: Physio Psych, or PSYC412: Human Neuropsych	3

<b>Psychology Electives (18 sh) Min. grade of C+</b>	
PSYC electives should be carefully selected, in consultation with your academic advisor to prepare you for your specific career goals	
(At least 9 sh must be 300 or 400 level courses #)	
#	3
#	3
#	3
	3
	3
	3

<b>Computer Skill Enhancement (3 sh)</b>	
COMP150: Intro to Computers (or COMP160)	3

# Advanced coursework (must be at least 42 sh)

**Fall Freshman (example)**

PSYC119 (1)  
 PSYC100 (3)  
 ENGL100 (3)  
 PLA course (3)  
 Wellness course (3)  
 GAC course (3)

Credit Total: 16

**Spring Freshman (example)**

PSYC102, PSYC103, or PSYC240 (3)  
 BIOL101 or BIOL106 (3)  
 PLA course (3)  
 PSYC250 (3)  
 PSYC207 (2)  
 MATH107 (3)

Credit Total: 17

**Fall Sophomore (example)**

PSYC202 (3)  
 PSYC307 or PSYC308 (3)  
 COMP150 or COMP160 (3)  
 Elective (3) [SPRT208 recommended]  
 HBSS course (3)

Credit Total: 15

**Spring Sophomore (example)**

PSYC215 (3)  
 PSYC204 (3)  
 PSYC elective (3)  
 GAC course (3)  
 Elective (3) [SPRT318 recommended]

Credit Total: 15

**Fall Junior (example)**

PSYC205 (3)  
 PSYC310 or PSYC elective (3)  
 OC course (3)  
 PSYC Elective (3)  
 HBSS course (3)

Credit Total: 15

**Spring Junior (example)**

PSYC409 (3)  
 PSYC305 or PSYC elective (3)  
 PSYC elective (3)  
 GAC course (3)  
 PLA course (3)

Credit Total: 15

**Fall Senior (example)**

PSYC499 (3)  
 Lab or non-lab Science course (3)  
 PSYC elective (3)  
 PSYC elective (3)  
 SPRT600

Credit Total: 15

**Spring Senior (example)**

PSYC402, PSYC410, or PSYC412 (3)  
 SPRT601  
 SPRT610  
 SPRT617

Credit Total: 12

EL = Experiential Learning; GAC = Global Awareness & Citizenship; HBSS = Historical, Behavioral, and Social Sciences Inquiry; OC = Oral Communication; PLA = Philosophical, Literary, and Aesthetic Inquiry. *At least 9 credits PSYC electives must be 300-400 level courses.*



**Community and Commercial Recreation Track  
Suggested Course Sequence**

**Fall Freshman (example)**

RECR119: First Year Student Seminar (1)  
RECR105: Leisure, Wellness and Personal Lifestyle (3 -  
WEL)  
RECR110: Introduction to Recreation (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

**Credit Total: 16**

**Spring Freshman (example)**

RECR215: Travel and Tourism (3)  
RECR244: Recreation Leadership (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

**Credit Total: 15**

**Fall Sophomore (example)**

RECR290: Special Topics (3)  
RECR330: Marketing Recreation Services (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

**Credit Total: 18**

**Spring Sophomore(example)**

RECR275: Inclusive Recreation and TR (3)  
RECR315: Program Planning (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
RECR210: Field Experience (3) (summer only)

**Credit Total: 15 + 3 = 18**

**Fall Junior (example)**

RECR300: Special Events (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

**Credit Total: 15**

**Spring Junior (example)**

RECR325: Camp Counseling (3)  
RECR340: Commercial Recreation (3)  
Additional RECR course: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

**Credit Total: 15**

**Fall Senior –Professional Semester**

RECR304: Finance and Acquisition (3)  
RECR410: Issues (3)  
RECR415: O & M (3)  
RECR430: Evaluation and Research (3)

**Credit Total: 12**

**Spring Senior (example)**

RECR425 Professional Field Experience (12\*)  
\*May take 10 or 12 credits dependent on individual  
student need.

**Credit Total: 12**





**Fitness Management Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
RECR119: First Year Student Seminar (1)  
RECR105: Leisure, Wellness and Personal Lifestyle (3 -  
WEL)  
RECR110: Introduction to Recreation (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 16

**Spring Freshman (example)**

RECR200: Personal Training and Aerobic Leadership (3)  
RECR244: Recreation Leadership and Supervision (3)  
HLTH128: Anatomy and Physiology 1 (3)  
  
HTLH129: Anatomy and Physiology 1 Lab (1)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 16

**Fall Sophomore (example)**

RECR205 Nutrition for Wellness (3)  
RECR315 Program Planning (3)  
HLTH130 A&P 2 (3)  
HTLH131 A&P 2 Lab (1)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 16

**Spring Sophomore(example)**

RECR275 Inclusive Recreation and TR (3)  
RECR330 Marketing Recreation Services (3)  
HLTH353 Physiology of Exercise (3)  
RECR210: Field Experience (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Fall Junior (example)**

RECR301 Exercise Prescription (3)  
RECR303 Sports Nutrition (3)  
  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Spring Junior (example)**

RECR302 Supervision of Strength Training Programs (3)  
RECR312 Teaching Conditioning Principles for  
Certification Testing (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Fall Senior –Professional Semester**

RECR405 Health Promotion (3)  
RECR410 Issues (3)  
RECR415 O & M (3)  
RECR420 Recreation Resource Management (3)  
RECR320 Evaluation and Research (3)  
Credit Total: 15

**Spring Senior (example)**

RECR425 Professional Field Experience (10/12)  
  
  
  
Credit Total: 10/12



**Outdoor Recreation Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
RECR119: First Year Student Seminar (1)  
RECR105: Leisure, Wellness and Personal Lifestyle (3 -  
WEL)  
RECR110: Introduction to Recreation (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 16

**Spring Freshman (example)**

RECR244: Recreation Leadership (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Fall Sophomore (example)**

RECR203: Team Building (3)  
RECR315: Program Planning (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Spring Sophomore(example)**

RECR320: Interpreting the Environment(3)  
RECR275: Inclusive Recreation and TR (3)  
RECR202: Outdoor Activities (3)  
RECR210: Field Experience (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Fall Junior (example)**

RECR356: Outdoor Education (3)  
RECR330: Marketing (3)  
Elective Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Spring Junior (example)**

RECR325: Camp Counseling (3)  
RECR355: Outdoor Recreation(3)  
Lab Science: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

**Fall Senior –Professional Semester**

RECR410: Issues (3)  
RECR415: O & M (3)  
RECR420: Recreation Resource Mgt (3)  
RECR430: Evaluation and Research (3)

Credit Total: 12

**Spring Senior (example)**

RECR425 Professional Field Experience (12)

Credit Total: 10/12

# Recreation Management: Therapeutic Recreation - Bachelor of Science

Effective Fall 2017

	SH	Sem
<b>Intellectual Foundation</b>	<b>9</b>	
<b>Written Communication</b>	<b>3</b>	
ENGL100: Composition		
WC Competency 1		
WC Competency 2		
<b>Oral Communication</b>	<b>3</b>	
<b>Mathematical and Computational Thinking</b>	<b>3</b>	
<b>Critical Thinking</b>		
CT Competency 1		
CT Competency 2		

<b>Knowledge and Inquiry</b>	<b>21</b>	
<b>Natural Science Inquiry</b>	<b>6</b>	
Lab Science		
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6</b>	
PSYC100		
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9</b>	

<b>Personal and Social Responsibility</b>	<b>12</b>	
<b>Global Awareness and Citizenship</b>	<b>9</b>	
GAC-Historical		
<b>Wellness</b>	<b>3</b>	
RECR105: Leisure, Wellness and Personal Lifestyle	3	
<b>Experiential Learning</b>		
EL Competency 1 – RECR210		
EL Competency 2 – RECR425		

<b>Electives</b>	<b>18</b>	

	SH	Sem
<b>First Year Student Seminar</b>	<b>1</b>	
RECR119: First Year Student Seminar	1	

<b>Major Area Core Courses</b>	<b>59</b>	
RECR110: Introduction to Recreation/Leisure	3	
RECR244: Recreation Leadership	3	
#RECR275: Inclusive Recreation and TR	3	
#RECR315: Program Planning and Design	3	
#RECR330: Marketing Recreation Services	3	
<b>Professional Semester Courses</b>		
#RECR304: Finance and Acquisition	3	
#RECR410: Current Issues	3	
#RECR415: Organization and Management	3	
#RECR430: Assessment, Evaluation and Research	3	
<b>Field Experiences</b>		
RECR210: Field Participation in RECR	3	
#RECR 425: Professional Field Experience	14	
<b>Track Specific Courses</b>		
RECR204: Foundations of TR	3	
#RECR364: TR Assessment and Documentation	3	
#RECR365: TR Methods and Techniques	3	
#RECR402: Leisure Education -TR	3	
<b>Required Cognate Courses</b>		
HLTH122: Essentials of Anatomy and Physiology	3	
<b>Courses required for NCTRC Exam Eligibility</b>		
#PSYC240: Life Span Development	3	
#PSYC307: Abnormal Psychology	3	
*One additional TR course	3	
<b>*In addition to PSYC240 and PSYC307, must complete one additional TR course to sit for the NCTRC exam.</b>		
<b>High Suggested Electives</b>		
PSYC315: Health Psychology	3	
PSYC330: Adult Development and Aging	3	
RECR203: Team Building/Challenge Course	3	
SPEC310: Manual Communication and Signing	3	
HLTH200: Introduction to Disease	3	
HLTH332: Psych Aspects of Injury & Illness	3	
#denotes upper-level course content		

**Therapeutic Recreation Track  
Suggested Course Sequence**

Fall Freshman (example)

RECR119: First Year Student Seminar (1)  
RECR105: Leisure, Wellness and Personal Lifestyle (3 – WEL)  
RECR110: Introduction to Recreation (3)  
PSYC100: Introduction to Psychological Sciences(3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Credit Total: 16

Fall Sophomore (example)

RECR275: Inclusive Recreation and TR (3)  
RECR364: Assessment & Documentation TR (3)  
RECR365: Methods & Techniques TR (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)

Credit Total: 15

Fall Junior (example)

RECR330: Marketing Recreation Services (3)  
RECR402: Leisure Education TR (3)  
PSYC307: Abnormal Psychology (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Credit Total: 15

Fall Senior –Professional Semester

RECR304: Finance and Acquisition (3)  
RECR410: Issues (3)  
RECR415: O & M (3)  
RECR430: Evaluation and Research (3)  
Credit Total: 12

Spring Freshman (example)

RECR204: Foundations of TR (3)  
RECR244: Recreation Leadership (3)  
  
HLTH122: Essentials of Anatomy and Physiology (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
  
Credit Total: 15

Spring Sophomore(example)

RECR315: Program Planning (3)  
PSYC240: Lifespan Development (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
RECR210: Field Experience (3) (summer only)  
Credit Total: 15 + 3 = 18

Spring Junior (example)

Recommended Elective: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Elective/Gen Ed: (3)  
Credit Total: 15

Spring Senior (example)

RECR425: Professional Field Experience (14\*)  
\*Must take a 14 credit field experience to meet NCTRC requirements.  
  
Credit Total: 14

## Secondary Education: Biology - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENG100: Composition (3 sh)	C-	
WC Competency 1		
WC Competency 2		
<b>Oral Communication</b>	C	3 sh
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141: Calculus I (3)	C	
<b>Critical Thinking</b>		
CT Competency 1		
CT Competency 2		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
BIOL106: Principles of Biology I (3)		
BIOL107 Principles of Biology II (3)		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103: Adolescent Development (3)	C	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110: Introduction to Literature (3)	C-	
Note: required for the major		
<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202: Cultural and Linguistic Diversity (3)	C	
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1		
EL Competency 2		

Major Coursework Credit Total		84
<b>First Year Student Seminar</b>	Min Grade	
SCI119: First Year Seminar	CR	1

Major Area and Cognate Courses Total		Min Grade	
<b>Required Biology Content Coursework</b>			51
#BIOL202: Genetics (3)	C		
#BIOL206: Botany (3)	C		
#BIOL240: Zoology (3)	C		
#BIOL309: Ecology (3)	C		
#BIOL330: Cell & Molecular Biology (4)	C		
#BIOL330: Microbiology (4)	C		
#BIOL410: Organismal Physiology (3)	C		
#BIOL3--/4—Biology elective (2-3)	C		
CHEM221/PHYS131/BIOL3--/4—(3-4)*	C		
CHEM120: Principles of Chemistry I (4)	C		
CHEM121: Principles of Chemistry II (4)	C		
CHEM220: Organic Chemistry I (4)	C		
PHYS130: Physics I (4)*	C		
* Students are encouraged to also take PHYS131 Physics II in case they choose to pursue an additional Biology degree.			
GEOS Elective (3)	C		
MATH107: Statistics (3)			
<b>Professional Education Coursework</b>			12
Block I			
SCI209: Science Methods 1 (3)	C		
PSYC201: Educational Psychology (3)	C		
Block II			
#SCI315: Science Methods II (4)	C		
EDUC212: Classroom Management (2)			
<b>Special Education Coursework</b>			9
SPEC204: Cognitive Develop. of Diverse Learners (3)	C		
#SPEC309: Effect. Inst. Strat. for Stud. with Dis. (3)	C		
#SPEC345: Literacy Skills for Students with Dis. (3)	C		
<b>Student Teaching</b>			12
#SCI493: Science ST and Practicum I (6)	C		
#SCI494: Science ST and Practicum II (6)	C		
# = Advanced Course Work			

**Secondary Education - Biology  
Suggested Course Sequence**

Fall First Year	SH	Spring First Year	SH
SCI119 Freshman Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH141 Calculus	3
1 general education course	3	Introduction to Literature	<u>3</u>
1 general education course	<u>3</u>		<b>16</b>
	<b>17</b>		
Fall Second Year		Spring Second Year	
BIOL206 Botany I	3	BIOL240 Zoology	3
CHEM220 Organic Chemistry I	4	BIOL202 Genetics	3
MATH107 Statistics	3	1 General Education Course	3
SPEC204 Cognitive. Development. of Div. Learners	3	<b>BLOCK I</b>	
1 General Education Course	3	SCI209 Science Methods I	3
	-	PSYC201 Educational Psychology	3
	<b>16</b>		-
			<b>15</b>
Fall Third Year		Spring Third Year	
BIOL309 Ecology	3	BIOL410 Organismal Physiology	3
BIOL330 Cell & Molecular Biology	4	BIOL3--- Biology Elective	2
BIOL3--- Biology Elective	3	GEOS--- Earth & Space science elective	3
1 General Education Course	3	1 General Education Course	3
SPE 202 Cultural/Linguistics Div. in Ed.	3	1 General Education Course	3
	-	SPEC345 Literacy Skills for Students w/Disabilities	3
	<b>16</b>		-
			<b>17</b>
Fall Fourth Year		Spring Fourth Year	
BIOL340 Microbiology	4	SCI493 Student Teaching & Practicum I	6
PHYS130 Physics I	4	SCI494 Student Teaching & Practicum II	6
SPEC309 Effect. Instruct. Strat. Stud w/ Disabilities	3		-
<b>SECONDARY BLOCK II</b>			<b>12</b>
SCI315 Science Methods II	4		
EDUC212 Classroom Management	<u>2</u>		
	<b>17</b>		



## Secondary Education: Biology with Special Education - Bachelor of Science in Education

For Students entering LHU Fall 2014

<b>General Education Credit Total</b>		<b>42</b>
<b>Intellectual Foundation</b>	Min Grade	<b>9 sh</b>
<b>Written Communication</b>		<b>3 sh</b>
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Assumed by the major		
WC Competency 2 Assumed by the major		
<b>Oral Communication</b>	C	<b>3 sh</b>
SPEC441 required for the major		
<b>Math. and Comp. Thinking</b>		<b>3 sh.</b>
MATH141 required for the major	C	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry</b>	C	<b>6 sh</b>
BIOL106 Required by the major		
BIOL107 Required by the major		
<b>Historical, Beh., and Social Science Inq.</b>		<b>6 sh</b>
PSYC103 required for the major	C-	
<b>Phil., Literary, and Aesthetic Inquiry</b>		<b>9 sh</b>
ENGL110 required for major	C-	

<b>Personal and Social Responsibility</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		<b>9 sh</b>
SPEC202 required for the major		
<b>Wellness</b>		<b>3 sh</b>
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		

<b>Dual Major Coursework Credit Total</b>		<b>101</b>
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or SCI119 First Year Seminar	CR	<b>1</b>

<b>Major Area and Cognate Courses</b>	Min Grade	
<b>Professional Education</b>		<b>9</b>
SCI209 Science Methods 1 (3sh)*		
PSYC201 Educational Psychology (3sh)		
MATH107 Statistics (3sh)		
<b>Required Biology Content Coursework</b>		<b>48</b>
BIOL106 Principles of Biology I (3sh)	C	NSI
BIOL107 Principles of Biology II (3sh)	C	NSI
BIOL202 Genetics (3sh)	C	
BIOL206 Botany (3sh)	C	
BIOL240 Zoology (3sh)	C	
BIOL309 Ecology (3sh)	C	
BIOL330 Cell & Molecular Biology (4sh)	C	
BIOL340 Microbiology (4sh)	C	
BIOL410 Organismal Physiology (3sh)	C	
BIOL3XX Biology Elective (3sh)	C	
BIOL3XX Biology Elective (3sh)	C	
NOTE: PHYS 131 or CHEM 221 may be used for 4 sh of BIO electives		
CHEM 120 Principles of Chemistry I (4sh)	C	
CHEM 121 Principles of Chemistry II (4sh)	C	
CHEM 220 Organic Chemistry I (4sh)	C	
PHYS 130 Physics I (4sh)	C	
GEOS Elective (3sh)	C	
<b>Required Special Education Coursework</b>		<b>18</b>
SPEC105 Foundations of Special Education	C	
SPEC202 Cultural and Linguistic Diversity (3sh)	C	GAC
SPEC215 High Incidence Disabilities Support*	C	
SPEC212 Low Incidence Disabilities Support*	C	
SPEC338 Positive Behavior Support*	C	
SPEC300 Comm. Disorders and Assist. Technology*	C	
SPEC345 Literacy Skills for Stud. with Dis. (3sh)*	C	
<b>Science/Special Education Prof. Semester</b>		<b>13</b>
SPEC430 Assess. Ed. Needs & Plan. for Instruction*	C	
SPEC440 Strat. For Teaching St. with Low Inc. Dis.*	C	
SPEC441 Strat. For Teaching St. with High Inc. Dis.*	C	OC
SPEC425 Law and Collaborative Practices*	C	
SCI315 Science Methods II (4sh)*	C	
<b>Student Teaching</b>		<b>12</b>
SCI493 ST & Practicum Science (6sh)*	C	
SPEC494 ST & Pract. for SPEC grades 7-12 (6sh)*	C	

**Secondary Biology/Special Education Dual Certification (BSED) 143 Credits  
Suggested Course Sequence**

Fall First Year	SH	Spring First Year	SH
SPEC119 or SCI119 Freshman Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH141 Calculus	3
SPEC105 Foundations of Special Education	3	SPEC202 Cultural and Linguistic Diversity	3
1 general education course	3		
	<b>17</b>		<b>16</b>
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
BIOL206 Botany I	3	BIOL240 Zoology	3
CHEM220 Organic Chemistry I	4	BIOL202 Genetics	3
MATH107 Statistics	3	SPEC212 Low Incidence Disabilities Support	3
ENGL110 Introduction to Literature	3	BIOL3--- Biology Elective	3
SPEC215 High Incidence Disabilities Support	3		
	-	<b>BLOCK I</b>	3
	<b>16</b>	SCI209 Science Methods I	3
		PSYC201 Educational Psychology	-
			<b>18</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
BIOL309 Ecology	3	BIOL---- Organismal or Plant Physiology	3
BIOL330 Cell & Molecular Biology	4	GEOS--- Earth & Space science elective	3
BIOL340 Microbiology/Biology Elective	4	SPEC338 Positive Behavior Supports	3
PHYS130 Physics I	4	BIOL3—Biology Elective	3
SPEC300 Communication Disorders and Assistive Technology	3	SPEC345 Effect. Instr. Strat. Stud. w/Disabilities	3
	-		-
	<b>18</b>		<b>15</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
<b>Secondary Block II</b>		SCI493/494 Student Teaching & Practicum	6
SCI315 Science Methods II	4	SPEC493/494 Student Teaching and Practicum	6
<b>Special Education Block</b>			-
SPEC425 Law and Collaborative Practices	3		<b>12</b>
SPEC430 Assessing Educational Needs and Planning for Instruction	3		
SPEC440 Strategies for Teaching Students with Low Incidence Disabilities	3		
SPEC441 Strategies for Teaching Students with High Incidence Disabilities	3		
	-		
	<b>16</b>		
<b>Advising Notes:</b>		<b>Summer or Intersession Coursework</b>	
3. GE: PLA- one course must be from visual or performing arts		<b>If a 4 year graduation timeline is desired, 5 General Education Courses should be completed in the summer or during intersession. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired. Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b>	<b>15</b>
4. GE: GAC- one course must meet the historical foundations competency			
5. *Denotes Advanced Coursework			

## Secondary Education: Chemistry - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3)	C-	
WC Competency 1		
WC Competency 2		
<b>Oral Communication</b>	C	3 sh
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141: Calculus I (3)	C	
Note: required for the major		
<b>Critical Thinking</b>		
CT Competency 1		
CT Competency 2		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
BIOL106: Principles of Biology I (3)		
BIOL107 Principles of Biology II (3)		
Note: both courses required for the major		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103: Adolescent Development (3)	C-	
Note: required for the major		
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110: Introduction to Literature (3)	C-	
Note: required for the major		

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202: Cultural and Linguistic Diversity (3)	C	
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1		
EL Competency 2		

Major Coursework Credit Total		82
<b>First Year Student Seminar</b>	Min Grade	
SCI119: First Year Seminar	CR	1

Major Area and Cognate Courses		Min Grade	
<b>Required Chemistry and Science Coursework</b>			48
CHEM120: Principles of Chemistry I (4)	C		
CHEM121: Principles of Chemistry II (4)	C		
#CHEM220: Organic Chemistry I (4)	C		
#CHEM221: Organic Chemistry II (4)	C		
#CHEM301: Inorganic Chemistry I (3)	C		
#CHEM316: Quantitative Analysis (4)	C		
#CHEM320: Physical Chemistry I (4)	C		
#CHEM410: Biochemistry (4)	C		
#CHEM 300+ Course (3)	C		
PHYS170: Inter. Gen. Physics I (4)	C		
PHYS171: Inter. Gen. Physics II (4)	C		
GEOSxxx Geoscience Elective (GEOS130 Principles of Geology I recommended) - (3)	C		
MATH142: Calculus II (3)	C		
<b>Professional Education Coursework</b>			12
Block I			
SCI209: Science Methods 1 (3)	C		
PSYC201: Educational Psychology (3)	C		
Block II			
#SCI315: Science Methods II (4)	C		
EDUC212: Classroom Management (2)			
<b>Special Education Coursework</b>			9
SPEC204: Cognitive Develop. of Div. Learners (3)	C		
#SPEC309: Effect. Instruct. Strat. for Stud. w/Dis. (3)	C		
#SPEC345: Literacy Skills for Students with Dis. (3)	C		
<b>Student Teaching</b>			12
#SCI493: Science ST and Practicum I (6)	C		
#SCI494: Science ST and Practicum II (6)	C		
# = Advanced Course Work			

**Secondary Education - Chemistry  
Suggested Course Sequence**

Fall First Year	SH	Spring First Year	SH
SCI119 Freshman Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PSYC103 Adolescent Development	3
English Composition	3	MATH142 Calculus II	3
MATH141 Calculus	3	Introduction to Literature	3
1 General Education Course	3		-
	-		<b>16</b>
	<b>17</b>		
Fall Second Year		Spring Second Year	
CHEM220 Organic Chemistry I	4	CHEM221 Organic Chemistry II	4
CHEM316 Quantitative Analysis	4	PHYS170 Intermediate Physics I	4
GEOS Geoscience Elective	3	1 General Education Course	3
SPEC204 Cognitive Development of Div. Learners	3	<b>BLOCK I</b>	
	-	SCI209 Science Methods I	3
	-	PSYC201 Educational Psychology	3
	<b>14</b>		-
			<b>17</b>
Fall Third Year		Spring Third Year	
CHEM 301 Inorganic Chemistry I or	3 or	CHEM410 Biochemistry	4
CHEM 320 Physical Chemistry I	4	1 General Education Course	3
PHYS171 Intermediate Physics II	4	1 General Education Courses	3
CHEM300 + Chemistry Elective	3	1 General Education Courses	3
1 General Education Course	3	SPEC345 Literacy Skills. for Students with Disabilities	3
SPE 202 Cultural and Linguistic Diversity	3		-
	-		<b>16</b>
	<b>16</b>		
	<b>or</b>		
	<b>17</b>		
Fall Fourth Year		Spring Fourth Year	
CHEM 320 Physical Chemistry I or	4 or	SCI493 Student Teaching & Practicum I	6
CHEM 301 Inorganic Chemistry I	3	SCI494 Student Teaching & Practicum II	6
1 General Education Course	3		-
SPEC309 Effect. Instruct. Strat. for Stud. With Dis.	3		<b>12</b>
<b>SECONDARY BLOCK II</b>			
SCI315 Science Methods II	4		
EDU 212 Classroom Management	2		
	-		
	<b>16</b>		
	<b>or</b>		
	<b>15</b>		

## Secondary Education: Chemistry with Special Education - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Assumed by the major		
WC Competency 2 Assumed by the major		
<b>Oral Communication</b>	C	3 sh
SPEC441 required for the major		
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141 required for the major	C	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
BIOL106 Required by the major		
BIOL107 Required by the major		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103 required for the major	C-	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110 required for major	C-	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202 required for the major		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		

Dual Major Coursework Credit Total		98
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or SCI119 First Year Seminar (1sh)	CR	1

Major Area and Cognate Courses		Min Grade	
<b>Professional Education</b>			9
SCI209 Science Methods 1 (3sh)*			
PSYC201 Educational Psychology (3sh)			
MATH142 Calculus II (3sh)			
<b>Required Chemistry and Science Coursework</b>			45
CHEM120 Principles of Chemistry I (4sh)	C		
CHEM121 Principles of Chemistry II (4sh)	C		
CHEM220 Organic Chemistry I (4sh)	C		
CHEM221 Organic Chemistry II (4sh)	C		
CHEM301 Inorganic Chemistry I (3sh)	C		
CHEM316 Quantitative Analysis (4sh)	C		
CHEM320 Physical Chemistry I (4sh)	C		
CHEM410 Biochemistry (4sh)	C		
CHEM300+ Elective (3sh)	C		
BIOL106 Principles of Biology I (3sh)	C	NSI	
BIOL107 Principles of Biology II (3sh)	C	NSI	
PHYS170 Inter. Gen. Physics I (4sh)			
PHYS171 Inter. Gen. Physics II (4sh)			
GEOS-- Geoscience Elec.(GEOS 130) - (3sh)			
<b>Required Special Education Coursework</b>			18
SPEC105 Foundations of Special Education	C		
SPEC202 Cultural and Linguistic Diversity	C	GAC	
SPEC215 High Incidence Disabilities Support*	C		
SPEC212 Low Incidence Disabilities Support*	C		
SPEC338 Positive Behavior Support*	C		
SPEC300 Comm. Disorders and Assist. Technology*	C		
SPEC345 Literacy Skills for Students with Dis.*	C		
<b>Science/Special Education Prof. Semester</b>			13
SPEC430 Assess. Ed. Needs & Plan. for Instruction*	C		
SPEC440 Strat. For Teaching St. with Low Inc. Dis.*	C		
SPEC441 Strat. For Teaching St. with High Inc. Dis.*	C	OC	
SPEC425 Law and Collaborative Practices*	C		
SCI315 Science Methods II (4sh)*	C		
<b>Student Teaching</b>			12
SCI493 ST & Practicum Science (6sh)*	C		
SPEC494 ST & Pract. for SPEC grades 7-12 (6sh)*	C		
*Denotes Advanced Coursework			

**Secondary Chemistry/Special Education Dual Certification (BSED) 140 Credits**

**Suggested Course Sequence**

Fall First Year	SH	Spring First Year	SH
SPEC119 or SCI 119 Freshman Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH142 Calculus II	3
SPEC105 Foundations of Special Education	3	SPEC202 Cultural and Linguistic Diversity	3
MATH141 Calculus	3		-
	-		<b>16</b>
	<b>17</b>		
Fall Second Year		Spring Second Year	
CHEM220 Organic Chemistry I	4	CHEM221 Organic Chemistry II	4
CHEM316 Quantitative Analysis	4	PHYS170 Intermediate Physics I	4
ENGL110 Literature	3	SPEC212 Low Incidence Disabilities Support	3
GEOS Geoscience Elective	3	<b>BLOCK I</b>	
SPEC215 High Incidence Disabilities Support	3	SCI209 Science Methods I	
	-	PSYC201 Educational Psychology	3
	-		3
	<b>17</b>		-
			<b>17</b>
Fall Third Year		Spring Third Year	
CHEM301 Inorganic Chemistry I	3	CHEM410 Biochemistry	4
CHEM320 Physical Chemistry I	4	1 General Education Courses	3
PHYS171 Intermediate Physics II	4	SPEC338 Positive Behavior Supports	3
SPEC300 Communication Disorders and Assistive Technology	3	SPE 345 Literacy Instruction for Students with Disabilities	3
1 General Education Course	3	CHEM300 + Chemistry Elective	
	-		3
	-		-
	<b>17</b>		<b>16</b>
Fall Fourth Year		Spring Fourth Year	
<b>Secondary Block II</b>		SCI493/494 Student Teaching & Practicum	6
SCI315 Science Methods II	4	SPEC493/494 Student Teaching and Practicum	6
<b>Special Education Block</b>			-
SPEC425 Law and Collaborative Practices	3		<b>12</b>
SPEC430 Assessing Educational Needs and Planning for Instruction	3		
SPEC440 Strategies for Teaching Students with Low Incidence Disabilities	3		
SPEC441 Strategies for Teaching Students with High Incidence Disabilities	3		
	-		
	<b>16</b>		
<b>Advising Notes:</b>		<b>Summer or Intersession Coursework</b>	
1. GE: PLA- one course must be from visual or performing arts		<b>If a 4 year graduation timeline is desired, 4 General Education Course should be completed in the summer or during intersession. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired. Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b>	<b>12</b>
2. GE: GAC- one course must meet the historical foundations competency			
3. *Denotes Advanced Coursework			

## Secondary Education: Earth and Space Science - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 s.h.)	C-	
WC Competency 1		
WC Competency 2		
<b>Oral Communication</b>	C	3 sh
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141: Calculus I (3 s.h.)	C	
Note: required for the major		
<b>Critical Thinking</b>		
CT Competency 1		
CT Competency 2		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
GEOS130 Principles of Geology I (3 s.h.)	C	
GEOS131 Principles of Geology II (3 s.h.)	C	
Note: both courses required for the major		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103: Adolescent Develop. (3 s.h.)	C	
Note: required for the major		
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110: Intro. to Literature (3 s.h.)		9 sh
Note: required for the major	C -	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202: Cultural and Linguistic Diversity (3 s.h.)	C	
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1		
EL Competency 2		

Major Coursework Credit Total		86
<b>First Year Student Seminar</b>	Min Grade	
SCI119: First Year Seminar	CR	1

Major Area and Cognate Courses		Min Grade	
<b>Required Earth and Space Science Coursework</b>			52
CHEM120: Principles of Chemistry I (4 s.h.)	C		
CHEM121: Principles of Chemistry II (4 s.h.)	C		
BIOL106: Principles of Biology I (3 s.h.)	C		
*BIOL107: Principles of Biology II (this course is required if certification in general science is also being pursued, strongly recommended) (3 s.h.)	C		
PHYS130: Physics I (4 s.h.)	C		
PHYS131: Physics II (4 s.h.)	C		
PHYS135: Meteorology (3 s.h.)	C		
PHYS140: Astronomy of the Solar System (3 s.h.)	C		
GEOS120: Oceanography (3 s.h.)	C		
#GEOS215: Environmental Geology (3 s.h.)	C		
#GEOS230: Geomorphology (3 s.h.)	C		
#3 s.h. GEOS260: Geology Field Trip required	C		
#11 credits of Geoscience Courses (300+ level)	C		
MATH113: Elem. Funct. or MATH107: Stats. (3 s.h.)			
<b>Professional Education Coursework</b>			12
Block I			
SCI209: Science Methods 1 (3 s.h.)	C		
PSYC201: Educational Psychology (3 s.h.)	C		
Block II			
#SCI315: Science Methods II (4 s.h.)	C		
EDUC212: Classroom Management (2 s.h.)			
<b>Special Education Coursework</b>			9
SPEC204: Cog. Develop. of Diverse Learners (3 s.h.)	C		
#SPEC309: Effect. Inst. Strat. for Stud. with Dis. (3)	C		
#SPEC345: Literacy Skills for Students with Dis. (3)	C		
<b>Student Teaching</b>			12
#SCI493: Science ST and Practicum I	C		
#SCI494: Science ST and Practicum II	C		
# = Advanced Course Work			

**Secondary Education - Earth and Space Science  
Suggested Course Sequence**

<b>Fall First Year</b>	SH	<b>Spring First Year</b>	SH
SCI119 Freshman Seminar	1	GEOS131 Principles of Geology II	3
GEOS130 Principles of Geology I	3	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH141 Calculus	3
MATH113 Elementary Functions	3	ENGL110 Introduction to Literature	3
1 General Education Course	3		-
	-		<b>16</b>
	<b>17</b>		
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
GEOS215 Environmental Geology (even years)	3	PHYS131 Physics II	4
GEOS230 Geomorphology (odd years)	3	GEOS260 Geology Field Trip	1
PHYS130 Physics I	4	1 General Education Course	3
BIOL106 Principles of Biology I	3	1 General Education Course	3
SPEC204 Cognitive Develop. of Diverse Learners	3	<b>BLOCK I</b>	3
GEOS260 Geology Field trip	1	SCI209 Science Methods I	3
	-	PSYC201 Educational Psychology	-
	<b>17</b>		<b>17</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
GEOS300+ Elective	3	GEOS120 Oceanography	3
PHYS140 Astronomy	3	GEOS Geology Field Trip	1
SPEC202 Cultural and Linguistic Diversity	3	SPEC345 Literacy Skills for Students with Disabilities	3
1 General Education Course	3	GEOS300+ Elective	4
1 General Education Course	3	GEOS300+ Elective	4
	-	1 General Education Course	3
	<b>15</b>		-
			<b>18</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
PHYS135 Meteorology	3	SCI493 Student Teaching & Practicum I	6
1 General Education Course	3	SCI494 Student Teaching & Practicum II	6
SPEC309 Effect. Instruct. Strat. for Stud. With Dis.	3		-
<b>BLOCK II</b>			<b>12</b>
SCI315 Science Methods II	4		
EDUC212 Classroom Management	2		
	-		
	<b>15</b>		

\*BIOL107 Principles of Biology II (this course is required if certification in general science is also being pursued, strongly recommended)



## Secondary Education: Earth and Space Science with Special Education - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Assumed by the major		
WC Competency 2 Assumed by the major		
<b>Oral Communication</b>	C	3 sh
SPEC441 required for the major		
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141 required for the major	C	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
GEOS130 Required by the major	C	
GEOS 131 Required by the major	C	
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103 required for the major	C-	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110 required for major	C-	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202 required for the major		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		

Dual Major Coursework		
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or SCI119 First Year Seminar (1sh)	CR	1

Major Area and Cognate Courses	Min Grade	
<b>Professional Education</b>		9
SCI209 Science Methods 1 (3sh)*		
PSYC201 Educational Psychology (3sh)		
MATH113 Elementary Functions (3sh)		
<b>Required Earth and Space Science Coursework</b>		48 (#)
CHEM120 Principles of Chemistry I (4sh)	C	
CHEM121 Principles of Chemistry II (4sh)	C	
BIOL106 Principles of Biology I (3sh)	C	
BIOL107 Principles of Biology II (this course is required if certification in general science is also being pursued) (3sh)#	C	
PHYS130 Physics I (4sh)	C	
PHYS131 Physics II (4sh)	C	
PHYS135 Meteorology (3sh)	C	
PHYS140 Astronomy of the Solar System (3sh)	C	
GEOS120 Oceanography (3sh)	C	
GEOS215 Environmental Geology (3sh)	C	
GEOS230 Geomorphology (3sh)	C	
3 GEOS260 Geology Field Trip courses req. (3sh) *	C	
3 Geoscience Electives Req. (300+ level) (11sh) *	C	
<b>Required Special Education Coursework</b>		18
SPEC105 Foundations of Special Education	C	
SPEC202 Cultural and Linguistic Diversity	C	GAC
SPEC215 High Incidence Disabilities Support*	C	
SPEC212 Low Incidence Disabilities Support*	C	
SPEC338 Positive Behavior Support*	C	
SPEC300 Comm. Dis. and Assist. Technology*	C	
SPEC345 Literacy Skills for Students with Dis.*	C	
<b>Science/Special Education Prof. Semester</b>		13
SPEC430 Assess. Ed. Needs & Plan. for Instruc.*	C	
SPEC440 Strat. For Teach. St. with Low Inc. Dis.*	C	
SPEC441 Strat. For Teach. St. with High Inc. Dis.*	C	OC
SPEC425 Law and Collaborative Practices*	C	
SCI315 Science Methods II (4sh)*	C	
<b>Student Teaching</b>		12
SCI493/494 ST & Practicum Science (6sh)*	C	
SPEC494 ST & Pract. for SPEC grades 7-12* (6sh)	C	

**Secondary Earth and Space Science/Special Education Dual Certification (BSED) 143-147 Credits**

**Suggested Course Sequence**

Fall First Year	SH	Spring First Year	SH
SPEC119 or SCI 119 Freshman Seminar	1	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	GEOS131 Principles of Geology II	3
GEOS130 Principles of Geology I	3	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH141 Calculus	3
SPEC105 Foundations of Special Education	3	SPEC202 Cultural and Linguistic Diversity	3
MATH113 Elementary Functions	3		-
	-		<b>16</b>
	<b>17</b>		
Fall Second Year		Spring Second Year	
GEOS215 Environmental Geology	3	BIOL107 Principles of Biology II	3
PHYS130 Physics I	4	PHYS131 Physics II	4
ENGL110 Intro to Literature	3	GEOS260 Geology Field Trip	1
BIOL106 Principles of Biology I	3	SPEC212 Low Incidence Disabilities Support	3
SPEC215 High Incidence Disabilities Support	3	<b>BLOCK I</b>	
GEOS260 Geology Field trip	1	SCI209 Science Methods I	3
	-	PSYC201 Educational Psychology	3
	<b>17</b>		-
			<b>17</b>
Fall Third Year		Spring Third Year	
GEOS230 Geomorphology	3	GEOS120 Oceanography	3
PHYS140 Astronomy	3	GEOS Geology Field Trip	1
GEOS300+ Elective	3	SPEC345 Literacy Instruction for Students with Disabilities	3
PHYS135 Meteorology	3	2 GEOS 300+ Electives	
SPEC300 Communication Disorders and Assistive Technology	3	General Education Course	8
SPEC338 Positive Behavior Supports	3		3
	-		-
	<b>18</b>		<b>18</b>
Fall Fourth Year		Spring Fourth Year	
<b>Special Education Block</b>		SCI493/494 Student Teaching & Practicum	6
SPEC425 Law and Collaborative Practices	3	SPEC493/494 Student Teaching and Practicum	6
SPEC430 Assessing Educational Needs and Planning for Instruction	3		-
SPEC440 Strategies for Teaching Students with Low Incidence Disabilities	3		<b>12</b>
SPEC441 Strategies for Teaching Students with High Incidence Disabilities	3		
<b>BLOCK II</b>			
SCI315 Science Methods II	4		
	-		
	<b>16</b>		
Advising Notes:		<b>Summer or Intersession Coursework</b>	
1. GE: PLA- one course must be from visual or performing arts		<b>If a 4 year graduation timeline is desired, 4-5 General Education Course should be completed in the summer or during intersession. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired. Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b>	<b>12-15</b>
2. GE: GAC- one course must meet the historical foundations competency			
3. *Denotes Advanced Coursework			



## Suggested Course Sequence Secondary Education/English

### Fall Freshman (example)

ENGL100: Composition (3)  
ENGL119: First Year Student Seminar (1)  
PLA Inquiry (3)  
PSYC103 (3)  
HBSS Inquiry (3)  
HIST101 or 102 (3)

Credit Total: 16

### Spring Freshman (example)

ENGL220 (3)  
THEA110 or THEA137 (3)  
NS Inquiry (w/ lab) (3)  
MATH (Suggested: 102, 112, 115) (3)  
Wellness (3)

Credit Total: 15

### Fall Sophomore (example)

ENGL205 (3)  
ENGL230 (3)  
ENGL280 (3)  
SPEC202 (3)  
MATH (Suggested: 102, 112, 115) (3)

Credit Total: 15

### Spring Sophomore (example)

Block I:  
PSYC201 (3)  
ENGL206 (3)  
ENGL231 (3)  
ENGL235 (3)  
SPEC204 (3)

Credit Total: 15

### Fall Junior (example)

ENGL240 (3)  
ENGL405 (3)  
ENGL writing course (3)  
GAC (3)  
NS Inquiry (no lab) (3)

Credit Total: 15

### Spring Junior (example)

ENGL242 (3)  
ENGL336 (3)  
ENGL315 (3)  
ENGL elective (3)  
Oral Communication (3)

Credit Total: 15

Summer: SPEC345      Credit total: 3

### Fall Senior (example)

Block II:  
ENGL312 (4)  
EDUC212 (2)  
SPEC309 (3)  
ENGL elective (2)  
ENGL elective (3)

Credit Total: 14

### Spring Senior (example)

ENGL493 (6)  
ENGL494 (6)

Credit Total: 12

EL = Experiential Learning; GAC = Global Awareness & Citizenship; HBSS = Historical, Behavioral, and Social Sciences Inquiry; OC = Oral Communication; PLA = Philosophical, Literary, and Aesthetic Inquiry.

## Secondary Education: English with Special Education – Bachelor of Science in Education

For Students entering LHU Fall 2016

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C	
WC: Required by the major ENGL235	C	
WC: Required by the major ENGL280	C	
<b>Oral Communication</b>		3 sh
SPEC441: Required for the major	C	
<b>Math. and Comp. Thinking</b>		3 sh.
	C-	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C-	6 sh
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103 required for the major	C	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL220 required for major	C	
THEA110 or 137 required for the major		

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202 required for the major	C	
HIST101 or 102 required for the major		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		

Dual Major Coursework Credit Total		89
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or ENGL119 First Year Seminar		1

Major Area and Cognate Courses	Min Grade	
<b>Professional Education</b>		9
ENGL206: Secondary English Methods 1 (spring)*		
PSYC201: Educational Psychology		
MATH general education course		
<b>Required English Content Coursework</b>		36
ENGL205: Intro. To Literary Studies (fall)	C	
ENGL220: World Literature (spring)	C	PLA
ENGL230: British Literature before 1800 (fall)	C	
ENGL231: British Literature after 1800 (spring)	C	
ENGL235: Teaching Lit. to Adolescents (spring)	C	
ENGL240: American Lit. before Civil War (fall)	C	
ENGL242: American Lit. after Civil War(spring)	C	
ENGL280: Intro. To Study of Language (fall)	C	WC
ENGL315: Composition Usage and Editing (spring)	C	
ENGL336: Shakespeare (spring)	C	
ENGL405: Grammars of English (fall)	C	
English Elective (any 200-400 writing or lit. course)	C	
English Elective (any 200-400 writing or lit. course)	C	
One of the following: ENGL345, 264, 266, 268, 237, 408, or 360	C	
<b>Required Special Education Coursework</b>		18
SPEC105: Foundations of Special Education	C	
SPEC202: Cultural and Linguistic Diversity	C	GAC
SPEC212: Low Incidence Disabilities Support*	C	
SPEC215: High Incidence Disabilities Support*	C	
SPEC338: Positive Behavior Support*	C	
SPEC300: Comm. Disorders and Assist. Technology*	C	
SPEC345: Literacy Skills for Students with Dis.*	C	
<b>English/Special Education Professional Semester</b>		13
SPEC430: Assess. Ed. Needs & Plan. for Instruction*	C	
SPEC440: Strat. For Teaching St. with Low Inc. Dis.*	C	
SPEC441: Strat. For Teaching St. with High Inc. Dis.*	C	OC
SPEC425: Law and Collaborative Practices*	C	
ENGL312: Methods of Teaching English II (fall)*	C	
<b>Student Teaching</b>		12
ENGL493/494: ST and Practicum English*	C	
SPEC494: ST and Practicum for SPEC grades 7-12*	C	

**Secondary English/Special Education Dual Certification (BSED) 131 Credits**  
**Suggested Course Sequence**

<b>Fall Freshman</b>	<b>Spring Freshman</b>
ENGL100: English Composition (3) ENGL205 Intro. To Lit. Studies (3) PSYC103: Adolescent Development (3) SPEC105: Foundation of Special Education (3) SPEC119 or ENGL119: Freshmen Seminar (1) General Education (3)  (16)	ENGL220: World Literature (3) SPEC202: Culturally and Linguistically Diverse (3) SPEC212: Low Incidence Disabilities Support (3) THEA110 or 137 (3) General Education (6)  (18)
<b>Fall Sophomore</b>	<b>Spring Sophomore</b>
ENGL230 (3) British Lit. before 1800 (3) ENGL280 (3) Intro. To Study of Language (3) SPEC215: High Incidence Disabilities Support (3) General Education (6)  (15)	<b>English Block I:</b> PSYC201: Educational Psychology (3) ENGL206: Methods of Teaching English 1 (3) ENGL231: British Lit. after 1800 (3) ENGL235: Teaching Literature to Adolescents (3) SPEC345: Literacy Skills for Students with Dis. (3) General Education (3)  (18)
<b>Fall Junior</b>	<b>Spring Junior</b>
ENGL240 American Lit. before Civil War (3) ENGL405 Grammars of English (3) ENGL Elective (3) ENGL Elective (3) SPEC300: Comm. Disord. & Assist. Tech. (3) General Education (3)  (18)	ENGL242 American Lit. after Civil War (3) ENGL336 Shakespeare (3) ENGL315 Composition Usage and Editing (3) SPEC338: Positive Behavior Support (3) General Education Course (6)  (18)
<b>Fall Senior</b>	<b>Spring Senior</b>
<b>English Block II:</b> ENGL312: Methods of Teaching English 2 (4) <b>Special Education Block:</b> SPEC430: Assessing Ed. Needs and Planning (3) SPEC441: Strategies for Teaching w/ High (3) SPEC440: Strategies for Teaching w/ Low (3) SPEC425: Law and Collaborative Practices (3)  (16)	ENGL493/494: Student Teaching (6) SPEC494: Student Teaching in grades 7-12 (6)  (12)
<b>Advising notes:</b> <b>Spring only English classes:</b> ENGL206, ENGL220, ENGL235, ENGL231, ENGL242, ENGL336, ENGL315  <b>Fall only English Classes:</b> ENGL205, ENGL280, ENGL230, ENGL240, ENGL312, ENGL405  <b>*Denotes Advanced Coursework</b>	<b>Summer or Intersession Coursework</b> <b>1 General Education Course must be completed in the summer or during intersession. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired.</b> <b>Many general education courses are taught online. Several special education courses are also taught online and are available during the summer as is ENGL345.</b>

## Secondary Education: General Science - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 s.h.)	C-	
WC Competency 1		
WC Competency 2		
<b>Oral Communication</b>	C	3 sh
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141: Calculus I (3 s.h.)	C	
Note: required for the major		
<b>Critical Thinking</b>		
CT Competency 1		
CT Competency 2		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
GEOS130 Required by the major (3 s.h.)	C	
GEOS131 Required by the major (3 s.h.)	C	
Note: both courses required for the major		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103: Adolescent Develop. (3 s.h.)	C-	
Note: required for the major		
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110: Intro. to Literature (3 s.h.)		
Note: required for the major		

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202: Cultural and Linguistic Diversity (3 s.h.)	C	
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1		
EL Competency 2		

Major Coursework Credit Total		85
<b>First Year Student Seminar</b>	Min Grade	
SCI119: First Year Seminar	CR	1

Major Area and Cognate Courses		Min Grade	
<b>Required General Science Coursework</b>			51
CHEM120: Principles of Chemistry I (4 s.h.)	C		
CHEM121: Principles of Chemistry II (4 s.h.)	C		
PHYS130: Physics I (4 s.h.)	C		
PHYS131: Physics II (4 s.h.)	C		
PHYS135: Meteorology (3 s.h.)	C		
PHYS140: Astronomy of the Solar System (3 s.h.)	C		
BIOL106: Principles of Biology I (3 s.h.)	C		
BIOL107: Principles of Biology II (3 s.h.)	C		
#GEOS230: Geomorphology (3 s.h.)	C		
#GEOS260: Geology Field Trip (1 s.h.)	C		
#GEOS260: Geology Field Trip (1 s.h.)	C		
GEOS120: Oceanography (3 s.h.)	C		
#12 credits of Science Courses (100+ level)	C		
MATH113: Elem. Funct. or MATH107: Stats. (3 s.h.)	C		
<b>Professional Education Coursework</b>			12
Block I			
#SCI209: Science Methods 1 (3 s.h.)	C		
#PSYC201: Educational Psychology (3 s.h.)	C		
Block II			
#SCI315: Science Methods II (4 s.h.)	C		
EDUC212: Classroom Management (2 s.h.)			
<b>Special Education Coursework</b>			9
#SPEC204: Cognitive Develop. of Div. Learners (3)	C		
#SPEC309: Effect. Instruct. Strat. for Stud. w/Dis. (3)	C		
#SPEC345: Literacy Skills for Students with Dis. (3)	C		
<b>Student Teaching</b>			12
#SCI493: Science ST and Practicum I (6 sh)	C		
#SCI494: Science ST and Practicum II (6 sh)	C		
# = Advanced Course Work			

**Secondary Education - General Science Suggested Course Sequence**

<b>Fall First Year</b>	SH	<b>Spring First Year</b>	SH
SCI119 Freshman Seminar	1	GEOS131 Principles of Geology II	3
GEOS130 Principles of Geology I	3	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH141 Calculus	3
MATH113 Elementary Functions	3	ENG 110 Introduction to Literature	3
1 General Education Course	3		-
	-		<b>15</b>
	<b>16</b>		
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
CHEM120 Principles of Chemistry I	4	CHEM121 Principles of Chemistry II	4
PHYS130 Physics I	4	PHY 131 Physics II	4
1 General Education Course	3	1 General Education Course	3
1 General Education Course	3	<b>BLOCK I</b>	
SPEC204 Cognitive Develop. of Diverse Learners	3	SCI209 Science Methods I	3
GEOS260 Geology Field trip	1	PSYC201 Educational Psychology	3
	-		-
	<b>18</b>		<b>17</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
GEOS230 Geomorphology	3	GEOS120 Oceanography	3
PHYS135 Meteorology	3	Science Elective	3
PHYS140 Astronomy	3	Science Elective	3
SPEC202 Cultural and Linguistic Diversity	3	SPEC345 Literacy Skills for Students with Disabilities	3
1 General Education Course	3	1 General Education Course	3
	-	1 General Education Course	3
	<b>15</b>		-
			<b>18</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
Science Elective	3	SCI493 Student Teaching & Practicum I	6
Science Elective	3	SCI494 Student Teaching & Practicum II	6
GEOS260 Geology Field trip	1		-
SPEC309 Effect. Instruct. Strat. for Stud. With Dis.	3		<b>12</b>
<b>BLOCK II</b>			
SCI315 Science Methods II	4		
EDUC 212 Classroom Management	2		
	-		
	<b>16</b>		



## Secondary Education: General Science with Special Education - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Assumed by the major		
WC Competency 2 Assumed by the major		
<b>Oral Communication</b>	C	3 sh
SPEC441 required for the major		
<b>Math. and Comp. Thinking</b>		3 sh.
MATH113 or 141 required for the major	C	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
BIOL106 Required by the major	C	
BIOL107 Required by the major	C	
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103 required for the major	C-	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110 required for major	C -	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202 required for the major		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		

Dual Major Coursework Credit Total		101
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or SCI119 First Year Seminar (1sh)	CR	1

Major Area and Cognate Courses	Min Grade	
<b>Professional Education</b>		9
SCI209 Science Methods 1 (3sh)*		
PSYC201 Educational Psychology (3sh)		
MATH141 or MATH107 (3sh)		
<b>Required General Science Coursework</b>		48
CHEM120 Principles of Chemistry I (4sh)	C	
CHEM121 Principles of Chemistry II (4sh)	C	
PHYS130 Physics I (4sh)	C	
PHYS131 Physics II (4sh)	C	
PHYS135 Meteorology (3sh)	C	
PHYS140 Astronomy of the Solar System (3sh)	C	
GEOS130 Principles of Geology I (3sh)	C	
GEOS131 Principles of Geology II (3sh)	C	
GEOS230 Geomorphology (3sh)	C	
GEOS260 Geology Field Trip (1sh)	C	
GEOS260 Geology Field Trip (1sh)	C	
GEOS120 Oceanography (3sh)	C	
**4 Courses of Science Elective (100+ level) (12sh)	C	
<b>Required Special Education Coursework</b>		18
SPEC105 Foundations of Special Education	C	
SPEC202 Cultural and Linguistic Diversity	C	GAC
SPEC215 High Incidence Disabilities Support*	C	
SPEC212 Low Incidence Disabilities Support*	C	
SPEC338 Positive Behavior Support*	C	
SPEC300 Comm. Disorders and Assist. Technology*	C	
SPEC345 Literacy Skills for Students with Dis.*	C	
<b>Science/Special Education Prof. Semester</b>		13
SPEC430 Assess. Ed. Needs & Plan. for Instruction*	C	
SPEC440 Strat. For Teaching St. with Low Inc. Dis.*	C	
SPEC441 Strat. For Teaching St. with High Inc. Dis.*	C	OC
SPEC425 Law and Collaborative Practices*	C	
SCI315 Science Methods II*	C	
<b>Student Teaching</b>		12
SCI493 ST & Practicum Science (6sh)*	C	
SPEC494 ST & Pract. for SPEC grades 7-12(6sh)*	C	
*Denotes Advanced Coursework		

**Secondary General Science/Special Education Dual Certification (BSED) 143 Credits**

**Suggested Course Sequence**

<b>Fall First Year</b>	<b>SH</b>	<b>Spring First Year</b>	<b>SH</b>
SPEC119 or SCI 119 Freshman Seminar	1	BIOL107 Principles of Biology II	3
BIOL106 Principles of Biology I	3	GEOS131 Principles of Geology II	3
GEOS130 Principles of Geology I	3	PSYC103 Adolescent Development	3
ENGL100 Composition	3	MATH141 Calculus or MATH 107 Statistics	3
SPEC105 Foundations of Special Education	3	SPEC202 Cultural and Linguistic Diversity	3
MATH113 Pre-Calculus or MATH141 Calculus I	3	1 General Education Course	3
	-		-
	<b>16</b>		<b>18</b>
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
CHEM120 Principles of Chemistry I	4	CHEM121 Principles of Chemistry II	4
PHYS130 Physics I	4	PHYS131 Physics II	4
ENGL110 Literature	3	SPEC212 Low Incidence Disabilities Support	3
1 General Education Course	3	<b>BLOCK I</b>	
SPEC215 High Incidence Disabilities Support	3	SCI209 Science Methods I	
GEOS260 Geology Field Trip	1	PSYC201 Educational Psychology	3
	-		3
	<b>18</b>		-
			<b>17</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
PHYS135 Meteorology	3	GEOS120 Oceanography	3
PHYS140 Astronomy I	3	Science Elective	3
Science Elective	3	Science Elective	3
GEOS230 Geomorphology	3	Science Elective	3
SPEC338 Positive Behavior Supports	3	GEOS Geology Field Trip	1
SPEC300 Communication Disorders and Assistive Technology	3	SPEC345 Literacy Instruction for Students with Disabilities	3
	-		-
	<b>18</b>		<b>16</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
<b>BLOCK II</b>		SCI493/494 Student Teaching & Practicum	6
SCI315 Science Methods II	4	SPEC493/494 Student Teaching and Practicum	6
<b>Special Education Block</b>			-
SPEC425 Law and Collaborative Practices	3		<b>12</b>
SPEC430 Assessing Educational Needs and Planning for Instruction	3		
SPEC440 Strategies for Teaching Students with Low Incidence Disabilities	3		
SPEC441 Strategies for Teaching Students with High Incidence Disabilities	3		
	-		
	<b>16</b>		
Advising Notes:		<b>Summer or Intersession Coursework</b>	
1. GE: PLA- one course must be from visual or performing arts		<b>If a 4 year graduation timeline is desired, 4 General Education Courses should be completed in the summer or during intersession. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired. Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b>	<b>12</b>
2. GE: GAC- one course must meet the historical foundations competency			
3. *Denotes Advanced Coursework			



**Secondary Education – Math  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
MATH119: First Year Student Seminar (1)  
MATH141: Calculus 1 (3) [MCT]  
Hist., Behav., and Soc. Sci. (3) [HBS]  
Natural Science (3) [NS]  
Philos., Literary, and Aesth. (3) [PLA]

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Credit Total: 16

**Spring Freshman (example)**

#MATH142: Calculus 2 (3)  
#MATH205: Foundations of Math (3)  
Philos., Literary, and Aesth. (3) [PLA]  
Oral Communication (3) [OC]  
Wellness (3) [WEL]

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Credit Total: 15

**Fall Sophomore (example)**

#MATH243: Calculus 3 (3)  
#COMP160: Programming 1 (3)  
Natural Science with Lab (3) [NS]  
Elective (3) [CT]  
Global Aware. And Citiz. (3) [GAC]

Credit Total: 15

**Spring Sophomore (example)**

#MATH244: Calculus 4 (3)  
#MATH225: History of Math (3) [WC]  
#MATH311: Elem. of Linear Alg (3)  
#COMP161: Programming 2 (3)  
Global Aware. And Citiz. (3) [GAC]

Credit Total: 15

**Fall Junior (example)**

#MATH302: Number Theory (3)  
#MATH307: Foundations of Geom. (3)  
Philos., Literary, and Aesth. (3) [PLA]  
Global Aware. And Citiz. (3) [GAC]  
Elective (3) [CT]

Credit Total: 15

**Spring Junior (example)**

#MATH310: Modern Algebra 1 (3)  
#MATH320: Linear Programming (3)  
Elective (3) [WC]  
Elective (3) [EL]  
Elective (3)

Credit Total: 15

**Fall Senior (example)**

#MATH401: Real Analysis 1 (3)  
#MATH301: Differential Equations (3)  
Elective (2) [EL]  
Hist., Behav., and Soc. Sci. (3) [HBS]  
#MATH313: Mathematical Stats (3)

Credit Total: 14

**Spring Senior (example)**

#MATH3XX or 4XX elective (3)  
#MATH312: Prob and Stats (3)  
Elective (3)  
Elective (3)  
Elective (3)

Credit Total: 15

## Secondary Education: Mathematics with Special Education - Bachelor of Science in Education

Effective Fall 2017

General Education Credit Total		42 sh
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1		
WC Competency 2		
<b>Oral Communication</b>	C	3 sh
<b>Math. and Comp. Thinking</b>		3 sh.
<b>Critical Thinking</b>		
CT Competency 1		
CT Competency 2		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C-	6 sh
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103	C	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110	C-	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1		
EL Competency 2		

Dual Major Coursework Credit Total		88 sh
<b>First Year Student Seminar</b>	Min Grade	
SPEC119: or MATH119: First Year Seminar	CR	1 sh

Major Area and Cognate Courses		Min Grade	
<b>Professional Education</b>			6 sh
#MATH200: Secondary Math Methods 1			3 sh
PSYC201: Educational Psychology			3 sh
<b>Required Mathematics Ed. Content Coursework</b>			38 sh
#MATH125: Intro. To Secondary Mathematics	C		1 sh
#MATH218: Technology in Secondary Mathematics	C		1 sh
#MATH327: Ped. Content Know. in Sec. Ed. Math 1	C		1 sh
#MATH427: Ped. Content Know. in Sec. Ed. Math 2	C		2 sh
#COMP160: Programming 1	C		3 sh
#MATH141: Calculus 1	C		CT
#MATH142: Calculus 2	C		3 sh
#MATH205: Foundations of Mathematics	C		3 sh
#MATH225: History of Mathematics	C		3 sh
#MATH243: Calculus 3	C		3 sh
#MATH244: Calculus 4	C		3 sh
#MATH302: Number Theory	C		3 sh
#MATH307: Foundations of Geometry	C		3 sh
#MATH310: Modern Algebra I	C		3 sh
#MATH311: Elements of Linear Algebra	C		3 sh
#MATH312: Probability and Statistics	C		3 sh
<b>Required Special Education Coursework</b>			18
SPEC105: Foundations of Special Education	C		3 sh
SPEC202: Cultural and Linguistic Diversity	C		GAC
#SPEC215: High Incidence Disabilities Support	C		3 sh
#SPEC212: Low Incidence Disabilities Support	C		3 sh
#SPEC338: Positive Behavior Support	C		3 sh
#SPEC300: Comm. Disorders and Assist. Tech.	C		3 sh
#SPEC345: Literacy Skills for Students with Dis.	C		3 sh
<b>Mathematics Education Professional Semester</b>			4
#MATH316: Methods of Teaching Math 2	C		4 sh
<b>Special Education Professional Semester</b>			9
#SPEC430: Assess. Ed. Needs & Plan. for Instruction	C		3 sh
#SPEC440: Strat. Teach. St. w Low Inc. Dis.	C		3 sh
#SPEC441: Strat. Teach. St. w High Inc. Dis.	C		OC
#SPEC425: Law and Collaborative Practices	C		3 sh
<b>Student Teaching</b>			12
#MATH493/494: ST and Practicum Mathematics	C		6 sh
#SPEC494: ST and Practicum for SPEC grades 7-12	C		6 sh

# BOG Advanced Course Work

**Secondary Mathematics/Special Education Dual Certification (BSED) 130 Credits  
Suggested Course Sequence**

<b>Fall Freshman</b>	<b>Spring Freshman</b>
MATH141: Calculus 1 (3) MATH119 or SPEC119: Freshmen Sem. (1) ENGL100: English Composition (3) PSYC103: Adolescent Development (3) SPEC105: Foundations of SPEC (3) General Education (3) <p align="right">(16)</p>	MATH142: Calculus 2 (3) ENGL110: Introduction to Literature (3) MATH125: Intro to Secondary Math (1) COMP160: Computer Programming 1 (3) SPEC202: Cult/Ling. Div. in Ed. (3) General Education (3) <p align="right">(16)</p>
<b>Fall Sophomore</b>	<b>Spring Sophomore</b>
MATH243: Calculus 3 (3) MATH218: Technology in Secondary Math (1) SPEC215: High Incidence Dis. Support (3) General Education (9) <p align="right">(16)</p>	MATH205: Foundations of Mathematics (3) MATH244: Calculus 4 (3) MATH225: History of Mathematics (3) MATH200: Methods of Teaching Math 1 (3) PSYC201: Educational Psychology (3) SPEC212: Low Incidence Dis. Support (3) <p align="right">(18)</p>
<b>Fall Junior</b>	<b>Spring Junior</b>
MATH307: Foundations of Geometry (3) MATH302: Number Theory (3) SPEC300: Comm. Disord. & Assist. Tech. (3) General Education (9) <p align="right">(18)</p>	MATH310: Modern Algebra (3) MATH312: Probability and Statistics (3) MATH311: Linear Algebra (3) SPEC345: Lit. Inst. for Sts. w/ Disab. (3) SPEC338: Positive Behavior Support (3) MATH327: PCK in Sec. Mathematics 1 (1) <p align="right">(16)</p>
<b>Fall Senior</b>	<b>Spring Senior</b>
MATH427: PCK in Sec. Mathematics (2) MATH316: Methods of Teaching Math 2 (4) SPEC430: Assess. Ed. Needs and Planning (3) SPEC441: Strategies for Teaching w/ High (3) SPEC440: Strategies for Teaching w/ Low (3) SPEC425: Law and Collaborative Practices (3) <p align="right">(18)</p>	MATH493: Student Teaching 1 (6) SPEC494: Student Teaching 2 (6) <p align="right">(12)</p>
	<b>Advising Notes:</b> 1. GE: PLA- one course must be from visual or performing arts 2. GE: GAC- one course must meet the historical foundations competency 3. *Denotes Advanced Coursework



## Secondary Education - Physics

### Suggested Course Sequence

Fall First Year	SH	Spring First Year	SH
SCI119 Freshman Seminar	1	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PHYS170 Intermediate Physics I	4
ENGL100 Composition	3	PSYC103 Adolescent Development	3
1 General Education Course	3	MATH141 Calculus I	3
1 General Education Course	3	ENGL110 Introduction to Literature	3
1 General Education Course	3		-
	<b>17</b>		<b>17</b>
Fall Second Year		Spring Second Year	
BIOL106 Principles of Biology I	3	MATH243 Calculus III	3
PHYS171 Intermediate Physics II	4	PHYS290 Electronics/ PHYS 325 Optics	4
MATH142 Calculus II	3	PHYS330 Mechanics I	3
SPEC204 Cognitive Development of Div. Learners	3	<b>BLOCK I</b>	
1 General Education Course	3	SCI209 Science Methods I	
	-	PSYC201 Educational Psychology	3
	<b>16</b>		3
			-
			<b>16</b>
Fall Third Year		Spring Third Year	
PHYS315 Modern Physics	4	BIOL107 Principles of Biology II	3
PHYS370 Electricity and Magnetism	3	PHYS250 Heat	3
MATH301 Differential Equations	3	PHYS310 Lab Development & Supervision	1
SPEC202 Cultural and Linguistic Div. in Ed.	3	PHYS325 Optics/ PHYS290 Electronics	4
1 General Education Course	3	SPEC345 Literacy Skills. for Students with Disabilities	3
	-	1 General Education Course	3
	<b>16</b>		-
			<b>17</b>
Fall Fourth Year		Spring Fourth Year	
GEOS elective	3	SCI493 Student Teaching & Practicum I	6
1 General Education Course	3	SCI494 Student Teaching & Practicum II	6
SPEC309 Effect. Instruct. Strat. for Stud. With Dis.	3		-
<b>SECONDARY BLOCK II</b>			<b>12</b>
SCI315 Science Methods II	4		
EDUC212 Classroom Management	2		
	-		
	<b>15</b>		



## Secondary Education: Physics with Special Education - Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Assumed by the major		
WC Competency 2 Assumed by the major		
<b>Oral Communication</b>		3 sh
SPEC441 required for the major	C	
<b>Math. and Comp. Thinking</b>		3 sh.
MATH141 required for the major	C	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C	6 sh
BIOL106 Required by the major (3sh)	C	
GEOS Elective (3sh)	C	
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103 required for the major (3sh)	C-	
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110 required for major	C-	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202 required for the major (3sh)		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		

Dual Major Coursework Credit Total		100
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or SCI119 First Year Seminar (1sh)	CR	1

Major Area and Cognate Courses		Min Grade	
<b>Professional Education</b>			9
SCI209 Science Methods 1 (3sh)*			
PSYC201 Educational Psychology (3sh)			
MATH142 Calculus II (3sh)			
<b>Required Physics and Science Coursework</b>			47
PHYS170 Intermediate General Physics I (4sh)	C		
PHYS171 Intermediate General Physics II (4sh)	C		
PHYS250 Heat (3sh)	C		
PHYS290 Electronics (4sh)	C		
PHYS310 Lab Development and Supervision (1sh)	C		
PHYS315 Modern Physics (4sh)	C		
PHYS325 Optics (4sh)	C		
PHYS330 Mechanics I (3sh)	C		
PHYS370 Electricity and Magnetism (3sh)	C		
BIOL107 Principles of Biology II			
CHEM120 Principles of Chemistry I (4sh)	C		
CHEM121 Principles of Chemistry II (4sh)	C		
MATH 243 Calculus III (3sh)	C		
MATH301 Differential Equations (3sh)	C		
<b>Required Special Education Coursework</b>			18
SPEC105 Foundations of Special Education	C		
SPEC202 Cultural and Linguistic Diversity	C		GAC
SPEC215 High Incidence Disabilities Support*	C		
SPEC212 Low Incidence Disabilities Support*	C		
SPEC338 Positive Behavior Support*	C		
SPEC300 Comm. Disorders and Assist. Technology*	C		
SPEC345 Literacy Skills for Students with Dis.*	C		
<b>Science/Special Education Prof. Semester</b>			13
SPEC430 Assess. Ed. Needs & Plan. for Instruction*	C		
SPEC440 Strat. For Teaching St. with Low Inc. Dis.*	C		
SPEC441 Strat. For Teaching St. with High Inc. Dis.*	C		OC
SPEC425 Law and Collaborative Practices*	C		
SCI315 Science Methods II (4sh)*	C		
<b>Student Teaching</b>			12
SCI493 ST & Practicum Science (6sh)*	C		
SPEC494 ST & Pract. for SPEC grades 7-12 (6sh)*	C		

\*Denotes Advanced Coursework

**Secondary Physics/Special Education Dual Certification (BSED) 142 Credits**

**Suggested Course Sequence**

<b>Fall First Year</b>	<b>SH</b>	<b>Spring First Year</b>	<b>SH</b>
SPEC119 or SCI 119 Freshman Seminar	1	CHEM121 Principles of Chemistry II	4
CHEM120 Principles of Chemistry I	4	PHYS170 Intermediate Physics I	4
ENGL100 Composition	3	PSYC103 Adolescent Development	3
SPEC105 Foundations of Special Education	3	MATH141 Calculus I	3
GEOS Geoscience Elective	3	SPEC212 Low Incidence Disabilities Support	3
1 General Education Course	3		-
	-		<b>17</b>
	<b>17</b>		
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
BIOL106 Principles of Biology I	3	MATH243 Calculus III	3
PHYS171 Intermediate Physics II	4	PHYS290 Electronics	4
ENGL110 Introduction to Literature	3	PHYS330 Mechanics I	3
MATH142 Calculus II	3	<b>BLOCK I</b>	
SPEC215 High Incidence Disabilities Support	3	SCI209 Science Methods I	3
	-	PSYC201 Educational Psychology	3
	<b>16</b>		-
			<b>16</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
PHYS315 Modern Physics	4	BIOL107 Principles of Biology II	3
PHYS370 Electricity and Magnetism	3	PHYS250 Heat	3
MATH301 Differential Equations	3	PHYS325 Optics	4
SPEC300 Communication Disorders and Assistive Technology	3	SPEC345 Literacy Instruction for Students with Disabilities	
1 General Education Course	3	PHYS310 Lab Development and Supervision	3
	-	SPEC338 Positive Behavior Support	1
	<b>16</b>		3
			-
			<b>17</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
<b>SECONDARY BLOCK II</b>		SCI493/494 Student Teaching & Practicum	6
SCI315 Science Methods II	4	SPEC493/494 Student Teaching and Practicum	6
<b>Special Education Block</b>			-
SPEC425 Law and Collaborative Practices	3		<b>12</b>
SPEC430 Assessing Educational Needs and Planning for Instruction	3		
SPEC440 Strategies for Teaching Students with Low Incidence Disabilities	3		
SPEC441 Strategies for Teaching Students with High Incidence Disabilities	3		
	-		
	<b>16</b>		
<b>Advising Notes</b>		<b>Summer or Intersession Coursework</b>	
Advising Notes:		<b>If a 4 year graduation timeline is desired, SPEC 202 and 4 General Education courses should be completed during summer or intersession as online courses. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired. Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b>	
1. GE: PLA- one course must be from visual or performing arts			
2. GE: GAC- one course must meet the historical foundations competency			
3. *Denotes Advanced Coursework			

## Secondary Education: Social Studies - Bachelor of Science in Education

Effective Fall 2017

<b>General Education Credit Total</b>		<b>42sh</b>
<b>Intellectual Foundation</b>	Min Grade	<b>9 sh</b>
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Absorbed by the major		
WC Competency 2 Absorbed by the major		
<b>Oral Communication</b>	C	3 sh
<b>Math. and Computational Thinking</b>		3 sh.
Not MATH107: Basic Statistics 1	C-	
<b>Critical Thinking</b>		
CT Competency 1 Absorbed by the major		
CT Competency 2 Absorbed by the major		

<b>Knowledge and Inquiry</b>		<b>21 sh</b>
<b>Natural Science Inquiry</b>	C-	6 sh
(Rec: BIOL102 CHEM101 or GEOS101)		
SCI110: Science, Technology and Society Required by the major		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
POLI105: American National Government		
ECON102: Principles of Macroeconomics		
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110: Introduction to Literature	C-	
Required by the major		

<b>Global Awareness and Citizenship</b>		9 sh
HIST111: Global History I		
HIST112: Global History II		
POLI107: World Politics		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Absorbed by the major		
EL Competency 2 Absorbed by the major		

<b>First Year Seminar</b>	Min Grade	
SSED119: First Year Student Seminar		<b>1</b>

<b>Major Area and Cognate Courses Credit Total</b>		<b>78 sh</b>
<b>Pre-Professional Education</b>		6
MATH107: Basic Statistics 1	C-	
PSYC103: Adolescent Development	C-	
<b>Required Social Studies Ed. Content Coursework</b>		36
HIST201: U.S. History I	C	
HIST202: U.S. History II	C	
#HIST200: Historical Thinking & Writing	C	
#HIST(3—or4--): Non West Elective	C	
#HIST (3—or4--): Non West Elective	C	
#HIST (3—or4--): Europe Elective	C	
#HIST (3—or4--): U.S. Elective	C	
ECON103: Principles of Microeconomics	C	
GEOG101: World Regional Geography	C	
GEOGxxx: Elective	C	
SOCI101: Introduction to Sociology	C	
#ANTH (3---or4--- ): Elective	C	
<b>Professional Education Coursework</b>		
<b>Required Special Education Coursework</b>		12
#SPEC202: Cultural and Linguistic Diversity	C	
#SPEC204: Cognitive Devel. of Diverse Learners	C	
#SPEC309: Effective Instr. Strat. for Students w/Dis.	C	
#SPEC345: Literacy Skills for Students with Dis.	C	
<b>Social Studies Block I</b>		6
SSED210: Methods of Teaching Social Studies I	C	
PSYC201: Educational Psychology	C	
<b>Social Studies Block II</b>		6
#SSED316: Methods of Teaching Social Studies II	C	
EDUC212: Class. Mgmt in Middle and Sec Setting	C	
<b>Student Teaching</b>		12
#SSED493: ST and Practicum Social Studies I	C	
#SSED494: ST and Practicum Social Studies II	C	
<b># denotes advanced course work</b>		
<b>Total Credits</b>		<b>120</b>

## Secondary Education: Social Studies with Special Education – Bachelor of Science in Education

For Students entering LHU Fall 2014

General Education Credit Total		42
<b>Intellectual Foundation</b>	Min Grade	9 sh
<b>Written Communication</b>		3 sh
ENGL100: Composition (3 sh)	C-	
WC Competency 1 Assumed by the major		
WC Competency 2 Assumed by the major		
<b>Oral Communication</b>	C	3 sh
SPEC441 required for the major		
<b>Math. and Comp. Thinking</b>		3 sh.
Not Math 107	C-	
<b>Critical Thinking</b>		
CT Competency 1 Assumed by the major		
CT Competency 2 Assumed by the major		

<b>Knowledge and Inquiry</b>		21 sh
<b>Natural Science Inquiry</b>	C-	6 sh
(BIOL102, CHEM101 or GEOS101 Recommended)		
SCI110 Required by the major		
<b>Historical, Beh., and Social Science Inq.</b>		6 sh
PSYC103 required for the major	C	
(second course assumed by the major)		
<b>Phil., Literary, and Aesthetic Inquiry</b>		9 sh
ENGL110 required for major	C-	

<b>Personal and Social Responsibility</b>		12 sh
<b>Global Awareness and Citizenship</b>		9 sh
SPEC202 required for the major		
HIST111 required by the major		
HIST112 required by the major		
<b>Wellness</b>		3 sh
<b>Experiential Learning</b>		
EL Competency 1 Assumed by the major		
EL Competency 2 Assumed by the major		
*Denotes Advanced Coursework		

Dual Major Coursework Credit Total		98
<b>First Year Student Seminar</b>	Min Grade	
SPEC119 or SSED119 First Year Seminar	CR	1

Major Area and Cognate Courses		Min Grade	
<b>Professional Education</b>			9
SSED210 Methods of Teaching Social Studies I*			
PSYC201 Educational Psychology			
MATH107 Statistics			
<b>Required Social Studies Ed. Content Coursework</b>			45
HIST111: Global History I	C	GAC	
HIST112: Global History II	C	GAC	
HIST200: Historical Thinking & Writing	C		
HIST201: U.S. History I	C		
HIST202: U.S. History II	C		
HIST (3—or4--) Non West Elective	C		
HIST (3—or4--) Non West Elective	C		
HIST (3—or4--) Europe Elective	C		
HIST (3—or4--) U.S. Elective	C		
POLI105 American National Government	C		
POLI107 World Politics	C		
ECON101 Principles of Economics	C		
ECON--- Elective	C		
GEOG101 World Regional Geography	C		
GEOG---Elective	C		
SOCI101 Introduction to Sociology	C		
ANTH (3---or4---) Elective	C		
<b>Required Special Education Coursework</b>			18
SPEC105 Foundations of Special Education	C		
SPEC202 Cultural and Linguistic Diversity	C	GAC	
SPEC215 High Incidence Disabilities Support*	C		
SPEC212 Low Incidence Disabilities Support*	C		
SPEC338 Positive Behavior Support*	C		
SPEC300 Comm. Disorders and Assist. Technology*	C		
SPEC345 Literacy Skills for Students with Dis.*	C		
<b>Social Studies/Special Education Prof. Semester</b>			13
SPEC430 Assess. Ed. Needs & Plan. for Instruction*	C		
SPEC440 Strat. For Teaching St. with Low Inc. Dis.*	C		
SPEC441 Strat. For Teaching St. with High Inc. Dis.*	C	OC	
SPEC425 Law and Collaborative Practices*	C		
SSED316 Methods of Teaching Social Studies II*	C		
<b>Student Teaching</b>			12
SSED493/494 ST and Practicum Social Studies*	C		
SPEC494 ST and Practicum for SPEC grades 7-12*	C		

**Secondary Social Studies/Special Education Dual Certification (BSED) 140Credits**

**Suggested Course Sequence**

<b>Fall First Year</b>	SH	<b>Spring First Year</b>	SH
SPEC119 Freshman Seminar	1	PSYC103 Adolescent Development	3
English Composition	3	SPEC202 Cultural and Linguistic Diversity	3
SPEC105 Foundations of Special Education	3	HIST112 Global History 2	3
HIST111 Global History I	3	POLI/GEOG/SOCI	3
MATH101 or higher (by placement)	3	MATH107 Statistics	3
POLI/GEOG/SOCI	3	General Education Course	3
	-		-
	<b>16</b>		<b>18</b>
<b>Fall Second Year</b>		<b>Spring Second Year</b>	
Literature	3	SPEC212 Low Incidence Disabilities Support	3
SPEC215 High Incidence Disabilities Support	3	<b>Social Studies Block I</b>	
HIST200 Historical Thinking and Writing	3	SSED210 Social Studies Methods I	3
HIST201 US History 1	3	PSYC201 Educational Psychology	3
ECON101	3	HIST202 US History 2	3
General Education Course	3	POLI/GEOG/SOCI	3
	-	General Education Course	3
	<b>18</b>		-
			<b>18</b>
<b>Fall Third Year</b>		<b>Spring Third Year</b>	
SPEC300 Communication Disorders and Assistive Technology	3	SPEC345 Literacy Instruction for Students with Disabilities	3
SPEC338 Positive Behavior Supports	3	ECON3xx	
POLI/GEOG/SOCI	3	POLI/GEOG/SOCI	3
ANTH3xx	3	HIST3xx	3
HIST3xx	3	HIST3xx	3
HIST3xx	3	General Education Course	3
	-		3
	<b>18</b>		-
			<b>18</b>
<b>Fall Fourth Year</b>		<b>Spring Fourth Year</b>	
<b>Special Education Block</b>		SSED493/494 Student Teaching & Practicum	6
SPEC425 Law and Collaborative Practices	3	SPEC493/494 Student Teaching and Practicum	6
SPEC430 Assessing Educational Needs and Planning for Instruction	3		-
SPEC440 Strategies for Teaching Students with Low Incidence Disabilities	3		<b>12</b>
SPEC441 Strategies for Teaching Students with High Incidence Disabilities	3		
<b>Social Studies Block II</b>			
SSED316 Social Studies Methods II	4		
	-		
	<b>16</b>		
Advising Notes:		<b>Summer or Intersession Coursework</b>	
1. GE: PLA- one course must be from visual or performing arts		<b>If a 4 year graduation timeline is desired, 3 General Education Courses should be completed in the summer or during intersession. Additional coursework may be completed in the summer if a reduced load is desired per the recommended sequence, a minor is being sought, or an earlier graduation timeline is desired. Many general education courses are taught online. Several special education courses are also taught online and are available during the summer.</b>	<b>9</b>
2. *Denotes Advanced Coursework			



**Social Work Department  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
SOCW119: First Year Seminar (1)  
SOCW102 Intro to Social Work (3)  
BIOL101 Basic Biology (3)  
SOC101 Intro to Sociology (3)  
Psychology (3)

Credit Total: 16

**Spring Freshman (example)**

SOCW110 Diverse Populations (3)  
MATH107 Basic Statistics (3)  
BIOL130 Human Bio for S.W. (3)  
Philosophical, Literary, Aesthetic Inq. (3)  
Wellness (3)

Credit Total: 15

**Fall Sophomore (example)**

SOCW201 Human Behavior 1 (3)  
SOCW215 Mental Health (3)  
Philosophical, Literary, Aesthetic Inq. (3)  
Global Awareness & Citizenship (3)  
Free Elective (3)

Credit Total: 15

**Spring Sophomore(example)**

SOCW203 Human Behavior 2 (3)  
SOCW301 Social Work Practice 1 (3)  
SOCW210 Case Management 1 (3)  
Lab or Non-lab Science (3)  
Global Awareness & Citizenship (3)

Credit Total: 15

**Fall Junior (example)**

SOCW335 SW Practice with Groups (3)  
SOCW412 Applied Social Research (3)  
Philosophical, Literary, Aesthetic Inq. (3)  
Oral Communication (3)  
Free Elective (2)

Credit Total: 14

**Spring Junior (example)**

SOCW302 SW with Families (3)  
SOCW404 Rural Social Work (3)  
SOCW425 Intro to Policy (3)  
Free Elective (3)  
Free Elective (3)

Credit Total: 15

**Fall Senior (example)**

SOCW450 Social Work Elective (3)  
SOCW450 Social Work Elective (3)  
Free Elective (3)  
Free Elective (3)

Credit Total: 12

**Spring Senior (example)**

SOCW426 Advanced Social Policy (3)  
SOCW401 Field Instruction 1 (6)  
SOCW402 Field Instruction 2 (6)  
SOCW420 Field Seminar (3)

Credit Total: 18

# Sociology – Bachelor of Science

Effective: Fall 2020

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH107: Basic Statistics 1	
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b> (at least one lab)	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
SOCI101: Introduction to Sociology	3 sh
<b>Philosophical, Literary and Aesthetic Inquiry</b>	<b>9 sh</b>
One course must be philosophy or literature. One must be visual or performance arts	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
One course must fulfill the historical foundation component of the competency	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
<b>Electives</b>	<b>17 sh</b>

EL Competency 2	
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<b>First Year Student Seminar</b>	<b>1 sh</b>
HIST119: First Year Student Seminar	

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Sociology Core Requirements</b>	<b>6 sh</b>
#SOCI352: Sociological Theory	
#SOCI404: Sociological Research	
<b>Sociology and Cognate Electives</b>	<b>54 sh</b>
#SOCI203: Social Problems	
#SOCI205: Race and Ethnic Relations	
#SOCI206: Marriage and Family	
#SOCI300: Sociology of Deviance	
#SOCI301: Juvenile Delinquency	
#CRJS302: Criminology	
#SOCI354: Social Change	
#SOCI328: Social Science Seminar (can be repeated)	
#SOCI351: Urban-Rural Sociology	
#SOCI369: Internship (3-6 sh)	
#SOCI402: Industrial Sociology	
#SOCI425: Economic Sociology	
#SOCI499: Independent Study (can be repeated)	
#GEOG440: Economic Geography	
ANTHxxx: any Anthropology course	
GEOGxxx: any Geography course	
#MATH108: Basic Statistics II	
3 semester hours Foreign Language Level 1	
#Up to 9 hours Foreign Language levels 2-4	
"#" means advanced coursework	



**Sociology Major  
Suggested Course Sequence**

<p><b>Fall Freshman (example)</b>  ENGL100: Composition (3)  HIST119: First Year Student Seminar (1)  SOCI101: Introduction to Sociology (3)  General Education/Elective (8)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Freshman (example)</b>  Sociology or Cognate Elective (9)  General Education/Elective (6)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Sophomore (example)</b>  Sociology or Cognate Elective (9)  MATH107: Basic Statistics 1 (3)  General Education/Elective (3)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Sophomore (example)</b>  Sociology or Cognate Elective (6)  General Education/Elective (9)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Junior (example)</b>  Sociology or Cognate Elective (9)  General Education/Elective (6)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Junior (example)</b>  SOCI 352 Sociological Theory (3)  Sociology or Cognate Elective (9)  General Education/Elective (3)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Senior (example)</b>  Sociology or Cognate Elective (9)  General Education/Elective (6)</p> <p style="text-align: center;">Credit Total 15</p>	<p><b>Spring Senior (example)</b>  SOCI404: Sociological Research (3)  Sociology or Cognate Elective (3)  General Education/Elective (9)</p> <p style="text-align: center;">Credit Total: 15</p>

EL-Experiential Learning; GAC=Global Awareness and Citizenship; HBSS = Historical, Behavioral and Social Sciences Inquiry; NS = Natural Science Inquiry  
OC = Oral Communication; PLA = Philosophical, Literary and Aesthetic Inquiry

# Sociology: Delinquent Youth Analysis – Bachelor of Science

For Students entering LHU Spring 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	3 sh
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH107: Basic Statistics	3 sh
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
SOCI101: Introduction to Sociology	3 sh
<b>Philosophical, Literary and Aesthetic Inquiry</b>	<b>9 sh</b>
One course must be philosophy or literature. One must be visual or performance arts	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
One course must fulfill the historical foundation component of the competency	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Sociology Core Requirements</b>	<b>18 sh</b>
#SOCI203: Social Problems	
#SOCI205: Race and Ethnic Relations	
#SOCI206: Marriage and Family	
#SOCI352: Sociological Theory	
#SOCI354: Social Change	
#SOCI404: Sociological Research	

<b>Required Sociology Cognates</b>	<b>6 sh</b>
ANTH101: Introduction to Anthropology OR ANTH102: Cultural Anthropology	
COMP150: Introduction to Computers	
<b>DYA Concentration</b>	<b>18 sh</b>
#SOCI300: Sociology of Deviance	
#SOCI301: Juvenile Delinquency	
<b>DYA Concentration Cognates</b>	
PSYC103: Adolescent Development	
CRJS102: Introduction to Criminal Justice	
#CRJS205: Drug Abuse OR #HLTH320: Drug Education OR #PSYC322: Drugs and Human Behavior	
#CRJS302: Criminology	

<b>Sociology Electives (Select 6 of the following sociology and cognate electives)</b>	<b>18 sh</b>
#SOCI328: Social Science Seminar (can be repeated)	
#SOCI351: Urban-Rural Sociology	
#SOCI/SOCW360: Death and Dying	
#SOCI369: Internship (1-9 sh)	
#SOCI402: Industrial Sociology	
#SOCI403: Gerontology	
#SOCI410: Sociology of Organizations	
#SOCI499: Independent Study	
<b>Cognate Electives</b>	
#CRJS215 American Gangs	
#CRJS305: Corrections	
ECON101: Principles of Economics	
#EDTF300: Educational Technology	
GEOG2XX or 3XX (any upper level course but limited to 3sh)	
#Math108 Basic Statistics II	
#SOCW415 Child Welfare	
# Up to 9 hours of Foreign Language levels 2-4	

**Sociology Major: Delinquent Youth Analysis Concentration**  
**Suggested Course Sequence**

<p><b>Fall Freshman (example)</b>  ENGL100: Composition (3)  HIST119: First Year Student Seminar (1)  SOC1101: Introduction to Sociology (3)  General Education (9)</p> <p style="text-align: center;">Credit Total: 16</p>	<p><b>Spring Freshman (example)</b>  COMP150: Introduction to Computers (3)  ANTH101: Introduction to Anthropology OR      ANTH102: Cultural Anthropology (3)  PSYC103: Adolescent Development (3)  General Education (6)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Sophomore (example)</b>  SOC1203: Social Problems (3)  SOC1205: Race and Ethnic Relations (3)  CRJS102: Introduction to Criminal Justice (3)  General Education (6)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Sophomore (example)</b>  SOC1206: Marriage and Family (3)  SOC13xx, SOC14xx or cognate (3)  MATH107: Basic Statistics 1 (3)  General Education (6)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Junior (example)</b>  SOC1300: Sociology of Deviance OR      SOC1301 Juvenile Delinquency (3)  SOC1354: Social Change (3)  SOC13xx or SOC14xx or cognate elective (3)  CRJS302: Criminology (3)  General Education (3)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Junior (example)</b>  SOC1352: Sociological Theory (3)  CRJS205: Drug Abuse OR HLTH320: Drug Education OR      PSYC322: Drugs and Human Behavior (3)  SOC13xx, SOC1 4xx or cognate (3)  General Education (6)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Senior (example)</b>  SOC1300: Sociology of Deviance OR      SOC1301: Juvenile Delinquency (3)  SOC13xx, SOC14xx or cognate (3)  SOC13xx, SOC14xx or cognate (3)  General Education (6)</p> <p style="text-align: center;">Credit Total 15</p>	<p><b>Spring Senior (example)</b>  SOC1404: Sociological Research (3)  SOC13xx, SOC14xx or cognate (3)  General Education (9)</p> <p style="text-align: center;">Credit Total: 15</p>

EL-Experiential Learning; GAC=Global Awareness and Citizenship; HBSS = Historical, Behavioral and Social Sciences Inquiry; NS = Natural Science Inquiry OC = Oral Communication; PLA = Philosophical, Literary and Aesthetic Inquiry

**Sociology: Industry and Economics – Bachelor of Science**  
Effective Fall 2019

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
MATH107: Basic Statistics 1	
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b> (at least one lab)	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
SOCI101: Introduction to Sociology	3 sh
<b>Philosophical, Literary and Aesthetic Inquiry</b>	<b>9 sh</b>
One course must be philosophy or literature. One must be visual or performance arts	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
One course must fulfill the historical foundation component of the competency	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>17 sh</b>


<b>First Year Student Seminar</b>	<b>1 sh</b>
ANY 119: First Year Student Seminar	

<b>Major Area and Cognate Courses</b>	<b>60 sh</b>
<b>Sociology Core Requirements</b>	<b>6 sh</b>
#SOCI352: Sociological Theory	
#SOCI404: Sociological Research	
<b>IEC Concentration</b>	<b>15 sh</b>
#SOCI351: Urban-Rural Sociology	
#SOCI402: Industrial Sociology	
#SOCI410: Sociology of Organizations	
#SOCI425: Economic Sociology	
#GEOG440: Economic Geography	
<b>Sociology and Cognate Electives</b>	<b>39 sh</b>
#SOCI203: Social Problems	
#SOCI205: Race and Ethnic Relations	
#SOCI206: Marriage and Family	
#SOCI300: Sociology of Deviance	
#SOCI301: Juvenile Delinquency	
#SOCI302: Criminology	
#SOCI354: Social Change	
#SOCI328: Social Science Seminar (can be repeated)	
#SOCI360/SOCW360: Death and Dying	
#SOCI369: Internship (3-6 sh)	
#SOCI403: Gerontology	
#SOCI499: Independent Study (can be repeated)	
Any Anthropology course	
Any Geography course	
#MATH108: Basic Statistics II	
3 semester hours Foreign Language Level 1	
#Up to 9 hours Foreign Language levels 2-4	
"#" means advanced coursework	

**Sociology Major: Industry and Economics Concentration**  
**Suggested Course Sequence**

<p><b>Fall Freshman (example)</b>            ENGL100: Composition (3)            HIST119: First Year Student Seminar (1)            SOCI101: Introduction to Sociology (3)            General Education/Elective (8)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Freshman (example)</b>            Sociology or Cognate Elective (9)            General Education/Elective (6)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Sophomore (example)</b>            Sociology or Cognate Elective (9)            MATH107: Basic Statistics 1 (3)            General Education/Elective (3)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Sophomore (example)</b>            Sociology or Cognate Elective (6)            SOCI351: Urban-Rural Sociology (3)            General Education/Elective (6)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Junior (example)</b>            SOCI425: Economic Sociology (3)            Sociology or Cognate Elective (6)            General Education/Elective (6)</p> <p style="text-align: center;">Credit Total: 15</p>	<p><b>Spring Junior (example)</b>            SOCI352: Sociological Theory (3)            SOCI402: Industrial Sociology (3)            Sociology or Cognate Elective (6)            General Education/Elective (3)</p> <p style="text-align: center;">Credit Total: 15</p>
<p><b>Fall Senior (example)</b>            SOCI410: Economic Sociology (3)            Sociology or Cognate Elective (6)            General Education/Elective (6)</p> <p style="text-align: center;">Credit Total 15</p>	<p><b>Spring Senior (example)</b>            GEOG440: Economic Geography (3)            SOCI404: Sociological Research (3)            Sociology or Cognate Elective (3)            General Education/Elective (6)</p> <p style="text-align: center;">Credit Total: 15</p>

EL-Experiential Learning; GAC=Global Awareness and Citizenship; HBSS = Historical, Behavioral and Social Sciences Inquiry; NS = Natural Science Inquiry OC = Oral Communication; PLA = Philosophical, Literary and Aesthetic Inquiry

**Special Education - Bachelor of Science in Education**  
**Effective Fall 2020**

<b>General Education Credit Total</b>	Min Grade	<b>42 sh</b>	<b>Major Coursework Credit Total</b>	Min Grade	<b>63 sh</b>
<b>Intellectual Foundation</b>		<b>9 sh</b>	<b>First Year Student Seminar</b>		<b>1 sh</b>
<b>Written Communication</b>		<b>3 sh</b>	SPEC119 First Year Seminar*	CR	
ENGL100: Composition	C-				
WC Competency 1 – #SPEC430		✓	<b>Major Area and Cognate Courses</b>	Min Grade	
WC Competency 2 – #SPEC325		✓	<b>Professional Education</b>		<b>17 sh</b>
			MATH115 Statistics and Geometry	C	
<b>Oral Communication</b>	C	<b>3 sh</b>	ECED212: Language Development	C	
#SPEC441: Strat. for High Incidence		✓	ECED204: Primary Reading	C	
			PSYC201 Educational Psychology	C	
<b>Math &amp; Computational Thinking</b>		<b>3 sh</b>	EDUC212: Classroom Management	C	2sh
MATH102: Number Systems	C		#EDUC335: Assessment and Differentiation	C	
<b>Critical Thinking</b>					
CT Competency 1 – #SPEC493		✓	<b>Required Special Education Coursework</b>		<b>24 sh</b>
CT Competency 2 – #SPEC494		✓	SPEC105: Foundations of Special Education	C	
			SPEC202: Cultural and Linguistic Diversity	C	GAC
<b>Knowledge and Inquiry</b>		<b>21 sh</b>	SPEC212: Low Incidence Disabilities Support	C	
<b>Natural Science Inquiry (one w/ a lab)</b>	C-	<b>6 sh</b>	SPEC215: High Incidence Disabilities Support	C	
			#SPEC300: Comm. Dis. and Assist. Technology	C	
			#SPEC309: Effective Instructional Strategies	C	
			#SPEC325: Infant/Preschool Special Needs	C	
<b>Hist., Behav., &amp; Social Science Inquiry</b>		<b>6 sh</b>	#SPEC338: Positive Behavior Support	C	
PSYC102: Child Development	C		#SPEC345: Literacy Instruction for Students with Dis.	C	
PSYC103: Adolescent Development	C				
			<b>Special Education Professional Semester</b>		<b>9 sh</b>
<b>Phil., Literary, &amp; Aesthetic Inquiry</b>		<b>9 sh</b>	#SPEC425: Law and Collaborative Practices	C	
Aesthetics:			#SPEC440: Strategies for Teaching Students with Low Incidence Disabilities	C	
Philosophy/Literature: ENGL110: Introduction to Literature	C-		#SPEC441: Strategies for Teaching Students with High Incidence Disabilities	C	OC
PLA:			#SPEC430: Assessing Educational Needs & Planning for Instruction	C	
<b>Personal and Social Responsibility</b>		<b>12 sh</b>	<b>Student Teaching</b>		<b>12 sh</b>
<b>Global Awareness and Citizenship</b>		<b>9 sh</b>	#SPEC493 Student Teaching and Practicum	C	
GAC: SPEC202: Cultural and Linguistic Diversity	C	✓	#SPEC494 Student Teaching and Practicum	C	
GAC:					
GAC-H:			✓ Met in course requirements		
			* Credit/No Credit		
<b>Wellness</b>		<b>3 sh</b>	# Upper division courses		
HPED245: Health and PE Elem School					
<b>Experiential Learning</b>					
EL Competency 1 – #SPEC440		✓			
EL Competency 2 – #SPEC441		✓			
<b>Electives</b>		<b>15 sh</b>			

BSED in Special Education  
Suggested Course Sequence

<b>Fall Freshman</b>	<b>Spring Freshman</b>
ENGL100 Composition SPEC119 First Year Student Seminar PSYC102 Child Development MATH102 Number Systems SPEC105 Foundations of Special Education  1 General Education course	SPEC212 Low Incidence Disabilities Support PSYC103 Adolescent Development MATH115 Statistics and Geometry ENGL110 Introduction to Literature  1 General Education course
<b>Credit Total: 16</b>	<b>Credit Total: 15</b>

<b>Fall Sophomore</b>	<b>Spring Sophomore</b>
SPEC215 High Incidence Disabilities Support SPEC202 Cultural and Linguistic Diversity ECED212 Language Development 1 General Education course 1 Elective course	PSYC201 Educational Psychology ECED204 Primary Reading  2 General Education courses 1 Elective course
<b>Credit Total: 15</b>	<b>Credit Total: 15</b>

<b>Fall Junior</b>	<b>Spring Junior</b>
SPEC300 Comm. Disorders and Asst. Tech SPEC309 Effective Instructional Strategies  1 General Education course 2 Elective courses	ECED335 Assessment and Differentiation SPEC325 Infant/Preschool Special Needs SPEC345 Literacy Instruction SPEC338 Positive Behavior Supports 1 General Education course 1 Elective course
<b>Credit Total: 15</b>	<b>Credit Total: 18</b>

<b>Fall Senior</b> <i>Professional Semester</i>	<b>Spring Senior</b> <i>Student Teaching</i>
SPEC425 Law and Collaborative Practices SPEC430 Assessing Educational Needs and Planning for Instruction SPEC440 Strategies for Teaching Students with Low Incidence Disabilities SPEC441 Strategies for Teaching Students with High Incidence Disabilities EDUC212 Classroom Management	SPEC 493: Elementary Student Teaching & Practicum SPEC 494: Secondary Student Teaching & Practicum
<b>Credit Total: 14</b>	<b>Credit Total: 12</b>

## Sport Administration - Bachelor of Science

(For Students entering LHU Fall 2014)

<b>GENERAL EDUCATION</b>	<b>42 sh</b>
<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	Sem/Grade
WC Competency 1 = SPRT324	
WC Competency 2 = SPRT465	
<b>Oral Communication</b>	<b>3 sh</b>
	Sem/Grade
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
	Sem/Grade
<b>Critical Thinking</b>	
CT Competency 1 = SPRT321	
CT Competency 2 = SPRT337	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
Science with lab	Sem/Grade
Science with/without lab	Sem/Grade
<b>Historical, Behavioral &amp; Social Science Inquiry</b>	<b>6 sh</b>
	Sem/Grade
	Sem/Grade
<b>Philosophical, Literary &amp; Aesthetic Inquiry</b>	<b>9 sh</b>
	Sem/Grade
	Sem/Grade
	Sem/Grade

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
	Sem/Grade
	Sem/Grade
	Sem/Grade
<b>Wellness</b>	<b>3 sh</b>
	Sem/Grade
<b>Experiential Learning</b>	
EL Competency 1 = SPRT450	
EL Competency 2 = SPRT450	

<b>SPORT ADMINISTRATION MAJOR</b>	<b>60 sh</b>
ACCT110 Financial Accounting	Sem/Grade
SPRT106: Intro to Sport Administration (Meets First Year Seminar Requirement)	Sem/Grade
SPRT208: Intro to Sport & Ex Psychology# OR SPRT305: Psychology of Coaching#	Sem/Grade
SPRT223: Contemporary Issues in SA	Sem/Grade
SPRT233: Sales, Sponsorship, Fundraising	Sem/Grade
SPRT321: Management/Leadership of Sport#	Sem/Grade
SPRT323: Sport and Society#	Sem/Grade
SPRT324: Sport Law and Ethics#	Sem/Grade
SPRT332: Sport Marketing Management#	Sem/Grade
SPRT335: Sport Admin & Community Relat#	Sem/Grade
SPRT337: Governance of Sport#	Sem/Grade
SPRT340: Sport Media Communications#	Sem/Grade
SPRT350: Field Participation#	Sem/Grade
SPRT401: Sport Facility Management/Op #	Sem/Grade
SPRT402: Sport Business Finance#	Sem/Grade
SPRT450: Field Experience in Sport Admin#	Sem/Grade
SPRT465: Organization/Administration of SA#	Sem/Grade
<b>NOTES:</b>	
Must have "C" in all major required courses	
Must have a 2.0 in the major and overall	
Must have a 2.25 to transfer into Sport Admin	
SPRT450: Field Experience in Sport Admin is a credit bearing course to which all tuition and fees apply.	

<b>Electives</b>	<b>18 sh</b>
Students are encouraged to consider using electives to complete minors including the Sport and Exercise Psychology, Business and Coaching Minors	Sem/Grade
	Sem/Grade
	Sem/Grade
<b>Other Recommendations</b>	Sem/Grade
COMP150: Introduction to Computers	Sem/Grade
ENGL345 Business Writing	Sem/Grade



**Sport Administration  
Suggested Course Sequence**

**Fall Freshman (example)**

SPRT106 Intro. Sport Administration	3
ENGL100: Composition	3
GE Global Awareness and Citizenship	3
GE Hist/Behavioral/Social Science Inquiry	3
GE Wellness	3
Credit Total	15

**Spring Freshman (example)**

SPRT223 Cont. Issues & Problems in Sport Admin.	3
SPRT233 Sport Sales, Sponsorship, & Fundraising	3
GE Philosophical, Literary and Aesthetic Inquiry	3
GE Math and Computational Thinking	3
GE Global Awareness and Citizenship	3
Credit Total	15

**Fall Sophomore (example)**

SPRT208 Intro to Sport & Exercise Psychology	3
<b>OR</b>	
SPRT305 Psychology of Coaching	
SPRT321 Manage. & Leadership of Sport	3
ACCT110 Financial Accounting	3
GE Natural Science Inquiry (without lab)	3
GE Philosophical, Literary and Aesthetic Inquiry	3
Credit Total	15

**Spring Sophomore (example)**

SPRT323 Sport and Society	3
SPRT332 Sport Marketing	3
SPRT350 Field Participation in Sport Admin	3
GE Natural Science Inquiry (with lab)	3
Free Elective	3
Credit Total	15

**Fall Junior (example)**

SPRT324 Sport Law and Ethics	3
SPRT337 Governance of Sport	3
GE Philosophical, Literary and Aesthetic Inquiry	3
GE Hist/Behavioral/Social Science Inquiry	3
Free Elective	3
Credit Total	15

**Spring Junior (example)**

SPRT335 Sport Admin. & Community Relations	3
SPRT340 Sport Media Communication Relations	3
GE Global Awareness and Citizenship	3
Free Elective	3
Free Elective	3
Credit Total	15

**Fall Senior (example)**

SPRT401 Sport Facility Management and Oper	3
SPRT402 Sport Business Finance	3
SPRT465 Org/Admin of Sport & Athletic Prog	3
GE Oral Communication	3
Free Elective	3
Free Elective	3
Credit Total	18

**Spring Senior (example)**

SPRT450 Prof. Field Experience in Sport Admin.	12
Credit Total	12

**Sport Administration: Accelerated – Bachelor of Science**  
**Sport and Exercise Psychology Track**

Effective: Spring 2017

<b>GENERAL EDUCATION</b>	<b>42 sh</b>
<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	Sem/Grade
WC Competency 1 = SPRT324	
WC Competency 2 = SPRT465	
<b>Oral Communication</b>	<b>3 sh</b>
	Sem/Grade
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
	Sem/Grade
<b>Critical Thinking</b>	
CT Competency 1 = SPRT321	
CT Competency 2 = SPRT337	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
Science with lab	Sem/Grade
Science with/without lab	Sem/Grade
<b>Historical, Behavioral &amp; Social Science Inquiry</b>	<b>6 sh</b>
	Sem/Grade
	Sem/Grade
<b>Philosophical, Literary &amp; Aesthetic Inquiry</b>	<b>9 sh</b>
	Sem/Grade
	Sem/Grade

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
	Sem/Grade
	Sem/Grade
	Sem/Grade
<b>Wellness</b>	<b>3 sh</b>
	Sem/Grade
<b>Experiential Learning</b>	
EL Competency 1 = SPRT450	
EL Competency 2 = SPRT450	

<b>SPORT ADMINISTRATION MAJOR</b>	<b>60 sh</b>
ACCT110 Financial Accounting (3 sh)	Sem/Grade
SPRT106: Intro to Sport Administration (3 sh) (Meets First Year Seminar Requirement)	Sem/Grade
SPRT208: Intro to Sport & Ex Psych# (3 sh) OR SPRT305: Psychology of Coaching# (3 sh)	Sem/Grade
SPRT223: Contemporary Issues in SA (3 sh)	Sem/Grade
SPRT233: Sales, Sponsorship, Fundrais (3 sh)	Sem/Grade
SPRT321: Mngmnt/Leadership of Sport# (3 sh)	Sem/Grade
SPRT323: Sport and Society# (3 sh)	Sem/Grade
SPRT324: Sport Law and Ethics# (3 sh)	Sem/Grade
SPRT332: Sport Marketing Management# (3 sh)	Sem/Grade
SPRT335: Sport Admin & Comm Relat# (3 sh)	Sem/Grade
SPRT337: Governance of Sport# (3 sh)	Sem/Grade
SPRT340: Sport Media Communications# (3 sh)	Sem/Grade
SPRT350: Field Participation# (3 sh)	Sem/Grade
SPRT401: Sport Facility Managmnt/Op # (3 sh)	Sem/Grade
SPRT402: Sport Business Finance# (3 sh)	Sem/Grade
SPRT450: Field Exp in Sport Admin# (12 sh)	Sem/Grade
SPRT465: Organization/Admin of SA# (3 sh)	Sem/Grade

<b>Electives</b>	<b>6sh</b>
	Sem/Grade
	Sem/Grade

<b>NOTES:</b>
Must have "C" or better in all major required courses # = upper level course
SPRT450: Field Experience in Sport Admin is a credit bearing course to which all tuition and fees apply.

**Accelerated BS in Sport Administration to MS in Sport Science  
Sport and Exercise Psychology Track  
Suggested Course Sequence**

**Fall Freshman (example)**

SPRT106 Intro. Sport Administration	3
ENGL100: Composition	3
GE Global Awareness and Citizenship	3
GE Hist/Behavioral/Social Science Inquiry	3
GE Wellness	3
<b>Credit Total</b>	<b>15</b>

**Spring Freshman (example)**

SPRT223 Cont. Issues & Problems in Sport Admin.	3
SPRT233 Sport Sales, Sponsorship, & Fundraising	3
GE Philosophical, Literary and Aesthetic Inquiry	3
GE Math and Computational Thinking	3
GE Global Awareness and Citizenship	3
<b>Credit Total</b>	<b>15</b>

**Fall Sophomore (example)**

SPRT208 Intro to Sport & Exercise Psychology	3
<b>OR</b>	
SPRT305 Psychology of Coaching	
SPRT321 Manage. & Leadership of Sport	3
ACCT110 Financial Accounting	3
GE Natural Science Inquiry (without lab)	3
GE Philosophical, Literary and Aesthetic Inquiry	3
<b>Credit Total</b>	<b>15</b>

**Spring Sophomore (example)**

SPRT323 Sport and Society	3
SPRT332 Sport Marketing	3
SPRT350 Field Participation in Sport Admin	3
GE Natural Science Inquiry (with lab)	3
GE Global Awareness and Citizenship	3
<b>Credit Total</b>	<b>15</b>

**Fall Junior (example)**

SPRT324 Sport Law and Ethics	3
SPRT337 Governance of Sport	3
SPRT335 Sport Media Communication Relation	3
GE Hist/Behavioral/Social Science Inquiry	3
GE Philosophical, Literary and Aesthetic Inquiry	3
Elective	3
<b>Credit Total</b>	<b>18</b>

**Spring Junior (example)**

SPRT340 Sport Media Communication Relations	3
SPRT401 Sport Facility Management and Oper	3
SPRT402 Sport Business Finance	3
SPRT465 Org/Admin of Sport & Athletic Prog	3
GE Oral Communication	3
Elective	3
<b>Credit Total</b>	<b>18</b>

**Summer**

SPRT450 Prof. Field Experience in Sport Admin.	12
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**Graduate Program**

**Fall**

SPRT600: Research Methods in Sport Science	3
SPRT602: Professional Ethics in Sport/Ex Psych	3
SPRT613: Psychology of Injury and Illness	3
<b>Credit Total</b>	<b>9</b>

**Spring Freshman**

SPRT601: Sport in American Culture	3
SPRT610: Foundations of Spor/Ex Psych	3
SPRT614: Legal and Policy Issues	3
<b>Credit Total</b>	<b>9</b>

**Summer 1**

SPRT611: Sport Psych for Perf Enhancement	3
<b>Credit Total</b>	<b>3</b>

**Summer 2**

SPRT612: Sport/Ex Psych across the Lifespan	3
SPRT Elective	3
<b>Credit Total</b>	<b>6</b>

**Summer Extended**

SPRT630: Capstone in Sport Science	
<b>Credit Total</b>	<b>3</b>

## Accelerated BS in Sport Administration to MS in Sport Science

### Sport Administration Track

Effective: Spring 2017

<b>GENERAL EDUCATION</b>	<b>42 sh</b>
<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	Sem/Grade
WC Competency 1 = SPRT324	
WC Competency 2 = SPRT465	
<b>Oral Communication</b>	<b>3 sh</b>
	Sem/Grade
<b>Mathematical and Computational Thinking</b>	<b>3 sh.</b>
	Sem/Grade
<b>Critical Thinking</b>	
CT Competency 1 = SPRT321	
CT Competency 2 = SPRT337	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry</b>	<b>6 sh</b>
Science with lab	Sem/Grade
Science with/without lab	Sem/Grade
<b>Historical, Behavioral &amp; Social Science Inquiry</b>	<b>6 sh</b>
	Sem/Grade
	Sem/Grade
<b>Philosophical, Literary &amp; Aesthetic Inquiry</b>	<b>9 sh</b>
	Sem/Grade
	Sem/Grade
	Sem/Grade

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
	Sem/Grade
	Sem/Grade
	Sem/Grade
<b>Wellness</b>	<b>3 sh</b>
	Sem/Grade
<b>Experiential Learning</b>	
EL Competency 1 = SPRT450	
EL Competency 2 = SPRT450	

<b>SPORT ADMINISTRATION MAJOR</b>	<b>60 sh</b>
ACCT110 Financial Accounting (3 sh)	Sem/Grade
SPRT106: Intro to Sport Administration (3 sh) (Meets First Year Seminar Requirement)	Sem/Grade
SPRT208: Intro to Sport & Ex Psych# (3 sh) OR	Sem/Grade
SPRT305: Psychology of Coaching# (3 sh)	
SPRT223: Contemporary Issues in SA (3 sh)	Sem/Grade
SPRT233: Sales, Sponsorship, Fundrais (3 sh)	Sem/Grade
SPRT321: Mngmnt/Leadership of Sport# (3 sh)	Sem/Grade
SPRT323: Sport and Society# (3 sh)	Sem/Grade
SPRT324: Sport Law and Ethics# (3 sh)	Sem/Grade
SPRT332: Sport Marketing Management# (3 sh)	Sem/Grade
SPRT335: Sport Admin & Comm Relat# (3 sh)	Sem/Grade
SPRT337: Governance of Sport# (3 sh)	Sem/Grade
SPRT340: Sport Media Communications# (3 sh)	Sem/Grade
SPRT350: Field Participation# (3 sh)	Sem/Grade
SPRT401: Sport Facility Managmnt/Op # (3 sh)	Sem/Grade
SPRT402: Sport Business Finance# (3 sh)	Sem/Grade
SPRT450: Field Exp in Sport Admin# (12 sh)	Sem/Grade
SPRT465: Organization/Admin of SA# (3 sh)	Sem/Grade

<b>Electives</b>	<b>6sh</b>

<b>Notes</b>
Must have "C" or better in all major required courses # = upper level course
SPRT450: Field Experience in Sport Admin is a credit bearing course to which all tuition and fees apply.

**Accelerated BS in Sport Administration to MS in Sport Science - Sport Administration Track  
Suggested Course Sequence**

**Fall Freshman (example)**

SPRT106 Intro. Sport Administration	3
ENGL100: Composition	3
GE Global Awareness and Citizenship	3
GE Hist/Behavioral/Social Science Inquiry	3
GE Wellness	3

**Credit Total 15**

**Spring Freshman (example)**

SPRT223 Cont. Issues & Problems in Sport Admin.	3
SPRT233 Sport Sales, Sponsorship, & Fundraising	3
GE Philosophical, Literary and Aesthetic Inquiry	3
GE Math and Computational Thinking	3
GE Global Awareness and Citizenship	3

**Credit Total 15**

**Fall Sophomore (example)**

SPRT208 Intro to Sport & Exercise Psychology	3
<b>OR</b>	
SPRT305 Psychology of Coaching	
SPRT321 Manage. & Leadership of Sport	3
ACCT110 Financial Accounting	3
GE Natural Science Inquiry (without lab)	3
GE Philosophical, Literary and Aesthetic Inquiry	3

**Credit Total 15**

**Spring Sophomore (example)**

SPRT323 Sport and Society	3
SPRT332 Sport Marketing	3
SPRT350 Field Participation in Sport Admin	3
GE Natural Science Inquiry (with lab)	3
GE Global Awareness and Citizenship	3

**Credit Total 15**

**Fall Junior (example)**

SPRT324 Sport Law and Ethics	3
SPRT337 Governance of Sport	3
SPRT335 Sport Media Communication Relation	3
GE Hist/Behavioral/Social Science Inquiry	3
GE Philosophical, Literary and Aesthetic Inquiry	3
Elective	3

**Credit Total 18**

**Spring Junior (example)**

SPRT340 Sport Media Communication Relations	3
SPRT401 Sport Facility Management and Oper	3
SPRT402 Sport Business Finance	3
SPRT465 Org/Admin of Sport & Athletic Prog	3
GE Oral Communication	3
Elective	3

**Credit Total 18**

**Summer**

SPRT450 Prof. Field Experience in Sport Admin.	12
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**Graduate Program**

**Fall**

SPRT600: Research Methods in Sport Science	3
SPRT602: Ethics in Sport	3
SPRT621: Financial Management in Sport	3

**Credit Total 9**

**Spring Freshman**

SPRT601: Sport in American Culture	3
SPRT622: Marketing and Public Relations	3
SPRT623: Legal and Policy Issues	3

**Credit Total 9**

**Summer 1**

SPRT620: Leadership in Sport Organizations	3
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**Credit Total 3**

**Summer 2**

SPRT Elective	3
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**Credit Total 3**

**Summer Extended**

SPRT624: Advanced Field Experience	6
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**OR**

SPRT630: Capstone in Sport Science (3 credits) and Elective in Summer 1 or Summer 2 (3 credits)

**Credit Total 6**

# Studio Art – Bachelor of Fine Arts

## Specialization in 2-D Art

Effective: Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART103: Introduction to Art (3 sh)	
Choose Two additional courses from PLA	
One must be Philosophy or Literature	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(at least one with GAC-Historical Foundation)	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>6 sh</b>
<b>Total University Requirements</b>	<b>48 sh</b>

<b>Major Area and Cognate Courses</b>	<b>72 sh</b>
VAPA119: First Year Student Seminar	1 sh

<b>Core (3-D) Requirements</b>	<b>37 sh</b>
ART105: Introduction to 3-D Design	3 sh
ART110: Color & 2-Dimensional Design	3 sh
ART112: Drawing 1	3 sh
#ART210: Materials & Techniques	3 sh
#ART217: Electronic (Digital) Art	3 sh
#ART312: Drawing 2	3 sh
#ART325: Printmaking	3 sh
#ART330: Painting	3 sh
#ART335: Sculpture	3 sh
#ART350: Photo or ART318: Digital Photo	3 sh
#ART355: Life Studies	3 sh
#ART440: A.P.E.	3 sh
#ART490: Senior Capstone	1 sh

<b># Art History</b>	<b>9 sh</b>
Select Three Courses from the following:	
ART301: Renaissance & Baroque Art	
ART304: Ancient and Medieval Art	
ART307: Asian Art	
ART401: Modern Art	
ART420: Art Since 1950	
ART430: American Art	

<b># Intermediate &amp; Advanced 2-D Studio</b>	<b>19 sh</b>
Choose from the following:	
#ART425: Special Problems: Printmaking	
#ART425: Special Problems: Painting	
#ART425: Special Problems: Photography	
#ART425: Special Problems: Digital Photography	
#ART425: Special Problems: Life Studies	
ART425s may be repeated up to 9 sh	
#ART499: Independent Studies	

<b>Art Electives</b>	<b>6 sh</b>
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<b>Junior Portfolio Review</b>	
Students must pass a portfolio review	

<b>Senior Exhibition (final semester)</b>	
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<b>Total Required Courses</b>	<b>120 sh</b>
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**Specialization in 3-D Art**

Effective: Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART103: Introduction to Art (3 sh)	
Choose Two additional Courses from PLA	
One must be Philosophy or Literature	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(at least one with GAC-Historical Foundation)	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>6 sh</b>
<b>Total University Requirements</b>	<b>48 sh</b>

<b>Major Area and Cognate Courses</b>	<b>72 sh</b>
VAPA119: First Year Student Seminar	1 sh

<b>Core (3-D) Requirements</b>	<b>37 sh</b>
ART105: Introduction to 3-D Design	3 sh
ART110: Color & 2-Dimensional Design	3 sh
ART112: Drawing 1	3 sh
#ART210: Materials & Techniques	3 sh
#ART217: Electronic (Digital) Art	3 sh
#ART312: Drawing 2	3 sh
#ART325: Printmaking	3 sh
#ART330: Painting	3 sh
#AR 335: Sculpture	3 sh
#ART350: Photo or ART318: Digital Photo	3 sh
#ART355: Life Studies	3 sh
#ART440: A.P.E.	3 sh
#ART490: Senior Capstone	1 sh

<b>#Art History</b>	<b>9 sh</b>
Select Three Courses from the following:	
ART301: Renaissance & Baroque Art	
ART304: Ancient and Medieval Art	
ART307: Asian Art	
ART401: Modern Art	
ART420: Art Since 1950	
ART430: American Art	

<b>Intermediate &amp; Advanced 3-D Studio</b>	<b>19 sh</b>
Choose from the following:	
#ART305: Pottery	
#ART315: Ceramics	
#ART425: Special Problems: Sculpture	
#ART425: Special Problems: Pottery	
#ART425: Special Problems: Ceramics	
ART425s may be repeated up to 9 sh	
#ART499: Independent Studies	

<b>Art Electives</b>	<b>6 sh</b>

<b>Junior Portfolio Review</b>	
Students must pass a portfolio review	
<b>Senior Exhibition (final semester)</b>	

<b>Total Required Courses</b>	<b>120 sh</b>
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# Studio Art: Graphic and OnLine Design – Bachelor of Fine Arts

Effective: Fall 2016

<b>Intellectual Foundation</b>	<b>9 sh</b>
ENGL100: Composition (3 sh)	
WC Competency 1	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
ART103: Introduction to Art (3 sh)	
Choose Two additional Courses from PLA	
One must be Philosophy or Literature	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(at least one with GAC-Historical Foundation)	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>6 sh</b>
<b>Total University Requirements</b>	<b>48 sh</b>

<b>Major Area and Cognate Courses</b>	<b>72 sh</b>
VAPA119: First Year Student Seminar	1 sh

<b>Core (Gold) Requirements</b>	<b>40 sh</b>
ART105: Introduction to 3-D Design	3 sh
ART110: Color & 2-Dimensional Design	3 sh
ART112: Drawing 1	3 sh
#ART200: Visual Thinking	3 sh
#ART211: Typography	3 sh
#ART217: Electronic (Digital) Art	3 sh
#ART227: History of Graphic Design	3 sh
#ART308 Online Design	3 sh
#ART312: Drawing II	3 sh
#ART342: Print Design	3 sh
#ART350: Photo <i>or</i> ART318: Digital Photo	3 sh
#ART411: Animation	3 sh
#ART440: A.P.E	3 sh
#ART490: Senior Capstone	1 sh

<b>#Art History</b>	<b>6 sh</b>
Select Two Courses from the following:	
ART301: Renaissance & Baroque Art	
ART304: Ancient and Medieval Art	
ART307: Asian Art	
ART401: Modern Art	
ART420: Art Since 1950	
ART430: American Art	

<b>Intermediate &amp; Advanced GOLD</b>	<b>19 sh</b>
Choose from the following:	
*#ART369: Internship	
#ART425: Special Problems: Electronic Art	
#ART425: Special Problems: Animation	
#ART425: Special Problems: Digital Photo	
*#ART425: Special Problems: Online Design	
*#ART425: Special Problems: Print Design	
*#ART425: Special Problems: Typography	
ART425s may be repeated up to 9 sh	
*May repeat Select Individual courses up to 9 sh	
#ART499: Independent Study	

<b>Art Electives</b>	<b>6 sh</b>
<b>Junior Portfolio Review</b>	
<b>Senior Exhibition (final semester)</b>	

<b>Total Required Courses</b>	<b>120 sh</b>
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## **REQUIREMENTS FOR MINORS**

<http://www.lockhaven.edu/academics/programs.html>

*Minors are not recorded on a student's academic record until the student's degree is earned.*

### **Anthropology - Minor**

#### **Purpose of Minor:**

To fulfill the need of students who wish to add an Anthropological perspective to their existing major and enhance their existing qualifications for employment in the field of human services.

#### **Requirements for a Minor in Anthropology:**

A minor in Anthropology is required to take 18 semester hours in Anthropology.

#### **Required Core Courses (6 sh)**

ANTH101 Introduction to Anthropology	3 sh
ANTH102 Cultural Anthropology	3 sh

#### **Electives (12 sh) Chosen From**

ANTH323 Cultures of North American Indians	3 sh
ANTH328 Seminar on Anthropology of Women	3 sh
ANTH330 Japanese Culture and Society	3 sh
ANTH422 Anthropology of Latin America	3 sh
ANTH424 Anthropology of the Middle East	3 sh
ANTH499 Independent Study	

**Total Semester Hours: 18 sh**

### **Applied Computer Science and Information Systems - Minor**

This minor provides students in other fields of study with a solid foundation in computer programming and information systems applications. The minor is designed to assist students in gaining employment and coping with the rapid changes in technology that are affecting and will continue to affect their personal and professional lives.

#### **Requirements (9 s.h.)**

COMP160	Programming I	3 s.h.
	(Prerequisite: MATH112 or appropriate Math Placement)	
COMP200	Fundamentals of Networking	3 s.h.
	(Prerequisite: COMP150)	
COMP255	Database Design	3 s.h.
	(Prerequisite: COMP160 or COMP250)	

#### **Minor Electives (Select 4 courses/12 s.h.)**

Select from the list below or select any COMP 300 or 400 level course

#### **Acceptable Minor Electives numbered below 300:**

COMP161	Programming II	3 s.h.
	(Prerequisite: COMP161)	
COMP202	Introduction to Systems Administration	3 s.h.
	(Prerequisite: COMP160)	
COMP205	Web-Based Application Development	3 s.h.
	(Prerequisite: COMP160)	

COMP225	Mobile App Development	3 s.h.
	(Prerequisite: COMP161)	
COMP230	Discrete Structures and Formal Languages	3 s.h.
	(Prerequisite: COMP160 and MATH107)	
COMP240	Game Programming	3 s.h.
	(Prerequisite: COMP161)	
COMP260	Information Technology Project Management	3 s.h.
	(Prerequisite: COMP160 or COMP255)	
<b>Total required semester hours:</b>		<b>21 s.h.</b>

Suggested Electives for Students interested in Software Application Development:  
COMP161, COMP205, COMP225 or COMP240, COMP300 (Prerequisite: COMP161)

Suggested Electives for Students interested in Database Systems:  
COMP205, COMP305 (Prerequisite: COMP255), COMP325 (Prerequisite: COMP255)

Suggested Electives for Students interested in Networking:  
COMP304 (Prerequisite: COMP200), COMP407 (Prerequisite: COMP200), COMP412 (Prerequisite: COMP200),

## Aquatics - Minor

(18 Credits)

### REQUIRED CORE COURSES (14 Credits)

• HPED134: Swimming / EWS	1
• HPED160: Coaching Methods and Applications	3
• HPED222: Lifeguarding Instructor (LGI)	1
• HPED225: Swimming/Lifeguard Training (LGT)	1
• HPED234: Water Safety Instructor (WSI)	1
• HPED350: Advanced Techniques/Coaching Swimming and Diving	2
• HPED351: Management of Aquatic Programs/Facilities	2
• SPRT305: Psychology of Coaching	3

### ELECTIVE COURSES (Select 6 Credits)

• HPED255: Teaching Fitness in K-12 Schools	3
• PSYC201: Educational Psychology	3
• PSYC235: Psychology of Leadership	3
• RECR244: Leadership in Recreation, Leisure, and Human Services	3
• SPRT323: Sport and Society	3

# Current CPR and First Aid Certification Required

(Approved 11/2019)

## Art History - Minor

(21-24 s.h.)

List I:

One course (3 s.h.) of the following:

ART 102	Fundamentals of Art
ART 103	Introduction to Art

List II:

Five courses (15 s.h.) of the following:

ART227	History of Graphic Design
ART 301	Renaissance through Baroque Art

ART 304	Ancient through Medieval Art
ART 307	Asian Art
ART 401	History of Modern Art
ART 420	Art Since 1950
ART 430	American Art
PHIL 307	The Philosophy of Art
ART 499	Independent Study and Research in a selected topic of Art History. Available to students who have completed 12 s.h. of the requirements in List II.

List III:

Studio courses (3 to 6 s.h.):

Must take one, but no more than two, studio course(s) scheduled for six hours a week for 3 s.h. credits (3 to 6 s.h.)

Updated 7/06

## Biology- Minor

Students choosing to minor in Biology must complete Principles of Biology I (BIOL106) and Principles of Biology II (BIOL107). The student then chooses to take Genetics (BIOL202), Human Genetics (BIOL225), Botany (BIOL206), or Zoology (BIOL240). The student then completes an additional 12 semester hours of 200-400 level biology courses, at least six of which must be at the 300 or 400 level. Prerequisites must be met. It is highly recommended that a student wishing to pursue a minor in Biology consult with a Biology Faculty member for advice. The listing of courses in the Biological Sciences may be found at

<https://www.lockhaven.edu/coursecatalog/biol.html>

<b>Biology Minor Course Requirements</b>	Semester	Semester Completed	Grade
<b>Required Courses (6 s.h.)</b> Students must earn a C average in BIOL106 and BIOL107 in order to take 200-400 level BIOL classes			
BIOL106: Principles of Biology I	3 s.h.		
BIOL107: Principles of Biology II	3 s.h.		
<b>Core (3 s.h.)</b> Students must take <b>one course</b> from the following:			
BIOL202: Genetics* BIOL225: Human Genetics* (*Prerequisite: CHEM120 and Corequisite: CHEM121) BIOL206: Botany BIOL240: Zoology	3 s.h.		
<b>Elective Biology Courses (12 s.h.)</b> Students must take 12 credits of 200-400 level courses in Biology. At least 6 s.h. must be 300 and/or 400 level. BIOL215 and BIOL328 do not count for this requirement. BIOL202 and BIOL225 may not both be counted towards the minor. A maximum of 3 credits of BIOL369 count in this category. A maximum of 3 credits of BIOL499 count in this category.			
BIOL ____	_ s.h.		
BIOL ____	_ s.h.		
BIOL ____	_ s.h.		
BIOL ____	_ s.h.		
BIOL ____	_ s.h.		

## Business - Minor

Baccalaureate degree students may wish to enhance their major program of study with knowledge of the basic principles of business. A Minor in Business will provide these students with a general overview of fundamental business concepts and terminology and an introduction to professional business skills. This knowledge may be applied to careers in industry, government or professional occupations, as well as to entrepreneurial endeavors.

*(NOTE: Due to prerequisites within the Business minor, students should plan at least three semesters in advance of graduation in order to complete the minor requirements. The Business minor is not available for Business Administration or Accounting majors.)*

<b>Requirements (15 semester hours total)</b>	
<ul style="list-style-type: none"> <li>ACCT110: Financial Accounting</li> </ul>	3 sh
<ul style="list-style-type: none"> <li>ECON101: Principles of Economics OR</li> <li>ECON102 Principles of Macroeconomics OR</li> <li>ECON103 Principles of Microeconomics (if a student takes both ECON102 and 103, one can count in the core and one as an elective.)</li> </ul>	3 sh
<ul style="list-style-type: none"> <li>MANG315 Management: Concepts and Strategies</li> </ul>	3 sh
<ul style="list-style-type: none"> <li>Another upper level Management course from among: MANG317, MANG320, MANG325, MANG425, MANG400, or MANG430</li> </ul>	3 sh
<ul style="list-style-type: none"> <li>MRKT200</li> </ul>	3 sh
<b>Electives (6 semester hours total)</b>	
Select two courses from among the following -	6 sh
<ul style="list-style-type: none"> <li>ACCT115 Management Accounting</li> </ul>	
<ul style="list-style-type: none"> <li>ACCT210 Introduction to Federal Income Tax</li> </ul>	
<ul style="list-style-type: none"> <li>COMP250 Advanced Microcomputer Applications</li> </ul>	
<ul style="list-style-type: none"> <li>COMP255 Database Design</li> </ul>	
<ul style="list-style-type: none"> <li>ENGL345 Business Writing</li> </ul>	
<ul style="list-style-type: none"> <li>PHIL425 Ethics in Business and Industry</li> </ul>	
<ul style="list-style-type: none"> <li>MANG302 Business Law I</li> </ul>	
<ul style="list-style-type: none"> <li>PSYC235 Interpersonal and Leadership Skills</li> </ul>	
<ul style="list-style-type: none"> <li>COMM320 Business Communications</li> </ul>	
<ul style="list-style-type: none"> <li>OR... Any upper division (300 or 400 level) course designated MANG and/or MRKT, except MANG475 (which is not open to students pursuing a business minor)</li> </ul>	
<b>TOTAL</b>	<b>21 sh</b>

## Chemistry - Minor

Effective: Fall 2017

### Required Courses

	<b>20 Credits</b>
CHEM120: Principles of Chemistry I	4
CHEM121: Principles of Chemistry II	4
CHEM220: Organic Chemistry I	4
CHEM221: Organic Chemistry II	4
CHEM316: Quantitative Analysis	4

### Elective Courses

Choose from 300 and 400-level chemistry courses*	<b>4 Credits</b>
*Excluding CHEM328 and CHEM369	

**Total** **24 Credits**

## Coaching – Minor

### REQUIRED CORE COURSES (15 Credits)

	<b>Credit</b>
SPRT305: Psychology of Coaching	3
SPRT323: Sport and Society	3
HPED160: Coaching Methods and Applications	3
HPED162: Principles of Coaching	3
HPEDxxx: Teaching course (choose one: 115, 125, or 130)	3

### SUPPORT COURSES (6 Elective Credits)

HPED140: Wellness for Life	3
HPED214: Teaching Lifetime Activities	2
HPED2XX: Teaching Aquatics & Personal Safety	3
HPED252: Physical Activity, Movement & Sport for Individuals w/ Disabilities	3
HPED255: Teaching Fitness in K-12 Schools	3
HPED302: Motor Learning Applied to Physical Education	3
RECR302: Supervision of Strength Training Programs	3

- *Current CPR and First Aid Certification Required at graduation for minor completion. Graduating students should provide a copy of the certificate to Health and Physical Education faculty for verification.*

## Community Health - Minor

The **Community & Public Health Education Minor** in the Department of Health Science is designed to provide students with the skills and tools to identify community health needs; utilize problem solving abilities; and mobilize resources to develop, promote, implement, evaluate and facilitate strategies to improve health status. The **Community & Public Health Education Minor** will help students develop skills in identifying the behavioral and environmental causes of community health concerns; facilitating community organizing and outreach efforts; identifying and writing appropriate grant funding proposals; and understanding and responding to data driven statistics concerning current and future health status. The **Community & Public Health Education Minor** serves as a foundation for students seeking certification as a Certified Health Education Specialist (CHES). The minor, however, does not fulfill all requirements for the certification exam. Please see information regarding certification eligibility on the following page.

### Required Courses: 6 semester hours

HLTH140: Introduction to Public Health	3.0 sh
HLTH204: Foundations of School and Community Health	3.0 sh

### Elective Courses: Select at least 12 semester hours from this list

HLTH214: Planning and Assessment in School Health Education	2.0 sh
HLTH218: Public Health & the Environment	3.0 sh
HLTH235: Community Health Education Methods and Strategies	3.0 sh
HLTH240: Introduction to Epidemiology	3.0 sh
HLTH307: Cultural Aspects of Health	3.0 sh
HLTH330: School Health Programs	2.0 sh
HLTH350: Health Program Planning	3.0 sh
HLTH401: Current Issues in Health	3.0 sh
HLTH402: Evaluation in Health Education & Promotion Programs	3.0 sh
HLTH410: Applied Community & Public Health	3.0 sh
HLTH485: Field Experience in Health Science  <i>Must be in a Community Health setting and the site supervisor at your site must hold a degree in the field (or closely related) aligned with your academic aspirations (MCHES/CHES preferred).</i>	varies

**Total (minimum): 18 semester hours**



## **Certified Health Education Specialist (CHES) Certification Eligibility Information**

Individuals completing at least 25 semester hours of course work with specific preparation addressing the Area of Responsibility for Health Educators (see below) are eligible to sit for the Certified Health Education Specialist (CHES) exam.

Health educators are professionals who design, conduct and evaluate activities that help improve the health of all people. These activities can take place in a variety of settings that include schools, communities, health care facilities, businesses, universities and government agencies.

Health educators are employed under a range of job titles such as patient educators, health education teachers, health coaches, community organizers, public health educators, and health program managers. Certified Health Education Specialists (CHES) are those who have met the standards of competence established by the National Commission for Health Education Credentialing Inc. (NCHEC) and have successfully passed the CHES examination. The CHES designation after a health educator's name is one indication of professional competency and commitment to continued professional development.

Source: National Commission for Health Education Credentialing, Inc. <http://www.nchec.org>

### **Areas of Responsibility for Health Educators**

- Assess individual and community needs for health education
- Plan effective health education strategies, interventions, and programs
- Implement health education strategies, interventions, and programs
- Conduct evaluation and research related to health education
- Administer health education strategies, interventions, and programs
- Serve as a health education resource person
- Communicate and advocate for health and health education

For a complete listing of the Responsibilities and Competencies visit The National Commission for Health Education Credentialing, Inc. @ <http://www.nchec.org>

### **For those planning to take the CHES examination:**

In addition to the required coursework for the minor, we recommend the following courses be included in the 25 semester hours required to sit for the CHES exam:

- HLTH235 Community Health Education Methods and Strategies
- HLTH240 Introduction to Epidemiology
- HLTH307 Cultural Aspects of Health
- HLTH350 Health Program Planning
- HLTH402 Evaluation in Health Education & Promotion Programs
- HLTH410 Applied Community & Public Health

## Economics - Minor

Baccalaureate degree students may wish to enhance their major program of study with knowledge of basic and advanced courses in economics.

<b>Requirements (12 semester hours total)</b>	
ECON102: Principles of Macroeconomics	3 sh
ECON103: Principles of Microeconomics	3 sh
ECON310: Intermediate Macroeconomics	3 sh
ECON315: Intermediate Microeconomics	3 sh
<b>Electives (6 semester hours total)</b>	
Six additional semester hours in economics (ECON) courses at the 300 level or above, excluding internships	6 sh
<b>TOTAL</b>	<b>18 sh</b>

## English - Minor

Electives	Course Number/Name	s.h.	Date Completed	Grade
<b>Required: ENGL110, HONR112, or ENGL220</b>		<b>3</b>		
15 credits of either 200-, 300-, and 400-level literature courses or 200-, 300-, and 400-level writing courses. <b>***Note: These 18 credits can be all literature, all writing, or a mixture of the two.</b>		3		
		3		
		3		
		3		
		3		
	<b>Total Minor S.H.</b>	<b>18</b>		

## Entrepreneurship & Innovation Minor

CREDITS	COURSE	EXISTING OR NEW
3	Entrepreneurship	MANG317 (existing)
3	Entrepreneurial & Small Business Marketing	MRKT310 (existing)
3	Financial Accounting	ACCT110 (existing)
1	Funding an Entrepreneurial Venture	New
1	Introduction to Pricing	New
1	How to Hire, Fire, Train, & Handle Regulations	New
1	Innovation	New
1	Leadership & Ethics	New
1	How to Negotiate and Sell	New
3	Special Topics – Capstone in Entrepreneurship	MANG480 (existing)
<b>18</b>	<b>TOTAL CREDITS</b>	<b>6 NEW CREDITS TO BE ADDED</b>

## Environmental Studies – Minor

Effective: Fall 2017

<b>1. Required Core Courses</b>	<b>6 sh</b>
ENVT101 Intro to Environmental Studies (3 sh)	
ENVT450 Environmental Studies Capstone (3 sh)	
<b>2. Sciences Content Area: One course (3 sh) from the following:</b>	<b>3 sh</b>
BIOL102 Environmental Science	
BIOL108 Field Natural History	
BIOL309 Ecology	
BIOL405 Field Ecology	
BIOL415 Environmental Policy and Regulations	
CHEM101 Chemistry in the Environment	
GEOS130 Principles of Geology	
GEOS135 Geology of National Parks	
GEOS140 Sustainability Science	
GEOS215 Environmental Geology	
GEOS360 Hydrogeology	
GEOS361 Aqueous Environmental Geochemistry	
GEOS420 Geology of Energy & Mineral Resources	
GEOS451 Coastal Environmental Oceanography	
BIOL/GEOS213 Introduction to GIS	
HONR115 Honors: Earth Resources & Environment	
PHYS101 Matter & Energy	
ENVT or science 328 seminars, topics courses, or independent studies when the topic is environmental (must be approved by the Director of Environmental Studies)	
<b>3. Humanities &amp; Social Sciences Content Area: One course (3 sh) from the following:</b>	<b>3 sh</b>
COMM355 Environmental Journalism	
CRJS220 Introduction to Conservation Law Enforcement	
CRJS309 Environmental Justice	
ECON301 Economics of the Environment	
GEOG305 Conservation of Natural Resources	
HIST324 Environmental History of Asia	
HLTH218 Public Health and the Environment	
MANG345 Strategic Sustainability for Entrepreneurs	
PHIL400 Ethics and the Environment	
RECR202 Outdoor Recreation Activities	
RECR320 Interpreting the Environment	
RECR355 Outdoor Recreation	
RECR356 Outdoor Education	
SOCI351 Urban-Rural Sociology	
ENVT, humanities, or social science 328 seminars, topics courses, or independent studies when the topic is environmental (must be approved by the Director of Environmental Studies)	

<b>4. Environmental Studies Electives:</b> Two courses (6 sh) from either #2 or #3 above.	<b>6 sh</b>
<b>Notes:</b>	
<ul style="list-style-type: none"> <li>• At least 2 courses (6 sh) of the minor must be numbered 300-level or above.</li> <li>• Some courses have prerequisites but the instructor might be willing to waive them for Environmental Studies minors.</li> </ul>	

**Total Credits: 18**

## French - Minor

A minor in French increases the marketability of students working towards any other degrees. It provides a global frame of reference and preparation for future work with international colleagues and in global corporations. It also greatly enhances students' applications to graduate schools.

- A minor in French consists of 18 credits of coursework
- FREN 201 (French 3) and FREN 202 (French 4) can be counted towards the minor.
- At least 12 credits must be beyond FREN 202 (French 4).
- All courses must be taught in the target language.
- There are no specific required courses.
- All courses can be taken at Lock Haven University or students may choose to take up to 15 credits abroad.
- At least 3 credits beyond FREN 202 (French 4) must be completed at Lock Haven University.

## Geography – Minor

Effective Fall 2020

### Required Courses (6 sh):

- GEOG100: Physical Geography (3sh)
- GEOG101: World Regional Geography (3sh)

### Elective Courses (12 sh): select any four of the following courses.

It is recommended that students complete GEOG100 and GEOG101 prior to enrolling in elective courses.

- GEOG212: Geography of the Developing World (3sh)
- GEOS140: Sustainability Science (3sh)
- GEOS213: Introduction to Geographic Information Systems (3sh)
- GEOS313: Advanced Geographic Information Systems (3sh)\*
- GEOG305: Conservation of Natural Resources (3sh)
- GEOG315: Political Geography (3sh)
- GEOG328: Social Science Seminar (3sh)
- GEOG440: Economic Geography (3sh)
- GEOG445: Geography of Latin America (3sh)
- GEOG499: Independent Study (3sh)

\*GEOS213: Introduction to Geographic Information Systems is the prerequisite for GEOS313: Advanced Geographic Information Systems.

<b>Geology - Minor</b>	
GEOS130 Principles of Geology I	3 SH
GEOS131 Principles of Geology II	3 SH
GEOS260 Geology Field Trip	1 SH
Remaining hours will have to be chosen from the following list, of which at least 6 SH will have to include GEOS 300+ level courses.	
GEOS120 Oceanography	3 SH
GEOS213 Introduction to GIS	3 SH
GEOS215 Environmental Geology	3 SH
GEOS230 Geomorphology	3 SH
GEOS301 Invertebrate Paleontology	3 SH
GEOS305 Mineralogy and Petrology	4 SH
GEOS315 Sedimentology	3 SH
GEOS360 Hydrogeology	4 SH
GEOS361 Aq. Environ. Geochem.	3 SH
GEOS415 Stratigraphy	3 SH
GEOS420 Geology of Energy & Min. Res.	4 SH
GEOS430 Structural Geology	4 SH
GEOS450 Tectonics & Geophysics	4 SH
2 additional SH of Geology Field Trip are <i>recommended from the following</i> :	
GEOS260 Geology Field Trip	1 SH

## History - Minor

### All students other than secondary education majors:

- 18 semester hours ( 6 semester hours at 300-400 level)
- No more than six semester hours from the following:

HIST 150 – American History ( 3 s.h.)  
HIST 201 – History of the US I ( 3 s.h.)  
HIST202 -- History of the US II ( 3 s.h.)

### Secondary Education Majors

- 6 semester hours 300-level in addition to major requirements

Liberal Arts Seminars (based on discipline of History) may count toward the minor based on a determination by the Department chairperson.

## International Studies - Minor

### Rationale.

The International Studies minor aims to encourage students to develop a more global perspective on the problems and issues facing themselves, the country, and the world. This can be accomplished through the examination of the history, culture, arts, literatures, languages, politics, philosophies, religions, geography, anthropology, economics, and/or social patterns of particular foreign countries or regions. While this aim can be furthered through course work here in Lock Haven, it can be better and more fully achieved through such course work taken in other countries as part of an approved Lock Haven University semester-long student exchange program.

### Requirements. 18 semester hours consisting of:

- A. Not more than 12 semester hours of approved Lock Haven University semester abroad exchange program courses dealing with the history, culture, arts, literature, languages, politics, philosophies, religions, geography, anthropology, economics, and/or social patterns of the country or region of the exchange program.
- B. Not fewer than 6 semester hours of advanced-level (300+) non-US courses in anthropology, art, music, literature, history, geography, political science, sociology or economics, OR courses beyond Level IV in a foreign language.

## Latin American Studies - Minor

Students may be granted a minor in Latin American Studies with 18 sh of work selected from the following courses.

Choose 3 sh from:

ANTH422 Anthropology in Latin America	3 sh
GEOG445 Geography of Latin America	3 sh

Choose 9 sh from:

POLI320 Latin American Politics	3 sh
HIST361 The Transatlantic Diaspora	3 sh
HIST367 Colonial Latin American History	3 sh
HIST377 Modern Latin American History	3 sh
HIST375 History of Mexico and Central America	3 sh

Choose 6 sh from:

SPAN204 Latin American Culture	3 sh
SPAN308 Intro to Spanish American Literature	3 sh
SPAN322 Spanish American Regional Novel and Short Story	3 sh
SPAN323 Spanish American Contemporary Novel and Short Story	3 sh

## Leadership - Minor

**Mission of the Minor:** The leadership minor seeks to prepare future leaders by acquainting them with the current theories and findings in leadership studies, assisting them in gaining a set of competencies which research suggests are held by effective leaders, and giving them experiential opportunities to apply their leadership knowledge and skills.

### Competencies:

- Knowledge of leadership theory and research
- Effective communication through writing and speaking
- Assertive persuasion and motivation skills using specific media
- Conflict management through integrative bargaining and mediation
- Self-leadership in setting and achieving personal goals
- Empathic listening skill
- Application of leadership knowledge and skills
- Project management and leadership skills
- Small group skills
- Coaching and mentoring skills
- Skill in ethical reasoning
- Team leadership and team building effectiveness
- Specific leadership position skills (job analysis, planning, etc.)

**Program of Study:** Students complete 6 courses totaling 18 credits, acquire at least six leadership competencies (as evidenced by their electronic portfolio artifacts and instructor rubric evaluations), and show evidence of the application of leadership skills in projects through service learning, campus leadership positions, or internship work. They present an electronic portfolio of their work as an assessment of their minor learning.

**Required Courses: Students must take PSYC235, then either PSYC313 or 328.**

- PSYC235 Interpersonal and Leadership Skills (**required**)
- PSYC313 Industrial and Organizational Psychology
- PSYC328 Issues in Contemporary Leadership

**Elective Skills Courses:** Students complete twelve credits from the courses listed below or courses approved by the Leadership Studies Committee in consultation with the Minor Adviser. Selected courses must span at least two different disciplines.

- POLI260 Introduction to Public Administration
- MILS404 Developing Adaptive Leaders
- COMM102 Fundamentals of Public Speaking
- COMM103 Small Group Communication
- COMM104 Interpersonal Communication
- COMM303 Argumentation and Debate
- COMM333 Public Relations
- COMM300 Business Communication
- COMM375 Persuasion
- COMM491 Propaganda and Public Opinion
- ENGL201 Advanced Composition (but not also 258)
- ENGL258 Business Writing (but not also 201)
- RECR203 Teambuilding and Challenge Courses
- PSYC470 Counseling Skills
- PHIL425 Ethics in Business and Industry (but not also 102)
- PHIL102 Ethics (but not also 425)
- PSYC313 Industrial-Organizational Psychology (if not taken as a core course)
- PSYC328 Issues in Contemporary Leadership (if not taken as a core course)
- Any leadership skill course approved by the Minor Steering Committee

### Electronic Portfolio Contents

1. Resume and personal mission statement.
2. At least six essays, case studies, client reports, internship reports, or other evidences of leadership skill attainment.
3. In addition to the service requirement for PSYC235, the student should submit evidence of leadership experience and achievements in one or more of the following areas where leadership can be studied and/or enacted: Service learning, student government, student life, sports, or internships.

**International Leadership Focus:** Students are encouraged to satisfy requirements in the minor by taking courses from LHUP's sister schools around the world. They may also accomplish an internship overseas with an international organization or while working on projects with organizations associated with our sister schools in various locations.

## Mathematics - Minor

**Purpose:** A student may wish to enhance his/her skills in the quantitative aspects of a chosen major. A minor in mathematics can be selected to assist the student in accomplishing that goal.

Requirements (12 semester hours total)		Grade Requirement
MATH141: Calculus 1	3 sh	C-
MATH142: Calculus 2	3sh	C-
MATH243: Calculus 3	3sh	C-
MATH211: Linear Methods OR MATH311: Elements of Linear Algebra	3sh	C-
<b>Electives (6 semester hours total)</b>	6sh	
Two 300 or 400 level MATH courses (other than MATH311)		
		C-
		C-
<b>TOTAL</b>	<b>18 sh</b>	

## Middle School Mathematics - Minor

Required Courses (9 semester hours total)		Grade Requirement
MATH102: Number Systems	3 sh	C-
MATH115: Statistics and Geometry	3 sh	C-
MATH107: Basic Statistics I	3 sh	C-
<b>Options (9 semester hours from one of the options)</b>		
<u>Option 1</u>		
MATH112: Intermediate Algebra	3 sh	C-
MATH113: Precalculus	3 sh	C-
MATH141: Calculus 1	3 sh	C-
OR		
<u>Option 2</u>		
MATH113: Precalculus	3 sh	C-
MATH141: Calculus 1	3 sh	C-
MATH142: Calculus 2 OR any 200 or 300 level MATH course	3 sh	C-
OR		
<u>Option 3</u>		
MATH141: Calculus 1	3 sh	C-
MATH142: Calculus 2 OR any 200 or 300 level MATH course	3 sh	C-
Another 200 or 300 level MATH course	3 sh	
		C-
<b>TOTAL</b>	<b>18 sh</b>	



## Music - Minor

Students may complete an 18 sh minor in music. Interested persons should consult the chairperson of the Music Department for further information.

## Nanotechnology - Minor

	Course Number	s.h.	Date Completed	Grade
<b>1. Required Core Nanotechnology Courses</b> (6 sh)				
Introduction to Nanoscale Science	NANO105	3		
Tools and Techniques in Nanotechnology	NANO210	3		
<b>2. Advanced Elective Courses</b> (12 sh)				
NOTE: Choose courses from those listed below. A minimum of 2 courses must have a NANO prefix. The selection of elective courses is frequently guided by the general areas of NANO research conducted at LHU (Materials Science/Engineering or Nanotoxicology).				
*Generation & Modification of Nanostructures	NANO 304	3		
*Characterization of Nanostructures	NANO 306	3		
Advanced Applied Nanotechnology Laboratory	NANO458	3		
Independent Study in Nanotechnology	NANO 499	1-3		
Cellular and Molecular Biology	BIOL 330	4		
Microbiology	BIOL 340	4		
Environmental Toxicology	BIOL425	3		
Inorganic Chemistry	CHEM301	3		
Environmental Geology	GEOS215	3		
Mineralogy and Petrology	GEOS305	3		
Heat	PHYS 250	3		
Electronics	PHYS 290	4		
Optics	PHYS 325	4		
	<b>TOTAL</b>	<b>18</b>		

\* NANO 105, NANO 210, PHYS 170 and PHYS 171 are prerequisites for 300-level NANO courses. Students may also take 300-level NANO courses if they have successfully completed PHYS 130, PHYS 131, and MATH 141.

## Philosophy - Minor

A minor in philosophy consists of six courses (18 semester hours) distributed as follows. Required Courses (12.0 sh)

PHIL102 Ethics

PHIL201 Classical Philosophy

PHIL110 Critical Thinking OR PHIL308 Logic

PHIL328 Humanities Seminar

Electives (6.0 sh)

Students must take at least one 300 or 400 level course as one elective. The other elective can be satisfied by any philosophy course, including PHIL101 Problems in Philosophy.

## Physics - Minor

Required Courses (12.0 sh)

PHYS170 Intermediate General Physics 4 sh

PHYS171 Intermediate General Physics I 4 sh

PHYS315 Modern Physics 4 sh

An additional 9 sh in physics (PHYS) or applied physics (PHAP) must be taken, with 6 of the 9 sh being 300+ level courses. Courses chosen from list below:

PHYS250 Heat 3 sh

PHYS290 Electronics 4 sh

PHYS325 Optics 4 sh

PHYS330 Mechanics I 3 sh

PHYS331 Mechanics II 3 sh

PHYS350 Quantum Mechanics 3 sh

PHYS370 Electricity and Magnetism I 3 sh

PHYS371 Electrodynamics 3 sh

PHAP300 Thin Film Science and Technology 3 sh

Total 21 sh

## Political Science - Minor

**Required Courses (6 semester hours total):**

POLI105 American National Government and 3 sh \_\_\_\_\_

POLI101 Political Science **OR** 3 sh \_\_\_\_\_

POLI107 World Politics 3 sh \_\_\_\_\_

**Choose one (3 sh total):**

POLI210 State and Local Government 3 sh \_\_\_\_\_

POLI250 United States Foreign Policy 3 sh \_\_\_\_\_

POLI260 Introduction to Public Administration 3 sh \_\_\_\_\_

**Choose three 300 or 400 level Political Science courses (9 sh total):**

**Total**

**18 semester hours**

## PreK-4/Early Childhood Education - Minor

This minor is intended to provide students with a second area of expertise, but does not lead to early childhood certification.

<b>Lower Division Course Work</b>	<b>9 sh</b>
ECED100: Introduction to Early Childhood Education	3 sh
ECED200: Observing and Assessing Young Children	3 sh
ECED212: Language Development	3 sh
<b>Upper Division Course Work</b>	<b>6 sh</b>
ECED326: Guidance and Classroom Management	3 sh
EDUC346: Disciplinary Literacy	3 sh
<b>Elective Course Work (Select 1)</b>	<b>3 sh</b>
ECED150: Diversity in ECED	3 sh
ECED220: Emerging Mathematics and Science	3 sh
ECED225: Beginning Literacy	3 sh
ECED230: Professional Communication & Family	3 sh
EDUC335: Assessment and Evaluation	3 sh
<b>Total Credits</b>	<b>18 sh</b>

## Psychology – Minor

Psychology is a broad field and complements several majors, including health science, criminal justice, and social work. It is also a very practical field and highly valued by potential employers because it provides students (potential employees) with the ability to find needed information (research skills), the ability to think critically about different options (critical thinking skills), and the ability to consider differing perspectives (critical thinking and diversity skills).

The psychology minor requires 18 credit hours – or 6 courses – to complete.

### Required Courses (6 credit hours)

1. PSYC100 – Introduction to Psychological Science
2. PSYC202 – Research Methods in Psychology (Prerequisite of PSYC100)

### Additional Courses (12 credit hours)

1. Six credit hours (usually 2 courses) at the 300 or 400 level. Some examples of classes that meet this are:
  - a. PSYC307 - Abnormal Psychology (prereq. of 6 hours taken in PSYC, including PSYC100)
  - b. PSYC308 - Psychology of Personality (prereq. of 6 hours taken in PSYC, including PSYC100)
  - c. PSYC315 – Health Psychology (prereq. of PSYC100 and PSYC215, PSYC410, or HLTH251)
  - d. PSYC322 – Drugs and Human Behavior (prereq. of PSYC100 and BIOL101 or HLTH251)
  - e. PSYC328 – Social Science Seminar (prereq. of 60 semester hours completed)
  - f. PSYC425 – Psychology of Women
2. Six credit hours (usually 2 courses) at any level of psychology. Some examples of classes that meet this are:
  - a. PSYC102 – Child Development
  - b. PSYC103 – Adolescent Development
  - c. PSYC201 – Educational Psychology (prereq. of PSYC102 or PSYC103) d. PSYC212 – Forensic Psychology (prereq. of PSYC100)
  - e. PSYC235 – Interpersonal and Leadership Skills (prereq. of PSYC100)

To declare a minor complete the “Change of Major and Declare Academic Minor” form with the Psychology Department Chairperson. The form is on MyHaven and can be found by clicking the Registrar tab, then choosing Forms from the left side bar.

During the semester that you are completing the requirements for the minor (or when you apply for graduation), you must also complete the "Verification of Minor" form with the Psychology Department Chairperson. The form is on MyHaven and can be found by clicking the Registrar tab, then choosing Forms from the left side bar.

## Recreation Management - Minor

### Purpose

A minor in Recreation Management is intended to provide students with a foundation in the discipline and to acquire skills for providing recreation services. The required 18 credits of coursework will provide basic knowledge in an additional field of study.

### Requirements

Twelve credits from the core courses listed below and six credits from 300 or 400 level courses in fitness management, outdoor management, or leisure/commercial are required to obtain a minor in Recreation Management.

### Core Courses (12 credits)

RECR105 Leisure, Wellness and Personal Lifestyle	3.0 sh
RECR110 Introduction to Recreation	3.0 sh
RECR244 Recreation Leadership and Supervision	3.0 sh
RECR275 Recreation Services for People with Disabilities	3.0 sh

### Track-Specific Courses (6 credits)

The university stipulates that a minor include at least six semester hours of upper division (300 level or higher) courses. In accordance with this policy, students who minor in Recreation Management have the flexibility to select six credits of coursework at the 300 or 400 levels in the fitness, outdoor, therapeutic, or leisure/commercial tracks. Selection of these courses is based on the goals and objectives of the individual student. Advisement from faculty in the recreation degree program is recommended.

### Additional Information

Students seeking more information concerning this minor should contact the chairperson of the Recreation Management Department.

## Sociology - Minor

### Required Core Courses (9 sh total):

SOCI101 Introduction to Sociology	3 sh
SOCI352 Sociological Theory	3 sh
SOCI404 Sociological Research	3 sh

### Electives (9 sh total)

SOCI203 Social Problems	3 sh
SOCI205 Racial and Ethnic Minority Relations	3 sh
SOCI206 Marriage and Family	3 sh
SOCI301 Juvenile Delinquency	3 sh
SOCI302 Criminology	3 sh
SOCI328 Social Science Seminar	3 sh
SOCI330 Japanese Culture and Society	3 sh
SOCI351 Urban-Rural Patterns	3 sh
SOCI353 Social Institutions	3 sh
SOCI354 Social Change	3 sh
SOCI360 Death and Dying	3 sh
SOCI402 Industrial Sociology	3 sh
SOCI403 Social Gerontology	3 sh
SOCI420 Corrections	3 sh
<b>3 sh Total</b>	<b>18 sh</b>

NOTE: Individualized Instructions and Independent Studies are not permitted in the minor.

## Spanish - Minor

A minor in Spanish increases the marketability of students working towards any other degrees. It provides a global frame of reference and preparation for future work with international colleagues and in global corporations. It also greatly enhances students' applications to any graduate school.

- A minor in Spanish consists of 18 credits of coursework.
- SPAN 201 and SPAN 202 can be counted towards the minor.
- At least 12 credits must be beyond SPAN 202 (Spanish 4).
- All courses must be taught in the target language.
- There are no specific required courses.
- All courses can be taken at Lock Haven University or students may choose to take up to 15 credits abroad.
- At least 3 credits beyond SPAN 202 must be completed at Lock Haven University.

## Special Education – Minor

The Special Education Minor is open to any student at Lock Haven University. The minor is intended to provide students with a second area of expertise, but does not lead to Special Education Certification. Depending on the student's academic major, this minor may require an extra semester to complete.

### Required Coursework

**(18 hours)**

### Lower Division Coursework

**(9 hours)**

- ☐ SPEC 105 Foundations of Special Education OR  
SPEC 204 Cognitive Development for Diverse Learners
- ☐ SPEC 215 High Incidence Disabilities Support
- ☐ SPEC 212 Low Incidence Disabilities Support

### Upper Division Coursework

**(9 hours)**

- ☐ SPEC 338 Positive Behavior Supports
- ☐ SPEC 345 Literacy Skills for Students with Disabilities
- ☐ SPEC 309 Effective Instructional Strategies for Students  
With Disabilities in Inclusive Settings

\* Students whose major is outside of teacher education may take a broader range of special education courses to complete the minor. Required coursework includes: SPEC 105 or 204, SPEC 212 and SPEC215 and three 300 level courses (SPEC 300, 309, 310, 325, 330, 338, or 345).

## **Sport and Exercise Psychology - Minor**

### **Required Core Courses (6 credits)**

SPRT208: Introduction to Sport and Exercise Psychology

SPRT318: Advanced Theory and Application of Sport and Exercise Psychology

### **Support Courses (12 credits)**

SPRT305: Psychology of Coaching

SPRT323: Sport and Society\*

ATTR332: Psychological Aspects of Injury and Illness\*

HLTH305: Introduction to Biomechanics\*

HLTH353: Physiology of Exercise\*

PSYC202: Research Methods in Psychology (3)\*\*

PSYC235: Interpersonal and Leadership Skills

PSYC250: Social Psychology\*

PSYC308: Psychology of Personality\*

PSYC313: Industrial and Organizational Psychology\*

\*These courses have pre-requisites.

\*\* Strongly recommended for students who do not complete a research methods class as part of their major requirements

? Students may petition the minor coordinator for approval of a maximum of 3 credits in lieu of those listed above. The petition must be approved prior to completion of the 3 credits.

## **Theatre - Minor**

Offered as a partnership through another State System University. *Minors are not recorded on a student's academic record until the student's degree is earned.*

### **Required course to be taken at Lock Haven University (3.0 sh)**

THEA110 Theatre: An Orientation

### **Additional Courses (15.0 sh)**

Students interested in a theatre minor should contact the Theatre advisor about opportunities to complete the remaining 15.0 sh of required coursework through a partner State System University.

## **Women and Gender Studies - Minor**

Pathway 1: Women's Studies

Required:

WMST101 Introduction to Women's Studies

WMST499 Independent Study Capstone Project

Electives: (Select 4 courses – 12 SH)

ANTH328 Anthropology of Women

ENGL328 Humanities Seminar\*

ENGL400 Adv Topics in British Lit\*

ENGL402 Adv Topics in American Lit\*

ENGL404 Adv Topics in World Lit\*

ENGL425 Major American Writers\*

ENGL435 Major British Writers\*  
HIST318 US Women's History  
HIST328 Social Science Seminar  
HLTH430 Women's Health Issues  
MCOM210 Gender and the Mass Media  
MCOM330 Cultural Studies in Mass Communication  
PHIL328 Philosophy of Feminism  
PSYC425 Psychology of Women  
SOC328 Changing Roles of Male and Female  
SOCW413 Women in Crisis  
THEA328 Humanities Seminar: Gender and Performance

Pathway 2: Gender Studies

Required:

WMST110 Introduction to LGBTQ Studies  
WMST499 Independent Study Capstone Project

Electives: (Select 4 courses – 12 SH)

ENGL328 Humanities Seminar\*  
ENGL400 Adv Topics in British Lit\*  
ENGL402 Adv Topics in American Lit\*  
ENGL404 Adv Topics in World Lit\*  
ENGL425 Major American Writers\*  
ENGL435 Major British Writers\*  
HIST328 Social Science Seminar  
HLTH430 Women's Health Issues  
MCOM210 Gender and the Mass Media  
MCOM330 Cultural Studies in Mass Communication  
SOC328 Changing Roles of Male and Female  
THEA328 Humanities Seminar: Gender and Performance

Pathway 3: Women and Gender Studies

Required:

WMST101 Introduction to Women's Studies  
WMST110 Introduction to LGBTQ Studies  
WMST499 Independent Study Capstone Project

Electives: (Select 3 courses – 9 SH)

ANTH328 Anthropology of Women  
ENGL328 Humanities Seminar\*  
ENGL400 Adv Topics in British Lit\*  
ENGL402 Adv Topics in American Lit\*  
ENGL404 Adv Topics in World Lit\*  
ENGL425 Major American Writers\*  
ENGL435 Major British Writers\*  
HIST318 US Women's History

HIST328 Social Science Seminar  
HLTH430 Women's Health Issues  
MCOM210 Gender and the Mass Media  
MCOM330 Cultural Studies in Mass Communication  
PHIL328 Philosophy of Feminism  
PSYC425 Psychology of Women  
SOC1328 Changing Roles of Male and Female  
SOCW413 Women in Crisis  
THEA328 Humanities Seminar: Gender and Performance  
THEA328 Humanities Seminar: Women and Theatre

\*Topics of these courses change; so check with coordinator for eligibility.  
Other courses may count or may be augmented to count as Women and Gender Studies electives; contact coordinator for details.



## ALTERNATE PATHWAYS TO CERTIFICATION

Today, it is increasingly common to obtain a teacher credential through an alternate pathway. The post-baccalaureate program is for individuals who already hold a bachelor's degree and are seeking PA PreK-4 certification. The courses can be offered fully online, blended, or face-to-face. Student teaching will be offered as traditional or internship per PDE requirements. The student teacher internship may be offered to students who meet a specific set of criteria established by the Pennsylvania Department of Education.

### PreK-4 Certification Post-Baccalaureate/Non-Degree

Recommended course of study\*

<b>Major Area and Cognate Courses</b>		
<b>Special Education</b>		<b>9 sh</b>
SPEC204 Cognitive Dev of Diverse Learners		
SPEC309 Effective Instructional Strategies		
SPEC345 Literary Instruction for Students w/Disabilities		
<b>PreK-Grade 4/ECED Coursework</b>		<b>21 sh</b>
PSYC102 Child Development OR ECED605 <b>Diversity in Development from Infancy through 4th Grade</b>		
ECED100 Intro to Early Childhood Education		
ECED212 Language Development OR SPEC 202 Cultural Diversity		
ECED200 Observing and Assessing OR ECED325 Assessment and Evaluation OR <b>ECED620 Assessment, Evaluation, and Observation</b>		
ECED225 Beginning Literacy OR ECED204 Primary Reading		
ECED230 Prof. Comm. and Family Collab. Or <b>ECED615 Family, Community and Educational Collaboration</b>		
ECED326 Guidance and Classroom Management OR <b>EDTL609 Classroom Management and Control OR ALTE610 Classroom Environment</b>		
<b>Student Teaching</b>		<b>12sh</b>
ECED493 Student Teaching and Practicum		
ECED494 Student Teaching and Practicum		
OR		
ECED4xx Internship Student Teaching		

\*Additional Coursework may be required.

A faculty advisor will determine the deficiencies that must be met prior to recommendation for certification. Additionally, some courses may be substituted or waived based on a review of prior coursework and experience.

To be recommended for certification by Lock Haven University:

- Candidates must have 2 college level math courses, 1 composition, and 1 English literature course.
- Candidates must maintain a 3.0 grade point average. Those coming into the program without an undergraduate GPA of 3.0 or above must establish the GPA to be an eligible candidate<sup>1</sup>.
- Candidates must complete 190 hours of classroom observation and teaching – 150 hours are embedded in student teaching. Those working in the field may be eligible to count the hours towards the requirement.

Candidates must be deemed to be of High Moral Character and demonstrate satisfactory understanding of the PreK-grade 4 competencies as established by PDE.

## **COURSE DESCRIPTIONS**

Current course descriptions can be found online at <http://www.lockhaven.edu/coursecatalog/>

### ACCT110 Financial Accounting (Min SH: 3, Max SH: 3)

An introduction to the process of financial reporting for business organizations including the preparation of financial statements. Primary emphasis is placed on accounting concepts with an exposure to procedural techniques to give students a basic knowledge of the accounting process. The course is designed for users of accounting information.

Prerequisites: None

Corequisites: None

### ACCT115 Managerial Accounting (Min SH: 3, Max SH: 3)

Focuses on the use of accounting data within a business for planning, controlling, and making decisions for the optimal utilization of the firm's financial resources.

Prerequisites: ( ACCT110 )

Corequisites: None

### ACCT210 Fundamentals of Income Taxation (Min SH: 3, Max SH: 3)

Introduces students to the federal income tax system, based on the Internal Revenue Code, its regulations and interpretations. Emphasis is placed, primarily, on the concepts of tax planning and compliance for business decision-making, and secondarily, for use in individual financial planning.

Prerequisites: ( ACCT110 )

Corequisites: None

### ACCT215 Accounting Information Systems (Min SH: 3, Max SH: 3)

A study of modern concepts of accounting information systems including accounting systems design for organizations of differing character and complexity. Manual and automated accounting systems are reviewed including the transition from manual to automated accounting systems. Designing internal controls and auditing of computerized systems are reviewed.

Prerequisites: ( ACCT115 AND COMP150 )

Corequisites: None

ACCT300 Cost Accounting (Min SH: 3, Max SH: 3)

An in-depth study of the basic principles and procedures of cost accounting that are most often used by typical manufacturing and service organizations. The cost accounting cycle is studied in a step-by-step approach to the flow of costs. Emphasis is on estimating, planning and controlling costs.

Prerequisites: ( ACCT115 )

Corequisites: None

ACCT333 Accounting for Governmental and Nonprofit Entities (Min SH: 3, Max SH: 3)

An introduction to the principles and standards used in not-for-profit accounting, as applied to governmental entities, health care organizations, colleges and universities, and all other non-profit organizations.

Prerequisites: ( ACCT110 )

Corequisites: None

ACCT335 Intermediate Accounting 1 (Min SH: 3, Max SH: 3)

An introduction to the theoretical foundation of generally accepted accounting principles for financial reporting and how those principles apply to a firm's assets, liabilities, and owners' equity accounts. Asset accounts are examined in depth.

Prerequisites: ( ACCT110 )

Corequisites: None

ACCT340 Intermediate Accounting 2 (Min SH: 3, Max SH: 3)

An application of intermediate accounting concepts to advanced topics such as liabilities, equity, income taxes, pensions, and postretirement benefits.

Prerequisites: ( ACCT335 )

Corequisites: None

ACCT410 Advanced Topics in Financial Accounting (Min SH: 3, Max SH: 3)

Covers topics emphasizing the relationship between specialized accounting functions and their impact on the financial statements of business organizations.

Prerequisites: ( ACCT110 )

Corequisites: None

#### ACCT420 Auditing (Min SH: 3, Max SH: 3)

Introduces the standards and procedures underlying auditing and emphasizes current auditing practices within the public accounting profession and operational auditing practices. The course stresses risk analysis and includes statistical sampling techniques.

Prerequisites: ( ACCT340 )

Corequisites: None

#### ACCT435 International Accounting (Min SH: 3, Max SH: 3)

Focuses on how and why accounting principles differ among countries, and on financial and accounting issues that U.S.-based, international businesses face. The course includes international auditing, international taxation, currency transaction and translation issues, and preparation of consolidated financial statements.

Prerequisites: ( ACCT335 )

Corequisites: None

#### ACCT460 Advanced Federal Taxation (Min SH: 3, Max SH: 3)

Introduces students to the concepts of corporate, partnership, estate, and trust taxation. Emphasis is placed on tax theory and application, as well as on projects in tax research. In addition, students will apply tax theory in the preparation of Forms 1120, 1120S, 1065, 1041, and 706.

Prerequisites: ( ACCT210 )

Corequisites: None

#### ACCT480 Topics in Accounting (Min SH: 3, Max SH: 3)

An in-depth exploration of aspects of accounting and topics of current interest. Specific topics for a section will be determined prior to the semester in which the course is offered.

Prerequisites: ( ACCT110 )

Corequisites: None

#### ADAC100 Learning Strategies for College (Min SH: 1, Max SH: 1)

Designed to develop the learning styles, attitudes, and behavior of students with special academic needs. The students will be instructed in listening skills, note taking, textbook reading, preparation for tests, use of time, solving problems, organizing study, critical and creative thinking for studying, and methods for converting short-term memory to long-term memory.

Prerequisites: None

Corequisites: None

#### ADAC101 Introduction to Academic and Personal Development (Min SH: 3, Max SH: 3)

An introduction to the evolution and purposes of American higher education and the value of general education requirements. Explores the psychosocial development of college students with a focus on self-awareness along multiple domains including academic skills, interpersonal relationships, career interests, and technological and communication skills. Acquaints students with university resources, diversity issues, and the connection between student learning styles and college success.

Prerequisites: None

Corequisites: None

#### ADAC105 Principles and Development of Cognitive Reading Processes (Min SH: 2, Max SH: 2)

College students will learn strategies and techniques to enhance their abilities to learn from written materials, including both expository and narrative texts and professional journals. The development of students' cognitive reading processes will be emphasized. This includes stressing methods pertaining to activating, schema, predicting, anticipating, searching, verifying, organizing, remembering and elaborating. Students will learn to apply metacognitive monitoring and self-correction strategies. Vocabulary development skills will also be emphasized, including the effective use of graphophonic, syntactic, semantic, and structural cues to identify unknown words.

Prerequisites: None

Corequisites: None

ADAC119 First Year Student Seminar (Min SH: 1, Max SH: 1)

An introduction to the culture and mission of the university and its programs of study. The course will explore the purpose of one's college education and provide the student an opportunity to engage with an academic field of interest. The student will be introduced to basic college learning and study skills. Through class discussion, the student will engage in active learning. Common co-curricular activities will facilitate the first year student's connection to the university.

Prerequisites: None

Corequisites: None

ADAC125 Introduction to Career/Life Planning (Min SH: 2, Max SH: 2)

Through an exploration of career development, thorough self-assessment, development of sound decision-making skills, and exploration of academic programs of study and the world of work, this course facilitates the ultimate declaration of an appropriate major and the first steps in navigating the career/life planning process. Restricted to second and subsequent semester students.

Prerequisites: None

Corequisites: None

ADAC200 Foundations of Group Peer Tutoring (Min SH: 1, Max SH: 1)

An overview of the mission, philosophy, and operation of Lock Haven University Tutorial Services. Students will be acquainted with the critical issues encountered in tutoring including the following: legal, multiculturalism, disabilities, pedagogy, learning strategies, and group dynamics.

Prerequisites: None

Corequisites: None

ALTE300 Helping Skills in Alternative Education (Min SH: 3, Max SH: 3)

This course is an introduction to working with at-risk youth in alternative education settings. The course is designed to prepare future educators and others for work in alternative education settings by introducing the scope and purpose of alternative education, the characteristics and dynamics of at-risk conditions for youth, and by providing opportunities to develop basic helping skills. Students will learn basic helping skills necessary for effective intervention with at-risk students including helping communication, referral/case-management, conflict

management, interviewing and assessment. Approximately one-half of the course is designed to examine at-risk youth issues and the programmatic considerations related to those issues and one-half of the course is devoted to examining alternative education settings and the development of helping skills appropriate to working in those settings. Restricted to Elementary and Special Education majors with a minimum of 60 credit hours; others by permission.

Prerequisites: None

Corequisites: None

#### ALTE480 Alternative Education Practicum (Min SH: 3, Max SH: 3)

The capstone course for the Alternative Education minor. It includes four weeks of classroom-only experience and eleven weeks in a placement at an alternative education program site. The four weeks of classroom experience emphasize alternative education theory and skills development. The eleven-week placement allows students to participate in a supervised participation experience, emphasizing practical application of alternative education classroom interventions.

Prerequisites: ( ALTE300 )

Corequisites: None

#### ANTH101 Intro Anthropology (Min SH: 3, Max SH: 3)

An overview of what anthropology has discovered about our biological and cultural evolution in physical anthropology and archeology. Students will also examine contemporary societies from a cross cultural perspective.

Prerequisites: None

Corequisites: None

#### ANTH102 Cultural Anthropology (Min SH: 3, Max SH: 3)

Explores and explains the diversity of human behavior in such areas as social organization, politics, economics and religion. The class also seeks to understand and explain this behavior. A goal of this course is to have students view new patterns of living using the principle of cultural relativism.

Prerequisites: None

Corequisites: None

ANTH223 Indigenous Cultures of North and South America (Min SH: 3, Max SH: 3)

A study of the indigenous cultures of North and South America using archeological, historical, and ethnographic data. Special focus is on cultures found within North America, Mesoamerica, and Amazonia. Particular attention is given to intercultural contact and its outcomes up to the present.

Prerequisites: None

Corequisites: None

ANTH328 Seminar-Social Science (Min SH: 3, Max SH: 3)

ANTH328-Anthropology of Women: Investigates the status of women in hunting and gathering, horticultural, agricultural, and industrial societies. Through this investigation we will discover the factors leading to sexual equality and inequality and make assessments about the status of women in the developing world.

Prerequisites: None

Corequisites: None

ANTH330 Japanese Culture and Society (Min SH: 3, Max SH: 3)

Sociological and anthropological perspectives are used to understand Japanese culture and society. The course will highlight various social institutions and cultural elements of the Japanese society, namely education, religion, popular culture, group dynamics, marriage and the family, and economy. Through the multidisciplinary approach, the course will investigate both historical as well as contemporary issues concerning Japan. See also SOCI330.

Prerequisites: ( SOCI101 ) OR ( ANTH102 ) OR ( ANTH101 )

Corequisites: None

ANTH422 Anthropology Latin America (Min SH: 3, Max SH: 3)

Studies indigenous cultures of Central and South America as constructed from archaeological and ethnographic. Ethnographic information on contemporary Indians, peasants, and urban residents and analysis of current events from an anthropological point of view will also be presented.

Prerequisites: None

Corequisites: None



ANTH424 Anthropology of the Middle East (Min SH: 3, Max SH: 3)

An exploration of the political, economic, religious and kinship systems of Middle Eastern peasants, pastoralists and townsmen. Contemporary issues such as the rise of Islamic Fundamentalism, Arab-Israeli relations, oil wealth, labor migration and development will also be examined from an anthropological perspective.

Prerequisites: ( ANTH101 ) OR ( ANTH102 ) OR ( SOCI101 )

Corequisites: None

ART100 Understanding Art (Min SH: 3, Max SH: 3)

Introduces students to the world of art both past and present. Essential ideas of art are examined in concrete form using examples from diverse times and cultures. The course stresses understanding that art as a universal human creative impulse by studying its forms in a variety of aesthetic and cultural contexts.

Prerequisites: None

Corequisites: None

ART103 Introduction to Art (Min SH: 3, Max SH: 3)

A survey of art history that serves as an introduction to aesthetics, perception, art criticism, and the art heritage of humankind. It is designed to help students develop appreciation and understanding of the visual arts.

Prerequisites: None

Corequisites: None

ART105 Introduction Three-Dimensional Art (Min SH: 3, Max SH: 3)

An introduction to the basic understanding of the elements of composition and principles of design as applied to the three-dimensional arts. The student will acquire this knowledge by executing a series of projects intended to stimulate visual problem solving. The course will examine the practical application of basic concepts of design in the plastic arts through the investigation of those masterworks which represent and inform core aesthetic concepts in the three three-dimensional arts.

Prerequisites: None

Corequisites: None

ART110 Color and Two-Dimensional Design (Min SH: 3, Max SH: 3)

Develops judgment and creativity in solving problems of abstract and decorative design with the use of color.

Prerequisites: None

Corequisites: None

ART112 Drawing 1 (Min SH: 3, Max SH: 3)

A beginning exploration of the various approaches to drawing as a means of aesthetic expression. Introduces aspects of practice, materials and concepts. Covers major genre types including perspective, still life, landscape and the human figure.

Prerequisites: None

Corequisites: None

ART200 Visual Thinking (Min SH: 3, Max SH: 3)

The study of idea development as it applies to the graphic communicator. A variety of idea-generating techniques are explored with a strong emphasis upon quick visual exercises to stimulate innovative thinking and collaborative visual problem solving.

Prerequisites: None

Corequisites: None

ART208 History of Photography (Min SH: 3, Max SH: 3)

Investigates the development of photography from its inception (c. 1839) to the present. Students examine the primary photographers, techniques, and aesthetic issues addressed over the last 170+ years. These aspects of photography will be viewed within their historical and cultural context.

Prerequisites: None

Corequisites: None

ART210 Materials and Techniques (Min SH: 3, Max SH: 3)

An intensive study and experimentation with different media. Stress is placed on creative expression and the use of the principles of design. Students will be introduced to computer graphics.

Prerequisites: None

Corequisites: None

#### ART217 Introduction to Digital Art (Min SH: 3, Max SH: 3)

An introduction to digital means of producing artworks utilizing computer based technology. Students create digitally generated images and are required to solve specific design problems.

Prerequisites: None

Corequisites: None

#### ART221 Typography (Min SH: 3, Max SH: 3)

An introduction to typography: the art of designing with type, including the planning of typeface, size, composition, and page layout. This course explores the fundamental principles of typography and its integral role in graphic design.

Prerequisites: ( ART110 )

Corequisites: None

#### ART227 History of Graphic Design (Min SH: 3, Max SH: 3)

Survey of the history of design concentrating on visual communication and typography from prehistory to the digital revolution.

Prerequisites: ( ART103 ) OR ( ART105 ) OR ( ART110 )

Corequisites: None

#### ART301 Renaissance and Baroque Art (Min SH: 3, Max SH: 3)

Art historical survey that covers the architecture, sculpture and painting in Italy, Flanders, Holland, England, and Spain from the fifteenth through the seventeenth centuries.

Recommend ART103 or ART304 prior to enrolling.

Prerequisites: None

Corequisites: None

ART304 Ancient and Medieval Art (Min SH: 3, Max SH: 3)

A detailed study of the history of art from Paleolithic times through the Gothic period. Art objects will be studied as reflections of changing cultural priorities that coincide with historic developments in Western Civilization.

Prerequisites: ( ART103 )

Corequisites: None

ART305 Pottery (Min SH: 3, Max SH: 3)

An introduction to the methods of forming pottery from primitive to contemporary techniques. Explores various types of decorating, glazing, and firing.

Prerequisites: None

Corequisites: None

ART307 Asian Art (Min SH: 3, Max SH: 3)

A survey of the visual arts in Asia (India, China and Japan) from prehistoric through the eighteenth century (pre-modern period). Emphasis will be on tracing major artistic developments and achievements in each region.

Prerequisites: None

Corequisites: None

ART308 On-line Interactive Design (Min SH: 3, Max SH: 3)

A studio course that explores concepts and structures of on-line communication employing interactive digital media. Students are taught screen-based interface design and are instructed how to design effectively for the World Wide Web. A variety of World Wide Web authoring tools and procedures are introduced.

Prerequisites: ( ART217 ) OR ( ART221 )

Corequisites: None

ART312 Drawing 2 (Min SH: 3, Max SH: 3)

Designed to expand the students conception of drawing subjects, techniques, and materials. An appreciation and study of drawings by major artists is also included.

Prerequisites: ( ART212 ) OR ( ART112 )

Corequisites: None

ART315 Ceramics: Techniques in Hand- building and Tile Construction (Min SH: 3, Max SH: 3)

A studio intensive exploration of various hand-building and tile construction techniques. The hand-built construction techniques investigated will be slab, drape, coil, additive, and reductive methods. The tile-making component of this course will emphasize various traditional and nontraditional mosaic tile construction methods. Bas, mezzo, and alto relief tile construction will be explored by creating plaster press and stamp molds of student generated relief tiles.

Prerequisites: None

Corequisites: None

ART318 Introduction to Digital Photography (Min SH: 3, Max SH: 3)

An introduction to the art, craft and history of photography through digital media.

Prerequisites: ( ART217 ) OR ( ART217 )

Corequisites: None

ART325 Printmaking (Min SH: 3, Max SH: 3)

An exploration of various traditional and contemporary printmaking techniques. Media include linoleum, woodcut, wood engraving, copper and zinc etching and engraving.

Prerequisites: ( ART110 AND ART112 ) OR ( ART110 AND ART212 )

Corequisites: None

ART328 Seminar-Humanities (Min SH: 3, Max SH: 3)

In-depth exploration of a selected topic in art. Students engage in research and participate in intensive discussions. Emphasis will be on gaining critical understanding of works of art through contextualization and study of various issues related to a given genre or social/historical context.

Prerequisites: None  
Corequisites: None

#### ART330 Painting (Min SH: 3, Max SH: 3)

An exploration of various painting materials, techniques, and styles of painting. Stress is placed on development of a creative, personal style. Paintings from the mid-1800s to the present serve as course models. Media may include watercolor, oil and acrylic paint.

Prerequisites: None  
Corequisites: None

#### ART335 Sculpture and Three-Dimensional Design (Min SH: 3, Max SH: 3)

An introduction to three-dimensional design and sculpture with an examination of many sculptural techniques, both ancient and modern.

Prerequisites: None  
Corequisites: None

#### ART342 Print Design (Min SH: 3, Max SH: 3)

An introduction to processes and problems in designing for print media. This graphic design course specifically builds upon skills developed in ART221 Typography.

Prerequisites: ( ART221 )  
Corequisites: None

#### ART350 Photography 1 (Min SH: 3, Max SH: 3)

Beginning exploration of photographic processes and materials. The course attempts to take the subject matter beyond its stage of literalness to a more expressive and stylistic approach in content and technique.

Prerequisites: None  
Corequisites: None

#### ART355 Life Studies (Min SH: 3, Max SH: 3)

An exploration and study of the anatomy and expressive qualities of the human form through drawing.

Prerequisites: ( ART312 )

Corequisites: None

ART374 Logotypes and Letterforms (Min SH: 3, Max SH: 3)

An advanced course in the creation and design of logos, logotypes, and letterforms.

Prerequisites: ( ART112 AND ART221 )

Corequisites: None

ART390 Video Art (Min SH: 3, Max SH: 3)

An introduction to digital video as an expressive art medium including filming, nonlinear editing, audio and post-production techniques.

Prerequisites: ( ART217 )

Corequisites: None

ART401 History of Modern Art (Min SH: 3, Max SH: 3)

Modern art from 1800 to 1990. Emphasis on relating concepts of modern art to the philosophy underlying development of various 19th and early 20th century art styles.

Prerequisites: None

Corequisites: None

ART405 Graphic Design Studio (Min SH: 3, Max SH: 3)

An upper level studio course in graphic design in which students engage in advanced design projects and visual problem solving. This course is aimed at helping students develop their portfolios.

Prerequisites: ( ART342 )

Corequisites: None

ART411 Interactive Animation (Min SH: 3, Max SH: 3)

Exploration of computer based animation and drawing techniques utilizing a vector-based animation program such as Macromedia Flash.

Prerequisites: ( ART212 AND ART217 ) OR ( ART112 AND ART217 )

Corequisites: None

ART415 Motion Graphics (Min SH: 3, Max SH: 3)

An advanced level studio course for working with type and image in time-based media.

Prerequisites: ( ART221 AND ART308 )

Corequisites: None

ART420 Art Since 1950 (Min SH: 3, Max SH: 3)

A survey of art since 1950. Emphasis is placed on the study of artistic movements emerging in reaction to Modernism and the impact of critical theory on late twentieth and early twenty-first century art.

Prerequisites: ( ART103 AND ART401 )

Corequisites: None

ART425 Special Problems (Min SH: 1, Max SH: 4)

Topics available from any studio course after having completed the basic course and gained permission from department. Makes possible individual study, creative work or research under the direct guidance of the art staff. May be taken for 1 to 3 credits more than one time to provide options for in-depth study within a specified area.

Prerequisites: None

Corequisites: None

ART430 American Art: Unity in Diversity (Min SH: 3, Max SH: 3)

A historical survey covering art produced in America from Colonial to Contemporary eras. Also examines influences that stem from multicultural sources, including the contributions of minorities to art in the US.

Prerequisites: ( ART103 )



Corequisites: None

#### ART440 Aesthetics, Portfolios and Exhibitions (Min SH: 3, Max SH: 3)

This course is taught in three units. The first covers the aesthetics from a wide range of studio disciplines. The second focuses on methods for creating portfolios for professional presentation. The third deals with exhibition preparation and gallery and museum practices. Emphasis is placed on hands on experience and development of career enhancing skills for art majors.

Prerequisites: None

Corequisites: None

#### ART490 Senior Capstone (Min SH: 1, Max SH: 1)

Students engage in an intensive project related to their major concentration which will culminate in an exhibition or presentation. Emphasis will be on gaining critical understanding of their work through articulation of goals, active critique, and self-assessment.

Prerequisites: ( ART440 )

Corequisites: None

#### ATTR100 Introduction to Athletic Training (Min SH: 3, Max SH: 3)

An introduction to the basic techniques and procedures used in the athletic training profession and to the policies and procedures of the Lock Haven University Athletic Training Education Program (ATEP). Emphasis will be on introductory athletic training skills and athletic training room management. This course will specifically train the student to be certified in professional rescuer cardiopulmonary resuscitation (CPR) and First Aid. Emphasis will be placed on skills pertaining to injury prevention and acute care.

Prerequisites: None

Corequisites: None

#### ATTR202 Care and Prevention of Athletic Injuries (Min SH: 3, Max SH: 3)

Designed to expose students to prevention techniques related to injuries sustained during participation in physical activity. Students will develop skills necessary to interpret risk factors associated with participation as well as prevention and recognition skills for environmental injuries.

Prerequisites: ( HLTH151 AND HLTH251 ) OR ( HLTH128 AND HLTH130 ) OR ( HLTH122 )  
Corequisites: None

AVIA115 Aviation/Aerospace Workshop (Min SH: 6, Max SH: 6)

This workshop is designed to give prospective teachers of aviation/aerospace specific preparation to teach typical courses. It will cover such scientific aspects as aerodynamics, aircraft components, weight and balance, meteorology, physiology of flight, and the nature of outer space. Technologically it will include aircraft systems, basic navigation, radio navigation, communications, and the like. Other factors to be dealt with include air traffic control, federal aviation regulations, military applications, commercial and general aviation, and the aviation/aerospace education movement. Special force will be lent to the program by field trips and flight instruction, as well as the use of outstanding specialist consultants. This course will meet 3 sh of the laboratory requirements for general education.

Prerequisites: None  
Corequisites: None

BIOL100 Backyard Biology (Min SH: 3, Max SH: 3)

An introduction to the fundamental principles and concepts of biological science relative to current environmental degradation. It provides students with an understanding of how humans have touched and altered nature by evaluating how plants and ecosystems respond. Students will apply cognitive skills to evaluate environmental responses using the scientific method and learn how to crowdsource scientific data. Labs will utilize the relationship among plants, water, and soils found within their homes and backyards.

Prerequisites: None  
Corequisites: None

BIOL101 Basic Biology (Min SH: 3, Max SH: 3)

Covers topics across the biological hierarchy from atoms to issues of global ecology including genetics, molecular biology, and evolution. The intent is to further students' understanding of the impact of biology on their lives. Laboratory exercises provide students with practical experience using the scientific method.

Prerequisites: None  
Corequisites: None

### BIOL102 Environmental Science (Min SH: 3, Max SH: 3)

An introduction to ecological principles and concepts with an examination of the biological basis of contemporary environmental problems. Central topics include the social, political, ethical, and economic factors that influence the biological aspects of environmental issues such as population control, pollution, land use, as well as conservation of natural resources and natural habitats. Laboratory exercises demonstrate some of the biological aspects of environmental issues and introduce students to basic processes used in environmental research.

Prerequisites: None

Corequisites: None

### BIOL103 Inquiry into Biology (Min SH: 3, Max SH: 3)

An overview of the fundamental principles of biology that are emphasized in the National Science Education Standards, focusing on the nature and the processes of science. The course models hands-on, inquiry-based practices as students use reasoning, analysis, scientific processes, procedures and tools of scientific investigations to learn about the structure and functions of organisms, continuity of life and ecological systems.

Prerequisites: None

Corequisites: None

### BIOL106 Principles of Biology 1 (Min SH: 3, Max SH: 3)

An introduction to biology with emphasis on the chemistry of life, cell structure and function, cellular metabolism and cell reproduction. Laboratory exercises are designed to reinforce principles covered in lecture and to provide students with experiences in making observations, hypothesis testing, and data collection, analysis and interpretation. This course is designed for science and health science majors.

Prerequisites: None

Corequisites: None

### BIOL107 Principles of Biology 2 (Min SH: 3, Max SH: 3)

A continuation of BIOL106: Principles of Biology I with emphasis on cell reproduction and development, genetics, molecular biology, biological evolution and the diversity of life, behavioral ecology, and fundamentals of ecology. Laboratory exercises are designed to

reinforce and supplement principles covered in lecture and to provide students with experiences in making observations, hypothesis testing, and data collection, analysis and interpretation.

Prerequisites: ( BIOL106 )

Corequisites: None

#### BIOL108 Plants, Animals, and Natural History of Pennsylvania (Min SH: 3, Max SH: 3)

A survey course examining the variety of living things in Pennsylvania by focusing on the evolutionary history, taxonomy, life histories, diversity and ecological value of a variety of representative and biologically important groups of organisms. The impacts of human interactions with organisms are studied throughout the course. The course emphasizes identification of plant and animal species, habitat needs, and their influence on the economic and social life of humans.

Prerequisites: None

Corequisites: None

#### BIOL125 Exploring Biology (Min SH: 3, Max SH: 3)

An introduction to fundamental biological concepts in the context of contemporary biological issues that affect citizens of human communities and members of broader biotic communities. Antimicrobial resistance, human reproduction, disease, bio-magnification, climate change, and community level impacts of invasive species are just some of the contemporary topics that may be explored.

Prerequisites: None

Corequisites: None

#### BIOL130 Human Biology for Social Workers (Min SH: 3, Max SH: 3)

An overview of human bodily form and function appropriate for Social Work majors. Particular focus will be on where and to what degree the disciplines of Biology and Social Work overlap. The course will provide students with a foundational skill-set in biological knowledge for future employment in the field of social work.

Prerequisites: ( BIOL101 )

Corequisites: None

BIOL140 Introduction to Watershed Ecology (Min SH: 1.5, Max SH: 1.5)

Designed to introduce students to theory and practice of ecology in local ecosystems. Emphasis is placed on research methods used to study terrestrial and aquatic communities. Classroom activities are intended to familiarize students with planning research and techniques for data collection and analysis. Field activities will include data collection from local ecosystems to provide experience before students plan their own research projects.

Prerequisites: ( BIOL106 )

Corequisites: (BIOL107 )

BIOL141 Introduction to Watershed Ecology 2 (Min SH: 1.5, Max SH: 1.5)

Designed for students to apply baseline ecological knowledge and techniques to the study of local ecosystems. An emphasis is placed on applying experimental techniques and concepts learned in Introduction to Watershed Ecology 1. Students will collect data from streams and forests and contribute to a long-term ecological monitoring dataset. Projects may include fish diversity studies, food web analysis, invertebrate or algal diversity, leaf decay, flow regime, and primary production measures.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL140 )

Corequisites: None

BIOL145 Investigations in Genetics and Molecular Biology (Min SH: 2, Max SH: 2)

Designed to introduce students to theory and practice of genetics and molecular biology. Students will utilize molecular biology and biotechnology research tools in scientific investigations. Classroom activities are intended to familiarize students with planning research and learning techniques for data collection and analysis. Laboratory activities will introduce students to molecular research techniques.

Prerequisites: ( BIOL106 )

Corequisites: (BIOL107 )

BIOL200 Marine Biology (Min SH: 3, Max SH: 3)

A study of plant and animal life in the marine environment. Emphasis will be on physical and chemical factors affecting the biota in the intertidal, open water, and benthic habitats. Common biota characteristic of each habitat will be investigated in terms of their natural history, morphology and ecological relationships. Laboratory and field exercises will emphasize the identification, anatomy, physiology, systematics and behavior of marine plants and animals

as well as the physical and chemical properties of seawater. This class will be taught during summer session at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL202 Genetics (Min SH: 3, Max SH: 3)

An overview of the basic principles of Mendelian genetics, cytogenetics, molecular genetics, and population genetics. Laboratory exercises emphasize molecular techniques, statistical evaluation of results, and case studies.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: (CHEM121 )

#### BIOL205 Marine Ecology (Min SH: 3, Max SH: 3)

A study of the interrelationships among animals, plants, and physical and chemical aspects of the marine environment with an emphasis on unique adaptations for survival. This class is taught during summer session at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL206 Botany (Min SH: 3, Max SH: 3)

An introduction to the principles of botany. Emphasis is placed on the integration of structure and function that reflect plant diversity and evolution. The primary models for this approach are angiosperms but also include discussions of other plant taxa. Topics covered include plant cellular structure; anatomy and morphology of stems, roots, leaves, and flowers; transport processes; photosynthesis and respiration; plant growth and development; plant diversity; plant interactions with the environment; and economic botany.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL213 Introduction to Geographic Information Systems (Min SH: 3, Max SH: 3)

An introduction to geographic information systems (GIS) with emphasis on biological applications. Activities will focus on capturing, storing, editing, querying, displaying, and analyzing geographically referenced data. Lecture and laboratory materials are designed to provide students with hands-on experience on real-world applications of GIS in biology.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL215 Basic Microbiology (Min SH: 4, Max SH: 4)

Introduces clinical nursing students to the biology, metabolism, classifications, ecology, genetics and evolution of microbes. Emphasis is placed on the role of bacteria in human health and disease, control of microbial growth, and antimicrobial resistance. The laboratory includes techniques in handling, isolation, cultivation, staining, identification, and control of microorganisms. Intended for students in the Nursing program and will not satisfy a core requirement for a BS degree in Biology.

Prerequisites: None

Corequisites: None

#### BIOL225 Human Genetics (Min SH: 3, Max SH: 3)

An overview of the basic principles of Mendelian genetics, cytogenetics, molecular genetics, and population genetics with a focus on the mechanisms of human inheritance and disease.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: (CHEM121 )

#### BIOL240 Zoology (Min SH: 3, Max SH: 3)

A survey of the animal kingdom with emphasis on evolutionary relationships within, between, and among constituent phyla. Lectures emphasize diversity, comparative anatomy, functional morphology, physiology, life history, ecology, and evolution. Laboratories emphasize and provide support for lecture concepts and comprise microscope analysis and gross animal dissection.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL245 Marine Invertebrates (Min SH: 3, Max SH: 3)

Designed to utilize the marine invertebrate taxa to introduce students to the unique specializations that animals have evolved which allow them to successfully carry out the processes necessary for life and to exploit a wide variety of marine habitats. Major trends in invertebrate evolution will be used to illustrate the historical constraints upon these solutions and the necessity of narrative explanations of form and function in animals. It is assumed that each student has been introduced to the major taxa of animals in a prior introductory zoology course. Taxonomy will be used as a heuristic tool, but will not be stressed as a separate subject. This class will be taught during summer session at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL240 )

Corequisites: None

#### BIOL250 Wetlands Ecology (Min SH: 3, Max SH: 3)

An overview of the essential role of wetlands in ecological systems. Because wetlands are transitional between aquatic and terrestrial systems, they require an interdisciplinary approach to be fully understood. This class will be taught during summer session at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.-

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL301 Behavior of Marine Organisms (Min SH: 3, Max SH: 3)

Concepts of ethology; discussion and observation of the influences of external and internal factors on the regulation and control of behavior of organisms living in the marine coastal environment. This class will be taught during summer session at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL302 Developmental Biology (Min SH: 3, Max SH: 3)

A study of classic embryology as well as relevant findings in cytogenetics, cell and molecular biology, and biochemistry, as it relates to structural and functional changes in molecules, cells, tissues, and organs during developmental cycles of plants and animals. Labs will include developmental study of living organisms as well as the study of prepared stages of development.



Prerequisites: ( BIOL106 AND BIOL107 AND BIOL202 )

Corequisites: None

BIOL303 Vertebrate Endocrinology (Min SH: 2, Max SH: 2)

A survey courses of the major endocrine systems in vertebrates. An introduction to the chemistry and cellular mechanisms of action of different hormones is followed by in-depth discussions of the physiological effects of hormones. Topics include hypothalamic-pituitary interactions, reproduction, growth, osmoregulation, digestion and metabolism, and stress. Mammalian endocrinology is emphasized with discussion of important species differences in endocrine systems.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL202 ) OR ( BIOL106 AND BIOL107 AND BIOL240 )

Corequisites: None

BIOL305 Ichthyology (Min SH: 3, Max SH: 3)

This course is an introduction to the study of evolution, taxonomy and morphology of fishes. Emphasis is placed on biodiversity, morphology, and conservation of fishes. Lecture topics include the nomenclature, history and techniques of both ichthyology and fisheries biology. Laboratory emphasis will be on identification, dissection, and the standard techniques used in field collections.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL240 )

Corequisites: None

BIOL309 Ecology (Min SH: 3, Max SH: 3)

An introduction to ecology. Emphasis is placed on evolutionary and classic ecology and effects of human society on natural systems. Topics include energy flow, nutrient recycling, and their influence on the distribution and abundance of organisms. Population studies include genetics, growth, age structure, density, and r and K selection. Community topics include competitive interactions, species diversity, community similarity, and keystone species. Field data collection and statistical techniques for data interpretation are treated in laboratory.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

BIOL310 Immunology (Min SH: 3, Max SH: 3)

An introduction to the study of immunology. Development, function, and interaction of the innate, adaptive, cellular, and humoral components of the immune system will be discussed. Immunopathology will be considered including infections, immunodeficiencies, and autoimmune diseases. The immune system implications of transplantation, vaccination, cancer, and hypersensitivities will be included.

Prerequisites: ( BIOL202 ) OR ( BIOL225 )

Corequisites: None

BIOL312 Marine Botany (Min SH: 3, Max SH: 3)

This course is the study of the primary producers of the ocean, estuaries and terrestrial margins. This includes the study of phytoplankton, benthic macrophytes, salt marsh macrophytes, and other edge communities like salt flats, mangroves and dunes. Although taxonomy will be important, it is not the sole focus of the course. Plant physiology and ecology will be stressed. The laboratory portion of the course will stress practical methods of measurement of the plants and their environment. This includes voucher production and specimen preservation, basic physical and chemical methods of abiotic environment measurement, growth and constituent analysis of plant tissue, chlorophyll analysis and wet and dry weight determination for biomass. This class will be taught during summer sessions at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL206 AND CHEM120 )

Corequisites: None

BIOL315 Comparative Vertebrate Anatomy (Min SH: 3, Max SH: 3)

A study of the evolutionary history and function of organ systems of different vertebrate classes with respect to each other and to other subphyla within the phylum Chordata. Comparative dissections of specimens from selected vertebrate classes will be carried out.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

BIOL317 Mycology (Min SH: 3, Max SH: 3)

A detailed examination of mushrooms, molds, and human mycoses, including an introduction to fungal ecology and assessment of fungal classification, as well as molecular systematics and

an overview of medical significance. The course utilizes hands-on student-driven, inquiry-based practices. Students will use scientific processes and procedures, data analysis, and research tools to investigate fungal morphogenesis, molecular diagnostics, culture techniques, ecological relationships, and human pathogenesis.

Prerequisites: ( BIOL202 AND CHEM121 )

Corequisites: None

BIOL321 Marine Molecular Technology: Applications for Management and Forensics (Min SH: 3, Max SH: 3)

Students will gain an overview of modern molecular technology and how it can be applied to the management of marine organisms and the forensics field. The laboratory component will allow students to learn some of the most widely used techniques and instrumentation in the molecular field.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

BIOL323 Bioinformatics and Genomics (Min SH: 3, Max SH: 3)

An introduction to recent technological advances in the life sciences that allow DNA sequencing of entire genomes and the analysis of the gene products of whole genomes simultaneously in one experiment. Topics include the structure and mechanics of the eukaryotic genome, transcriptome, and proteome in detail, with emphasis on hands-on exercises using public databases and software to extract, analyze and manipulate DNA and protein sequences.

Prerequisites: ( BIOL202 )

Corequisites: None

BIOL325 Cancer Biology (Min SH: 3, Max SH: 3)

A study of topics relevant to cancer, with an emphasis on the experiments that led to our current understanding of the disease. There will be a focus on the cellular and molecular basis of cancer, and the specific topics will include tumor suppressor genes, oncogenes, cell signaling, DNA mutation and repair, apoptosis, metastasis, and angiogenesis. Various approaches for the treatment of cancer will also be discussed.

Prerequisites: ( BIOL202 ) OR ( BIOL225 )

Corequisites: None

### BIOL328 Seminar-Science (Min SH: 3, Max SH: 3)

This seminar fulfills the natural and mathematical science seminar requirement in general education for the Bachelor of Arts degree; it does not fulfill biology majors course requirements but may be selected as a general education elective by biology majors. Topics studied each semester vary, but have included selected readings on ethics in science, evolution, genetics and genetic engineering, behavior, the brain, physiology, medicine and the world's environment. Assigned readings are used as a starting point for further student research and presentations. The interrelationships of biology with other disciplines such as economics, political science, and history are considered. A primary goal of this seminar is to increase the student's exposure to some contemporary topics of biology.

Prerequisites: None

Corequisites: None

### BIOL330 Cell and Molecular Biology (Min SH: 4, Max SH: 4)

An in-depth study of cellular chemicals, molecular genetics, cellular functions, and cellular communication. Laboratory experiments give theoretical and hands-on experience in molecular techniques, such as gel electrophoresis, DNA isolation, restriction digestion, DNA purity and quantification, probe hybridization and detection, and Polymerase Chain Reaction (PCR).

Prerequisites: ( BIOL202 ) OR ( BIOL225 )

Corequisites: None

### BIOL340 Microbiology (Min SH: 4, Max SH: 4)

A study of the anatomy, physiology, and taxonomy of microorganisms with a primary emphasis on prokaryotes. The laboratory component provides critical hands-on experience in standard bacteriological techniques involving the handling, cultivation, isolation, and identification of microorganisms. Additional emphasis will be placed on the role of bacteria, viruses, and other microorganisms in environmental and public health issues.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL202 AND CHEM121 ) OR ( BIOL106 AND BIOL107 AND BIOL225 AND CHEM121 )

Corequisites: None

### BIOL345 Advanced DNA Methods (Min SH: 3, Max SH: 3)

A technique-oriented course that presents the theory and methods associated with characterizing organisms using modern DNA-based methods such as genotyping and sequencing. The laboratory techniques in this class can be used for human identification, species verification, parentage testing, and evolutionary research. Example topics include sample preparation, PCR, qPCR, lab math, and theory/operation of the ABI 310 Genetic Analyzer, including interpretation of results and troubleshooting.

Prerequisites: ( BIOL202 ) OR ( BIOL330 )

Corequisites: None

BIOL400 Ecology of Marine Plankton (Min SH: 3, Max SH: 3)

A study of the phytoplankton and zooplankton in marine and brackish environments. In laboratory qualitative and quantitative comparisons will be made between the planktonic populations of various types of habitats in relation to primary and secondary productivity. This class will be taught during summer session at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL309 )

Corequisites: None

BIOL402 Biological Evolution (Min SH: 3, Max SH: 3)

Intended for students interested in examining in detail the phenomenon of biological evolution. Although topics such as Cultural Evolution and Creationism will be considered briefly, the focus of this offering will be evolution as manifest in natural, biological systems. Topics to be presented via lecture and student presentation will include Population Genetics, Darwinism, Natural Selection, Sexual Selection and Altruism, Molecular Evolution, Human Origins and Evolution and Extinction.

Prerequisites: ( BIOL202 )

Corequisites: None

BIOL403 Coral Reef Ecology (Min SH: 3, Max SH: 3)

A study of coral reef structure, formation, types, and the relationships of reef organisms to their environment. Emphasis is given to species diversity, identification, symbioses, and effects of temperature, salinity, light, nutrient concentration, predation, and competition on the abundance and distribution of coral reef organisms. This class will be taught during summer sessions at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

BIOL405 Field Ecology (Min SH: 3, Max SH: 3)

An advanced study of terrestrial community ecology including interactions between animal and plant populations. Special emphasis will be placed on standard techniques for estimating population size of various taxa, sampling plant community structure and statistical analysis and written interpretation of data.

Prerequisites: ( BIOL309 )

Corequisites: None

BIOL409 Ornithology (Min SH: 3, Max SH: 3)

A study of identification of birds in the field, by study skins and by song. It includes study of basic bird biology, evolution, natural history, ecology, research methodologies, biodiversity and conservation.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

BIOL410 Organismal Physiology (Min SH: 3, Max SH: 3)

A study of homeostatic mechanisms and systems in organisms and their relation to fundamental chemical and physical events in cells. Topics such as bioenergetics, osmoregulation, movement, and information processing are discussed as they relate to the function of organisms.

Prerequisites: ( BIOL106 AND BIOL107 AND CHEM121 )

Corequisites: None

BIOL411 Aquatic Biology (Min SH: 3, Max SH: 3)

Flora and fauna of fresh water ecosystems. Emphasis on the biotic, physical and chemical characteristics of lotic and lentic systems and how these may affect abundance, distribution, and evolution within aquatic communities. Ecological effects of water pollution and some possible solutions for our increasing world problems. Laboratory will stress use of keys, field methods of water analysis, and applied techniques of individual scientific research.

Prerequisites: ( BIOL106 AND BIOL107 AND CHEM121 )

Corequisites: None

#### BIOL413 Entomology (Min SH: 3, Max SH: 3)

An introduction to the study of insects. Emphasis will be placed on internal and external structure and function, unity and diversity among Class Insecta and Phylum Arthropoda, and applied entomology.

Prerequisites: ( BIOL309 )

Corequisites: None

#### BIOL415 Environmental Policy and Regulations (Min SH: 3, Max SH: 3)

A review of significant United States Federal and Pennsylvania legislation and regulations pertinent to the study, protection and management of our biological resources. The legislation and rulemaking processes relevant to environmental issues will be investigated. The biological basis for resource management decisions and the role of the scientist in advocating, writing and implementing environmental legislation and regulations will be examined in detail.

Prerequisites: ( BIOL309 )

Corequisites: None

#### BIOL421 Marine Mammals (Min SH: 3, Max SH: 3)

A study of the distribution, population ecology, behavior, physiology and adaptations of marine mammals. Student projects will entail collecting physiological and behavioral data at field sites and at facilities studying marine mammals.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

#### BIOL422 Biological Oceanography (Min SH: 3, Max SH: 3)

Investigates the interactions among ocean communities (planktonic, benthic and nektonic) and the marine environment (chemical and physical). The effects of the environment on the distribution and abundance of marine organisms as well as their effect on the environment are emphasized. This class will be taught during summer sessions at the Wallops Island Campus of the Marine Science Consortium by faculty from various member universities.

Prerequisites: ( BIOL106 AND BIOL107 )

Corequisites: None

BIOL425 Environmental Toxicology (Min SH: 3, Max SH: 3)

An introduction to environmental toxicology and an interdisciplinary study of the major classes of pollutants. Focus is on the effects of environmental toxins on living organisms and the ecosystem.

Prerequisites: ( BIOL309 AND CHEM205 ) OR ( BIOL309 AND CHEM220 )

Corequisites: None

BIOL430 Herpetology (Min SH: 3, Max SH: 3)

An overview of amphibians (salamanders, frogs, caecilians) and reptiles (lizards, snakes, tuatara, turtles, crocodilians). Emphasis is on the biology, evolution, ecology, behavior, and reproduction of amphibians and reptiles. Laboratory sessions focus on survey methods, identification, and habitats of amphibians and reptiles.

Prerequisites: ( BIOL106 AND BIOL107 AND BIOL240 )

Corequisites: None

BIOL432 Ecosystems (Min SH: 3, Max SH: 3)

An introduction to contemporary ecosystem science, focusing on two core concepts: energetics and biogeochemistry of ecosystems. This course will explore the interactions of terrestrial ecosystems (vegetative communities, forests, and soils) and aquatic systems (streams and lakes). Case studies and field work will be used to demonstrate the tools and methods by which ecosystem processes can be measured and analyzed.

Prerequisites: ( CHEM121 )

Corequisites: (BIOL309 )

BIOL440 Environmental Microbiology (Min SH: 3, Max SH: 3)

Provides a fundamental knowledge base of general microbiology, microbial ecology, and specific microbial processes essential to many sub-disciplines of environmental microbiology. Through intensive discussions, applied research investigations, and hands-on laboratory- and



field-based experiences, students will be introduced to a variety of topics that are central to understanding microbial diversity and microbial evolution.

Prerequisites: ( BIOL340 AND CHEM205 ) OR ( BIOL340 AND CHEM220 )

Corequisites: None

BIOL450 Biology Senior Seminar (Min SH: 1, Max SH: 1)

A discussion-based course of current biological topics in which students read and critically evaluate scientific writing then present seminars and lead discussions on the articles. Themes and topics will vary with the instructor; thus, students may take this course more than once if the topic differs.

Prerequisites: None

Corequisites: None

CHEM101 Chemistry in the Environment (Min SH: 3, Max SH: 3)

An introduction to chemical principles as they apply to important issues in everyday life. The American Chemical Society Program Chemistry in Context serves as the basis for the course. The laboratory experience emphasizes the scientific method and is designed to reinforce the topics from the lecture. Students make real world measurements as part of investigations of their environment and the applications of chemistry to their lives.

Prerequisites: None

Corequisites: None

CHEM103 The Chemistry of Art (Min SH: 3, Max SH: 3)

An exploration of the intersection of chemistry with the visual arts. Basic principles of chemistry will be applied to the topics of color, paint, paper, clay, glass, metals, photography, and art restoration. Important chemical concepts and safety concerns will be investigated to learn how to properly handle art materials.

Prerequisites: None

Corequisites: None

CHEM105 Forensic Chemistry (Min SH: 3, Max SH: 3)

An introduction to chemical principles as they apply to forensic investigations. By applying the scientific method to these basic principles, students will investigate the role of chemistry in solving crimes. The laboratory experience is designed to reinforce the scientific method and the topics from the lecture. Students make real world determinations as they investigate and apply chemistry to their lives.

Prerequisites: None

Corequisites: None

#### CHEM110 Basic Chemistry (Min SH: 3, Max SH: 3)

Introduces chemical principles as they apply to important issues in everyday life and incorporates chemical principles and problem solving into examples to help students gain an understanding of scientific and technological aspects of the contemporary world. Topics may include the properties of matter, atomic theory, chemical bonding, molecular structure, and types of chemical reactions.

Prerequisites: ( MATH100 )

Corequisites: None

#### CHEM111 Chemistry of Nutrition (Min SH: 3, Max SH: 3)

An introduction to the chemistry of nutrition emphasizing the chemical structure and function of nutrients as they relate to the body. Emphasis is placed on the scientific basis for normal nutritional recommendations for humans. The six major classes of nutrients are studied in detail including dietary needs and an analysis of human risk/benefit.

Prerequisites: ( CHEM110 ) OR ( CHEM2\*\* ) OR ( CHEM4\*\* ) OR ( CHEM120 ) OR ( CHEM121 )

Corequisites: None

#### CHEM120 Principles of Chemistry 1 (Min SH: 4, Max SH: 4)

The first of two semesters of a standard general chemistry sequence. Topics include measurement and dimensional analysis, atomic and molecular structure, mole and stoichiometry calculations, gas laws, thermochemistry, introductory quantum mechanics, electron configuration and periodicity. The chemistry laboratory work emphasizes introductory level techniques and follows several of the lecture topics.

Prerequisites: ( MATH112 ) OR ( MATH141 ) OR ( MATH142 ) OR ( MATH113 )

Corequisites: None

CHEM121 Principles of Chemistry 2 (Min SH: 4, Max SH: 4)

Second of two semesters of a standard general chemistry sequence. Topics include solids and liquids, solutions and solubility, kinetics, equilibrium, acids and bases, spontaneity and free energy, electrochemistry, and nuclear chemistry. The chemistry laboratory work is introductory in nature and follows several of the lecture topics. Qualitative analysis is included as part of the laboratory experience.

Prerequisites: ( CHEM120 )

Corequisites: None

CHEM205 Introduction Organic Chemistry (Min SH: 4, Max SH: 4)

An integrated course covering the properties, reactions, and preparations of both aliphatic and aromatic compounds from the functional group approach with focus on their biological applications. Explanations are given in terms of mechanisms, rearrangements, stereochemistry, and energy diagrams. Laboratory exercises consist of key separation and purification techniques, representative preparations of simple biologically active molecules, and the identification of unknowns by their physical and chemical behavior.

Prerequisites: ( CHEM121 )

Corequisites: None

CHEM220 Organic Chemistry 1 (Min SH: 4, Max SH: 4)

An integrated lecture and lab course covering the properties, reactions, and preparations of both aliphatic and aromatic compounds. The properties of organic compounds are explored from the combined perspectives of functional groups, chemical reactivity, stereochemistry, energy changes, and reaction mechanisms. Lab consists of introduction to techniques of identification, purification, and preparation of organic compounds, and the use of instrumental analysis.

Prerequisites: ( CHEM121 )

Corequisites: None

CHEM221 Organic Chemistry 2 (Min SH: 4, Max SH: 4)

An extension of CHEM220 concepts that underlie the reaction mechanisms and synthesis of the organic compounds encountered in CHEM221. The chemistry of carbonyl compounds and aromatic compounds are major parts of the content. Laboratory experiments emphasize the

synthesis of organic compounds and their identification by their physical and chemical properties. The design of experimental procedures is stressed, and students carry out multi-step processes.

Prerequisites: ( CHEM220 )

Corequisites: None

#### CHEM301 Inorganic Chemistry (Min SH: 3, Max SH: 3)

Introduces fundamental concepts of inorganic chemistry including atomic and molecular structure, bonding theories, group theory, coordination chemistry and descriptive chemistry of the elements.

Prerequisites: ( CHEM221 ) OR ( CHEM205 )

Corequisites: None

#### CHEM302 Introduction to Computational Chemistry (Min SH: 3, Max SH: 3)

An introduction to the field of computational chemistry including molecular mechanical, semi-empirical, ab initio wavefunction, and density functional modeling of chemical systems. This course enables students to use computational chemistry in their studies and to be critical consumers of computational chemistry results in scientific literature.

Prerequisites: ( CHEM221 AND MATH141 )

Corequisites: (CHEM221 ANDPHYS131 ) OR (CHEM221 ANDPHYS171 )

#### CHEM310 Food Chemistry (Min SH: 3, Max SH: 3)

An integrated course applying chemical principles to food systems and applications. Chemical reactions of proteins, lipids, minerals, enzymes, food additives, vitamins, and other constituents are discussed with respect to food quality. Processes which affect color, flavor, texture, nutrition, and safety of food are emphasized. Lecture exercises contain activities focusing on activation and control enzymes, consequences of water migration on food quality, the thixotropic nature of carbohydrates, the generation of non-enzymatic browning, and food emulsification.

Prerequisites: ( CHEM221 )

Corequisites: None

#### CHEM315 Medicinal Chemistry (Min SH: 3, Max SH: 3)

A study of medicinal chemistry with major emphasis on organic chemistry as applied to the principles of drug discovery, drug development, drug-receptor interactions and structure-activity relationships. Aspects of biochemistry and physical-organic chemistry will be covered as necessary to understand the chemistry of drug action and metabolism in the body. Examples from the major classes of drugs will be used to facilitate discussion and examine the role of medicinal chemistry in Western medicine.

Prerequisites: ( CHEM221 )

Corequisites: None

#### CHEM316 Quantitative Analysis (Min SH: 4, Max SH: 4)

An introduction to statistical analysis of experimental data, validation of analytical methods, gravimetric analysis, potentiometric measurements, and electrodes. In addition, advanced examination of stoichiometric calculations, chemical equilibrium, acid-base equilibria, acid-base titrations, and complexometric titrations will be undertaken. Laboratory experimentation involves titrations, gravimetric analysis, electrochemical measurements, calibration of volumetric glassware, and statistical analysis.

Prerequisites: ( CHEM121 )

Corequisites: None

#### CHEM317 Instrumental Analysis (Min SH: 4, Max SH: 4)

An integrated lecture and laboratory course covering the fundamentals of spectroscopy, chromatography, electrochemistry, and mass spectrometry. Lecture topics include data treatment, data interpretation, theory of the underlying principles, and basic operating principles. Special attention is given to how these techniques are used to solve analytical problems, examples being taken from other areas of science. Laboratory experiments focus on the operation, maintenance, and optimization of instrumentation and interpretation of laboratory data.

Prerequisites: ( CHEM316 )

Corequisites: None

#### CHEM320 Chemical Thermodynamics and Kinetics (Min SH: 4, Max SH: 4)

A study of the content and transfer of energy in physical and chemical reactions. The laws of thermodynamics, and the concepts of work, enthalpy, entropy, and free energy are defined and given in a detailed quantitative treatment. The course also provides a detailed introduction to

the topics of kinetics and reaction dynamics. The laboratory portion of the course is designed to provide students experience with a broad range of the topics covered during the course.

Prerequisites: ( CHEM221 AND MATH141 AND PHYS131 ) OR ( CHEM221 AND MATH141 AND PHYS171 )

Corequisites: (CHEM316 ANDPHYS131 ) OR (CHEM316 ANDPHYS171 )

CHEM321 Quantum Chemistry and Spectroscopy (Min SH: 4, Max SH: 4)

An exploration of the application of quantum mechanics to understanding chemical phenomena, with special emphasis on chemical structure and spectroscopy.

Prerequisites: ( MATH142 AND PHYS171 ) OR ( MATH142 AND PHYS131 )

Corequisites: (CHEM221 )

CHEM325 Nuclear Chemistry and Its Applications (Min SH: 3, Max SH: 3)

A study of the principles underlying the nature of radioisotopes, their chemical implications, and the various chemical, biological, and industrial applications of radioisotopes. Particular emphasis will be placed on factors contributing to nuclear instability, the nature of the decay process, the handling and measurement of radioisotopes, and the practical aspects of nuclear power generation.

Prerequisites: ( CHEM220 ) OR ( CHEM205 )

Corequisites: None

CHEM328 Seminar-Science (Min SH: 3, Max SH: 3)

An exploration of various topics in chemistry with an emphasis on the impact of major chemical concepts, discoveries, inventions, and/or paradigms on global or international history, society, and/or culture. Specific topic selection is based on the expertise and interest of the faculty.

Prerequisites: None

Corequisites: None

CHEM330 Chemical Literature (Min SH: 1, Max SH: 1)

Introduces students to important library resources in chemical research (i.e. handbooks, reviews, monographs, compendiums and abstracts). Emphasis will be given to development of systematic library search strategies and information retrieval from library resources. Special

emphasis will be given to instruction in the hands-on use of computerized scientific databases.  
Pre- or Co-requisite: CHEM221 or permission of instructor.

Prerequisites: None

Corequisites: (CHEM221 )

#### CHEM350 Polymer Chemistry (Min SH: 3, Max SH: 3)

A course covering the properties, reactions, and preparations of both aliphatic and aromatic compounds from the functional group approach with focus on their biological applications. Explanations are given in terms of mechanisms, rearrangements, stereochemistry, and energy diagrams. Laboratory exercises consist of key separation and purification techniques, representative preparations of simple biologically active molecules, and the identification of unknowns by their physical and chemical behavior.

Prerequisites: ( CHEM221 )

Corequisites: None

#### CHEM404 Spectroscopic Methods of Molecular Structure Determination (Min SH: 3, Max SH: 3)

An in-depth analysis of spectral data for the purpose of determining the structure of an unknown compound. The theory of each spectroscopic method, sample preparation, instrumentation, and application and limitations of each method will also be discussed. Examples from both organic and inorganic chemistry will be used.

Prerequisites: ( CHEM220 )

Corequisites: None

#### CHEM410 Biochemistry (Min SH: 4, Max SH: 4)

An introduction to modern biochemistry at the molecular level. Emphasis will be given to the structure and function of the major classes of biomolecules (proteins, nucleic acids, carbohydrates and lipids) and the bioenergetics of metabolic pathways. The laboratory portion will include the application of modern biochemical methods of analysis to the problems of: purification and characterization of biomolecules, quantitative measurement of enzyme activities, and the evaluation of metabolic processes.

Prerequisites: ( CHEM221 ) OR ( CHEM205 )

Corequisites: None

#### CHEM415 Biochemistry 2 (Min SH: 4, Max SH: 4)

An extension of Biochemistry with an emphasis on biological synthesis of the building blocks of the major classes of biomolecules. Specifically, it is an overview of the metabolic transformations of fatty acids, complex lipids, amino acids and nucleotides. The course will also provide an introduction to cellular signaling and specialized topics in biochemistry. The laboratory portion will expand on the techniques learned in first semester and research methods by undertaking independent/small group projects.

Prerequisites: ( CHEM410 )

Corequisites: None

#### CHEM430 Advanced Organic Chemistry (Min SH: 4, Max SH: 4)

An in-depth study of organic chemistry with major emphasis on physical aspects as applied to syntheses, spectroscopy, structure elucidation, and reaction mechanisms. The laboratory component will emphasize advanced experimental techniques used in synthesis, mechanism elucidation, and the characterization of organic compounds.

Prerequisites: ( CHEM221 )

Corequisites: None

#### CHEM440 Advanced Inorganic Chemistry (Min SH: 4, Max SH: 4)

Examines major topics in theoretical and descriptive inorganic chemistry including acid-base chemistry, oxidation and reduction, chemistry of transition metals, organometallic chemistry, catalysis, inorganic clusters, solid state and bioinorganic chemistry. The laboratory component of this course emphasizes experimental techniques in the synthesis and characterization of inorganic compounds.

Prerequisites: ( CHEM301 )

Corequisites: None

#### CHEM450 Biophysical Chemistry (Min SH: 4, Max SH: 4)

A discussion of physiochemical principles with a focus concerning their application in the study and understanding of the behavior of biological systems. Broadly, topics will include thermodynamics, chemical equilibrium, kinetics, and spectroscopy. Modern biophysical techniques commonly used for macromolecular characterization will be covered with a focus



on theory and data interpretation. In addition, the laboratory portion of the course will provide a setting for students to utilize biophysical techniques and collect, analyze, and present data.

Prerequisites: ( CHEM410 )

Corequisites: (MATH141 )

#### CHIN101 Chinese 1 (Min SH: 3, Max SH: 3)

An introduction to the basics of the foreign language in question; the course is especially designed for students who wish to spend a semester at a university in a country where the language is spoken. The primary emphasis of the course will be on developing basic listening, reading and speaking skills in the language and increasing the students' awareness of the foreign culture.

Prerequisites: None

Corequisites: None

#### CHIN102 Chinese 2 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building on the material learned in the level I course. Especially designed for students who wish to improve their basic knowledge of the language in order to be able to study at the foreign university that supplied the instructor (completion of this course followed by a semester of study abroad at the university will satisfy the foreign language requirement).

Prerequisites: None

Corequisites: None

#### CHIN201 Chinese 3 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 2 course and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

#### CHIN202 Chinese 4 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 1, 2 and 3 courses and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

#### COMM100 Introduction to Communication (Min SH: 3, Max SH: 3)

Emphasizes the process of communication on the personal, group, and public levels. Students develop abilities to: interact in ways that are both effective and appropriate, demonstrate physical and verbal control while presenting, become more sensitive and aware of self and others, and listen critically to analyze and evaluate the messages of others. Students will consider the art and technical aspects of communication and apply skills and concepts to various communication situations.

Prerequisites: None

Corequisites: None

#### COMM102 Fundamentals of Public Speaking (Min SH: 3, Max SH: 3)

Designed to increase the student's ability to express their ideas both verbally as well as in writing, strengthen delivery competence in a variety of public speaking opportunities, and develop the critical listening skills needed to analyze and evaluate the speeches of others. Public speeches are not only a means of communicating; they are also a form of self-expression and influence within a society.

Prerequisites: None

Corequisites: None

#### COMM103 Small Group Communication (Min SH: 3, Max SH: 3)

Addresses the theory and practice of small group communication. Students will identify and demonstrate the techniques of how to lead and participate in a small group.

Prerequisites: None

Corequisites: None

#### COMM104 Interpersonal Communication (Min SH: 3, Max SH: 3)

Emphasizes understanding and improving habits of human communication. The student will gain insight in the areas of applied interpersonal communication ethics -- skills needed in managing personal, community, and corporate relations in ways that are both effective and appropriate. The student will also display and support interpersonal competencies through a variety of communication mediums, which build communicator versatility.

Prerequisites: None

Corequisites: None

#### COMM119 First Year Seminar for Communication Students (Min SH: 1, Max SH: 1)

Introduces communication majors to the university learning environment and their chosen program of study. Students will learn about the requirements of the Communication program, internship options, career paths, and the competencies and professional behaviors expected of professionals in the field. The course also covers specific learning strategies, classroom technologies, and institutional resources that might help them achieve their goals in academe.

Prerequisites: None

Corequisites: None

#### COMM150 Intro Mass Communication (Min SH: 3, Max SH: 3)

A survey of the American mass media with emphasis on historical development, economic structure, organization, function and effects in society today.

Prerequisites: None

Corequisites: None

#### COMM190 Writing for the Mass Media (Min SH: 3, Max SH: 3)

Examines basic principles of effective multi-media writing, emphasizing in particular the development and organization of ideas relevant to news events and the expression of those ideas in clear expository prose. Students will be introduced to a variety of prose models and write a specified number of news articles. The news writing process includes researching, interviewing, drafting, revising, and submitting in a timely fashion.

Prerequisites: None

Corequisites: None

#### COMM200 Voice and Articulation (Min SH: 3, Max SH: 3)

Improvement of the physical act of speaking through work on diction, projection, vocal quality, pitch, and time factors. Physiological, phonetic, and psychological foundations considered. Students will be introduced to the rudiments of the international phonetic alphabet. Individual and group activities are an integral part of this course. Class attendance is a critical part of the successful completion of this course.

Prerequisites: None

Corequisites: None

#### COMM201 Communication Practicum 1 (Min SH: 1, Max SH: 1)

Provides hands-on skill development related to the student's disciplinary interests within the Communication program. Students majoring in the Journalism, Electronic Media, and Public Relations and Advertising tracks in the Communications program will complete three credits of Practicum during their sophomore and junior years. Each practicum credit requires 24 service hours to an approved student organization.

Prerequisites: None

Corequisites: None

#### COMM202 Communication Practicum 2 (Min SH: 1, Max SH: 1)

Provides hands-on skill development related to the student's disciplinary interests within the Communication program. Students majoring in the Journalism, Electronic Media, and Public Relations and Advertising tracks in the Communications program will complete three credits of Practicum during their sophomore and junior years. Each practicum credit requires 24 service hours to an approved student organization.

Prerequisites: ( COMM190 )

Corequisites: None

#### COMM203 Communication Practicum 3 (Min SH: 1, Max SH: 1)

Provides hands-on skill development related to the student's disciplinary interests within the Communication program. Students majoring in the Journalism, Electronic Media, and Public Relations and Advertising tracks in the Communications program will complete three credits of Practicum during their sophomore and junior years. Each practicum credit requires 45 service hours to an approved student organization.

Prerequisites: None

Corequisites: None

#### COMM208 Communication Theory (Min SH: 3, Max SH: 3)

Surveys dominant theories in interpersonal, group, public, and mass communication. Emphasis is placed on both establishing frameworks that provide a context for each theory and demonstrating how theories help illustrate the process of communication in applied settings.

Prerequisites: ( COMM100 ) OR ( COMM102 ) OR ( COMM103 ) OR ( COMM104 )

Corequisites: None

#### COMM210 Gender and the Mass Media (Min SH: 3, Max SH: 3)

Explores issues and representational practices in the relationship among women, men, and the mass media. Students examine the historical, sociological, psychological, and cultural constructions of gender and the influence of the media upon these processes.

Prerequisites: None

Corequisites: None

#### COMM215 Sports Broadcasting (Min SH: 3, Max SH: 3)

Examination of the industry, history, practice, ethics and theory of sports broadcasting. Particular attention given to sportscasts, play-by-play and color commentaries and production techniques.

Prerequisites: None

Corequisites: None

#### COMM220 Oral Interpretation (Min SH: 3, Max SH: 3)

Designed to improve interpretation and delivery skills in the performance of literature, and to develop the critical listening skills needed to analyze and evaluate the performance of others. Students will complete individual and group work in the selection, analysis, preparation, and presentation of published literary works from prose, drama, and poetry.

Prerequisites: None

Corequisites: None

COMM240 Online Public Relations (Min SH: 3, Max SH: 3)

Examines new media technologies used to publish public relations information on the Internet. Primary foci are gathering data, constructing multi-media public relations releases, and publishing on a website documents with embedded audio and video. Students gain practical experience in delivering information electronically.

Prerequisites: ( COMM190 ) OR ( JOUR190 )

Corequisites: None

COMM250 The Movies Look at the Media Professions (Min SH: 3, Max SH: 3)

A critical examination of the media professions as portrayed in movies. Students analyze and compare film representations of journalism, advertising, public relations, and the entertainment industries with published articles that explore how media professionals and others view the work that they do.

Prerequisites: None

Corequisites: None

COMM290 Multimedia Journalism (Min SH: 3, Max SH: 3)

Helps students to identify, focus, and shape stories for a variety of media. Students will build upon news writing skills developed in COMM190 by concentrating on the use of news gathering techniques, including research and interviewing. Students will write, shoot, report and produce stories for print, online, audio and mobile.

Prerequisites: ( COMM190 )

Corequisites: None

COMM292 Principles of Advertising (Min SH: 3, Max SH: 3)

An introduction to the organization of the consumer advertising industry, contemporary advertising practices, and the key steps involved in creating effective print, broadcast, and digital advertisements.

Prerequisites: None

Corequisites: None

COMM295 Radio Journalism (Min SH: 3, Max SH: 3)

Students will learn to record, edit and produce audio segments suitable for professional broadcast. Students will produce a weekly radio program.

Prerequisites: None

Corequisites: None

#### COMM300 Organizational Communication (Min SH: 3, Max SH: 3)

Designed to examine verbal and written communication that occurs in organizations. Course topics include informal and formal methods of communication, power bases, leadership and corporate communication flow.

Prerequisites: None

Corequisites: None

#### COMM301 Listening and Conflict Management (Min SH: 3, Max SH: 3)

Introduces students to concepts of listening and teaches them how to manage conflicts through a variety of effective methods. Students will develop skills involved in the listening process to increase their understanding of others' thoughts and feelings and gather accurate information. They will overcome barriers to effective listening and be able to provide more accurate responses to questions. Students study and broaden their own conflict management styles. Students learn the principles of mediation and negotiation.

Prerequisites: ( COMM102 ) OR ( COMM103 ) OR ( COMM104 )

Corequisites: None

#### COMM303 Argumentation and Debate (Min SH: 3, Max SH: 3)

Designed to improve analytical skills in construction of arguments, debating skills in defending those arguments, and critical listening skills needed to analyze and evaluate the arguments of others. Students will study thinking, argumentation, and their practical application to extemporaneous debate.

Prerequisites: ( COMM100 ) OR ( COMM102 )

Corequisites: None

#### COMM305 Television Criticism (Min SH: 3, Max SH: 3)

A survey of contemporary critical methods used to examine the aesthetic and sociological aspects of television. Extensive reading in critical literature is supplemented by analyses of selected television programs.

Prerequisites: None

Corequisites: None

#### COMM310 Television Journalism (Min SH: 3, Max SH: 3)

An introduction to the skills of reporting, writing, and assembling audio and visual material for television news. Students use studio and field equipment to prepare, produce, and edit news and sports stories.

Prerequisites: ( COMM190 )

Corequisites: None

#### COMM315 Corporate Video Production (Min SH: 3, Max SH: 3)

An introduction to the planning and production of video programs for businesses and nonprofit institutions. Through course materials and activities, students learn to use video as a promotional tool.

Prerequisites: None

Corequisites: None

#### COMM317 Radio Workshop (Min SH: 3, Max SH: 3)

A combination workshop-seminar that provides direct practical experience in radio production. This course will help students develop skills in producing commercials, PSAs, and audio narratives that include effectively integrated sound effects.

Prerequisites: None

Corequisites: None

#### COMM318 Video Workshop (Min SH: 3, Max SH: 3)

An introduction to the principles and skills associated with effective television performance. The course emphasizes those skills necessary for the practicing television journalist or on-camera host.



Prerequisites: None  
Corequisites: None

#### COMM320 Business Communication (Min SH: 3, Max SH: 3)

Advanced practice in effective speaking and listening: reports and sales presentations, policy speeches, and conference leadership techniques employed in business and industry. Special attention is paid to the vital role management plays in developing, initiating and maintaining effective communication within the business/industrial setting.

Prerequisites: None  
Corequisites: None

#### COMM328 Seminar-Humanities (Min SH: 3, Max SH: 3)

A content-based or situational approach to communication with emphasis on investigation, analysis, and critique. Topics might include, among others, Introduction to Film, Media Literacy, and Media and the Public.

Prerequisites: ( ENGL100 ) OR ( HONR111 )  
Corequisites: None

#### COMM330 Cultural Studies in Mass Communication (Min SH: 3, Max SH: 3)

An examination of issues concerning access and representation in the mass media. Of central interest are the practices of the media industries and their relationships with social change coalitions concerned about media representations of cultural identity including gender, race, ethnicity, class, and sexual orientation.

Prerequisites: ( COMM150 )  
Corequisites: None

#### COMM333 Public Relations (Min SH: 3, Max SH: 3)

The nature and scope of public relations; the principles and techniques underlying the practice of public relations. Emphasis on the public relations practitioner as a communication specialist who explores and maintains channels of communication between organizations and the public.

Prerequisites: ( COMM102 ) OR ( COMM103 )  
Corequisites: None

### COMM340 Advertising Design (Min SH: 3, Max SH: 3)

Advertisements that can be designed on a computer constitute the content of the course. Enticement, composition, and impact form the three theoretical areas upon which advertising design will focus.

Prerequisites: ( COMM190 )

Corequisites: None

### COMM345 Advanced Public Speaking (Min SH: 3, Max SH: 3)

Advanced study of the theory and practice of oral discourse. Projects, assignments, and coursework designed to provide students with the opportunity to develop skills in oral communication beyond the level achieved in Fundamentals of Public Speaking.

Prerequisites: ( MCOM100 ) OR ( SPCH100 ) OR ( SPCH102 ) OR ( SPCH103 ) OR ( SPCH104 ) OR ( COMM100 ) OR ( COMM102 ) OR ( COMM103 ) OR ( COMM104 )

Corequisites: None

### COMM355 Environmental Journalism (Min SH: 3, Max SH: 3)

Presents the writing techniques students need to communicate simply and effectively for the media about science, environment, health and medical topics.

Prerequisites: ( COMM290 )

Corequisites: None

### COMM360 Communication Analysis (Min SH: 3, Max SH: 3)

This course is an analysis of the persuasion that impacts us all, often beneath the level of awareness. Students explore the process and purpose of analyzing messages that rely on verbal and nonverbal symbols that more or less intentionally influence social attitudes, values, beliefs, and actions. Students make connections between the rhetorical message and ideas such as quality, value, goodness, and rightness to ensure that the power of rhetoric is used competently.

Prerequisites: None

Corequisites: None

COMM370 Topics in Communication (Min SH: 3, Max SH: 3)

A topical approach to applied communication practice designed to explore specialized knowledge and skills. Topics might include digital video editing, investigative journalism, special event planning, and social media strategies, among others.

Prerequisites: None

Corequisites: None

COMM375 Persuasion (Min SH: 3, Max SH: 3)

A study of the factors related to attitude-change through oral communication. General theories of persuasion and an introduction to modern experimental research in the area included.

Prerequisites: ( COMM102 ) OR ( COMM103 ) OR ( COMM104 ) OR ( COMM202 )

Corequisites: None

COMM390 Feature Writing (Min SH: 3, Max SH: 3)

Focus is on writing issue-oriented features and personality profiles. Attention given to structure, style, and content of features and to various ways to begin and end features. Also discussed are techniques of fiction writing that can be applied to features.

Prerequisites: ( COMM190 AND ENGL100 ) OR ( COMM190 AND HONR111 )

Corequisites: None

COMM391 Sports Writing (Min SH: 3, Max SH: 3)

A workshop providing direct practical experience in sports writing. Focus is on news gathering and writing techniques. Attention also given to ethics, business and financial aspects of sports, sports columns, investigative sports writing, sports features, and the history of sports writing.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

COMM392 Documentary Film (Min SH: 3, Max SH: 3)

A study of the art and development of documentary film, examining the major documentary film movements and filmmakers.

Prerequisites: None

Corequisites: None

COMM393 News Editing (Min SH: 3, Max SH: 3)

Focus on editing copy and designing news pages for print and web. Attention given to the elements of typography, design, and computer usage in the news room.

Prerequisites: ( COMM190 )

Corequisites: None

COMM400 Communication Capstone Seminar (Min SH: 3, Max SH: 3)

Addresses the process of communication and communication issues as they relate to the public, and practical applications. Students will develop a professional portfolio and explore current issues affecting the industry, including matters of professional ethics and responsibility. Topics will be addressed from the perspective of the student's major emphasis.

Prerequisites: None

Corequisites: None

COMM405 Communication and Responsibility (Min SH: 3, Max SH: 3)

Designed to explore the appropriate and effective use of words and actions as they affect our communication and relationships. We discuss theories and standards by which our communicative acts are chosen and evaluated. We discuss responsible communicative choices we make in order to refine our various communicative paradigms. Finally, this course can help communicators deal with the consequences that result from using language and nonverbal communication competently and ethically. Restricted to students who have completed 60 credits or permission of the instructor.

Prerequisites: None

Corequisites: None

COMM450 Opinion Writing (Min SH: 3, Max SH: 3)

Writing opinion in the form of editorials and reviews. For editorial writing, the course will use a critical thinking model to analyze social issues; for review writing, it will focus on aesthetic issues in various art forms.

Prerequisites: ( COMM190 )

Corequisites: None

#### COMM488 Case Studies in Public Relations (Min SH: 3, Max SH: 3)

A case study approach to examine concrete public relations settings and situations that illustrate the possibilities and limitations of public relations effectiveness. Students explore the range of strategies that businesses, nonprofit organizations, and government agencies have adopted in varied circumstances and learn how to assess the practical and ethical implications of these strategic choices thus developing an effective public relations management perspective.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

#### COMM491 Propaganda and Public Opinion (Min SH: 3, Max SH: 3)

A detailed study of propaganda and public opinion from World War II to the present. Special emphasis is given to the media of propaganda. The course also focuses on propaganda strategies in industrial and non-industrial countries.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

#### COMM493 Online Journalism (Min SH: 3, Max SH: 3)

Examines new media technologies used to communicate newsworthy information over the Internet. Primary foci are gathering data and constructing new forms of news for online and mobile delivery. Students gain practical experience in managing and delivering information electronically.

Prerequisites: ( COMM190 )

Corequisites: None

#### COMM494 Communication Law and Ethics (Min SH: 3, Max SH: 3)

An analysis of the central legal themes relevant to the activities of working journalists: free speech, libel, privacy, copyright, obscenity, courtroom news, and broadcast regulation. Students learn the application of ethical theory to journalism praxis.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

COMM495 Public Relations Writing (Min SH: 3, Max SH: 3)

A writing-intensive course that allows students to develop skills in a variety of specialized public relations tasks targeting specific audiences. Topics might include press releases, media advisories, brochures, newsletters, and fundraising packages.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

COMM496 Advertising Campaign Development (Min SH: 3, Max SH: 3)

Acquaints students with the major phases involved in the development of an advertising campaign, from market research, creative copy writing and advertising design, to media placement and the testing of advertising effectiveness. Students examine and critique specific advertising campaigns and construct a campaign for a specific client as a major course project.

Prerequisites: ( COMM292 )

Corequisites: None

COMP119 Freshman Seminar: Introduction to Computing and Problem Solving (Min SH: 3, Max SH: 3)

Introduces students to the culture and mission of the university and to the field of Computer Science. Students are encouraged to explore the purpose of a college education within an academic discipline and are introduced to learning strategies and study skills for success in the major. Class discussion, active learning, common co-curricular activities, service and/or civic opportunities are incorporated to promote connection with fellow students, faculty, university and the community.

Prerequisites: None

Corequisites: None

COMP150 Introduction to Computers (Min SH: 3, Max SH: 3)

Provides an introduction to computing systems and their applications in modern society. It acquaints students with the organization and operation of computer systems. Students are introduced to a variety of applications such as word processing, spreadsheets, database management, and web development.

Prerequisites: None

Corequisites: None

#### COMP160 Programming 1 (Min SH: 3, Max SH: 3)

An overview of computer programming as a discipline and profession. Students study algorithm design and development using an object-oriented programming language. The emphasis is on Classes, Objects, and Methods, and topics include data types and storage, control structures, functions, arrays and files. This course introduces Object Oriented Design of Software and generic Integrated Development Environment.

Prerequisites: ( MATH112 ) OR ( MATH113 ) OR ( MATH141 )

Corequisites: None

#### COMP161 Programming 2 (Min SH: 3, Max SH: 3)

Continuation of Programming I providing intermediate to advanced programming techniques in the programming language introduced in Programming I. Emphasis is placed on object-oriented techniques and modular design as well as algorithm design involving library objects, advanced techniques for input and output (I/O) and exception handling, and elementary data structures.

Prerequisites: ( COMP160 )

Corequisites: None

#### COMP200 Fundamentals of Networking (Min SH: 3, Max SH: 3)

Introduces fundamentals of computer networks and the Internet. The TCP/IP protocol stack is introduced and concepts are discussed. Application layer protocols used for FTP, Web and email access, DNS etc are studied using network surveillance tools. Transport layer protocols TCP and UDP are investigated. Students learn the concept of IP address assignment, Router configuration and the physical layer. This course will introduce the students to the workings of the Internet Engineering Task Force and the standardization process.

Prerequisites: ( CISC150 ) OR ( COMP119 ) OR ( CISC119 ) OR ( COMP150 )

Corequisites: None

COMP202 Operating System Principles and Administration (Min SH: 3, Max SH: 3)

Focuses on the installation and use of software including a variety of operating systems (OS), virtual machines, disk partitions and application installation. Students will also acquire knowledge on the principles and concepts of operating systems, including processes, threads, scheduling, synchronization, memory management, file systems, and I/O systems.

Prerequisites: None

Corequisites: (COMP160)

COMP205 Web-Based Application Development (Min SH: 3, Max SH: 3)

A survey of business application development using web-based technologies.

Prerequisites: (COMP160)

Corequisites: None

COMP212 Data and Computer Communications (Min SH: 3, Max SH: 3)

An introduction to data communications and networking including Open Systems Interconnection (OSI) protocol stacks. The course presents principles involved in data transmissions primarily with the exchange of data between two directly connected devices. The course also examines various transmission media. Key aspects of transmission such as signal encoding techniques, digital data communication techniques, data link control protocols, and multiplexing are discussed. The course introduces the basics of Wide Area Networks (WAN) and Local Area Networks, both standard and wireless (LAN and WLAN).

Prerequisites: (COMP200 AND MATH112)

Corequisites: None

COMP220 Contemporary Issues in Computing (Min SH: 3, Max SH: 3)

An examination of the legal, ethical, and unethical issues that arise as a result of the use of computers, and the responsibilities that all computer users, including computer scientists, have with regard to these developments.

Prerequisites: (COMP150) OR (COMP160)

Corequisites: None



### COMP225 Mobile Application Development (Min SH: 3, Max SH: 3)

Introduces the tools and techniques used to develop software applications for mobile devices and platforms. The course will examine topics such as user interface design, application portability, web protocols, software services, security and accessibility. The course will emphasize hands-on development using Google's Android platform.

Prerequisites: ( COMP161 )

Corequisites: None

### COMP230 Discrete Structures and Formal Languages (Min SH: 3, Max SH: 3)

Provides the theoretical computer science foundation to support the success of the computing student. This course includes a study of algorithms, graphs, trees, Boolean expressions, logic networks, and formal models of computation.

Prerequisites: ( COMP160 AND MATH107 )

Corequisites: None

### COMP235 Introduction to Data Science (Min SH: 3, Max SH: 3)

Introduces students to the fundamentals of data science. Students will model and analyze business problems using introductory descriptive, predictive, and prescriptive methods. Focus will be on using spreadsheets and statistical software when applying the different methods.

Prerequisites: ( MATH107 AND MATH180 )

Corequisites: None

### COMP240 Game Programming (Min SH: 3, Max SH: 3)

Provides a continuation of the concepts introduced in Programming I from the perspective of 2D game programming. Emphasis is placed on object-oriented techniques and modular design. Common algorithms used in game design are introduced, with a focus on utilizing the data structures and generics provided by the Java standard runtime library. Quality assurance, concurrent programming, event-driven programming, and graphical user interface programming are also covered.

Prerequisites: None

Corequisites: None

COMP245 Introductory Programming for Data Science (Min SH: 3, Max SH: 3)

Introduces students to programming focusing on the languages and tools used in data science. The course will cover basic programming concepts (variables, input/output, control structures, etc.) and provide an introduction to the tools used in data science.

Prerequisites: ( MATH107 AND MATH112 ) MATH107 OR ( MATH107 AND MATH113 ) OR ( MATH107 AND MATH141 ) OR ( MATH107 AND MATH180 ) MATH107 MATH107

Corequisites: None

COMP250 Advanced Microcomputer Applications (Min SH: 3, Max SH: 3)

Teaches students how to use personal productivity software (including but not limited to word processors, spreadsheets, and databases), to collect data, manage data, analyze data, solve problems and effectively communicate results.

Prerequisites: ( COMP150 AND MATH107 ) OR ( CISC150 AND MATH107 )

Corequisites: None

COMP255 Database Design (Min SH: 3, Max SH: 3)

Introduces students to database design at the enterprise level. Coverage includes the development of logical and conceptual models, translation into the internal model using Structured Query Language (SQL), and creation of database queries.

Prerequisites: ( CISC250 ) OR ( COMP160 ) OR ( COMP250 )

Corequisites: None

COMP260 Information Technology Project Management (Min SH: 3, Max SH: 3)

An introduction to fundamentals of project management using both concept and application. A generic Information Technology Project Methodology (ITPM) is used. The nine areas of the Project Management Institute's Project Management Body of Knowledge (PMBOK) are incorporated.

Prerequisites: ( COMP160 ) OR ( COMP255 )

Corequisites: None

### COMP300 Data Structures and Algorithms (Min SH: 3, Max SH: 3)

Introduces the fundamental concepts of data structures, abstractions for organizing and processing data, and the algorithms that evolve from them. Topics include basic data structure types (including stacks, queues, linked lists, hash tables, trees, heaps and graphs) and their applications, algorithms for searching and sorting, the use of object and generic programming techniques for implementation, algorithm analysis and algorithm design strategies including recursion and greedy approaches.

Prerequisites: ( COMP161 )

Corequisites: None

### COMP302 C/C++ for Systems Programming (Min SH: 3, Max SH: 3)

Introduces students to C and C++ and includes both procedural and object-oriented programming. Emphasis is placed on the use of Application Programming Interfaces (API) for use with systems, network, and graphics applications.

Prerequisites: ( COMP161 )

Corequisites: None

### COMP304 Data and Computer Communications (Min SH: 3, Max SH: 3)

Introduces communications architectures used in business and services industries. The network is viewed from an end-to-end perspective as a system of cooperating functional blocks. The course covers Public Switched Telephone Network, Voice over IP, Wireless Wide Area Networks, Satellite communications and WAN/MAN technologies using MPLS. Security frameworks, network management, protocol vulnerability, optimization techniques, and capacity analysis are topics covered in this course.

Prerequisites: ( CISC200 ) OR ( COMP200 )

Corequisites: None

### COMP305 Database Application Development (Min SH: 3, Max SH: 3)

An introduction to the development of software applications incorporating database management systems. Topics include the development of user and system requirements, analysis of work and data flow, database design and the application of Agile project management methods.

Prerequisites: ( COMP205 AND COMP255 )

Corequisites: None

#### COMP308 Wireless Networking (Min SH: 3, Max SH: 3)

An introduction to the fundamentals of wireless communications and the evolution of wireless networks from the first generation to LTE advanced. This course also offers various contents of wireless channel management such as radio propagation and fading models, channel allocation spread spectrum, fundamentals of cellular communications, multiple access technologies, and various wireless networks. Simulation of wireless channels with various operational environments will be an integral part of this course.

Prerequisites: ( COMP200 AND COMP212 )

Corequisites: None

#### COMP312 Introduction to Cyber Security (Min SH: 3, Max SH: 3)

An introduction to the cyber security principles, terminologies and practices used in the cyber-attacks including techniques for identifying, detecting and protection the cyber-attacks. Students will learn network and computer security, security technology, threat identification, detection and prevention mechanisms, and the legal and ethical issues associated with network security.

Prerequisites: ( COMP160 AND COMP200 )

Corequisites: None

#### COMP315 Network Programming (Min SH: 3, Max SH: 3)

Provides students the necessary skill-set to design and implement software that employ Internet Protocols at various layers of the standards-based stack. Students will be introduced to the socket Application Programmer Interface (API), the transport layer, raw sockets that allow network layer programming, and specialized libraries that makes packet creation and injection possible at the data link layer. These skills will prepare students to design and build prototypes operating at various layers of the protocol stack.

Prerequisites: ( CISC200 ) OR ( COMP200 )

Corequisites: None

#### COMP322 Database System Administration (Min SH: 3, Max SH: 3)

Introduces students to installing and managing a database management system. Topics include installation, performance monitoring and tuning, user management, security, physical storage and backup and recovery techniques.

Prerequisites: ( CISC255 AND COMP202 ) OR ( COMP202 AND COMP255 )

Corequisites: None

#### COMP325 Advanced SQL (Min SH: 3, Max SH: 3)

Introduces students to advanced topics in Structured Query Language (SQL) such as subqueries, correlated queries, query tuning, and programming languages extensions (Oracle's PL/SQL), as well as topics in data control language.

Prerequisites: ( COMP255 )

Corequisites: None

#### COMP335 Advanced Networking (Min SH: 3, Max SH: 3)

Offers advanced technical insights in networking protocols and standards. Students learn multiple scheduling algorithms and MAC (Media Access Control) layer protocols in detail. Routing protocols and algorithms are discussed, analyzed, and evaluated in detail. Network protocols and supporting services are discussed and implemented in detail. Transport layer protocols and associated services are discussed and practiced in the labs.

Prerequisites: ( COMP200 AND COMP212 )

Corequisites: None

#### COMP340 Data Mining (Min SH: 3, Max SH: 3)

Introduces students to methods used to prepare, analyze, and extract useful information from large data sets. Topics include data cleansing; data warehouses; building models using data mining techniques such as association, clustering, classification, and regression; and data visualization.

Prerequisites: ( COMP235 AND COMP255 )

Corequisites: None

#### COMP345 Advanced Programming for Data Science (Min SH: 3, Max SH: 3)

Provides an in-depth course in programming applications in data science using programming languages appropriate for data analysis and scientific computing with large data sets such as R or Python.

Prerequisites: ( COMP160 AND MATH180 ) OR ( COMP160 AND MATH141 ) OR ( COMP245 AND MATH180 ) OR ( COMP245 AND MATH141 )

Corequisites: None

#### COMP400 Computer Architecture (Min SH: 3, Max SH: 3)

Designed to give students an understanding of the organization and relationship of components of computer systems. Concepts discussed include analysis and design of digital circuits, design of major components of computer systems, and interface of software and hardware in the control of hardware components.

Prerequisites: ( COMP255 )

Corequisites: None

#### COMP402 Algorithm Analysis and Design (Min SH: 3, Max SH: 3)

Provides a survey of classic and modern computer algorithms, demonstrates techniques to analyze algorithm performance and illustrates the design methodologies used to develop computer algorithms.

Prerequisites: ( COMP300 AND MATH205 AND MATH211 )

Corequisites: None

#### COMP405 Software Engineering (Min SH: 3, Max SH: 3)

An introduction to the engineering principles and practices used in the process of developing usable, reliable, efficient, and maintainable software systems. Students will learn both classic and agile software development models and the process used in these models including specification, design, prototyping, implementation, integration, verification and validation.

Prerequisites: ( COMP300 )

Corequisites: None

#### COMP407 Network and Security Systems Administration (Min SH: 3, Max SH: 3)

Imparts skills necessary for configuring, optimizing and administering computer networks and associated security mechanisms. Course includes the configuration of local area networks (LAN), wide area networks (WAN), wireless networks, network management protocols and security frameworks. The course provides a hands-on approach to using open source networking and security software for managing administration, networking, and wireless infrastructures.

Prerequisites: ( COMP308 AND COMP312 AND COMP335 )

Corequisites: None

#### COMP410 Machine Learning and Robotics (Min SH: 3, Max SH: 3)

Introduces algorithms that allow computers to learn and improve based on the analysis of empirical data gained from experience. Machine learning algorithms will be developed and applied in areas such as gaming and robotics.

Prerequisites: ( COMP300 )

Corequisites: None

#### COMP412 Network Security (Min SH: 3, Max SH: 3)

Introduces the concepts of network security and its applications and standards. This course emphasizes the operation of secure frameworks, system level security and the use of secure protocols. Topics include cryptography; secure applications and secret key management frameworks; intrusion detection; legal and ethical issues, and the dynamics of malicious software. An overview of open standards in this area is also included in this course.

Prerequisites: ( COMP308 AND COMP312 AND COMP335 )

Corequisites: None

#### COMP415 Structure Programming Languages (Min SH: 3, Max SH: 3)

Study of language design, language processors, syntax, and semantics. What makes a language good or bad and similarities in different languages? Brief introduction to a variety of high-level languages, such as Pascal, C, SNOBOL, PROLOG, ADA, LISP, MODULA-2, which contain advanced features.

Prerequisites: ( COMP300 )

Corequisites: None

### COMP425 Advanced Database Architectures (Min SH: 3, Max SH: 3)

Provides an in-depth analysis of the various forms of database management system (DBMS) architectures in use today. Models include standard systems such as relational and object-oriented DBMS as well as the newest so-called NoSQL or New SQL architectures including Key-Value, Document, Column-Family and Graph DBMS.

Prerequisites: ( COMP255 )

Corequisites: None

### COMP430 Interactive Graphics Programming (Min SH: 3, Max SH: 3)

An introduction to the theory and practice of interactive graphics programming. Emphasis will be placed on the use of Application Programming Interfaces (APIs) that are available across different systems. In addition to applications programming, topics include interaction with input devices, geometric transformations and viewing modeling of curves and surfaces, basic lighting and shading, animation, and rendering.

Prerequisites: ( COMP161 )

Corequisites: None

### COMP435 Next Generation Networks and Services (Min SH: 3, Max SH: 3)

Introduces Next Generation Networking and Services to the students. This course offers an introduction to system architecture, components and system functionalities of Software Defined Networking (SDN), Network Function Virtualization (NFV), Cloud Computing, Internet of Things (IoT).

Prerequisites: ( COMP308 AND COMP335 )

Corequisites: None

### COMP465 Data Base Management Systems (Min SH: 3, Max SH: 3)

An examination of the various levels of organization of data base systems including the hardware level (state-of-art media, devices, channels, controllers), the physical representation of data, the logical organization of data and the overall structure of large scale information processing systems. A survey of commercial data management products. Applications to management planning and control are included.

Prerequisites: ( COMP300 )

Corequisites: None



COMP475 Senior Capstone Seminar (Min SH: 3, Max SH: 3)

A study of major concepts and topics in Computer Science and Information Systems that encompass the student's concentration of study. As a capstone seminar, this course is an integrating experience that requires students to apply knowledge and skills gained from previous coursework in both the core and their concentration.

Prerequisites: ( COMP200 AND COMP230 AND COMP255 )

Corequisites: None

COMP480 Special Problems (Min SH: 1, Max SH: 3)

An in-depth investigation of aspects of computer science. Topics to be determined prior to the semester in which the course is offered.

Prerequisites: ( COMP161 )

Corequisites: None

CRJS102 Introduction to Criminal Justice (Min SH: 3, Max SH: 3)

Examines the history, organization, and functions of various components of the criminal justice system and focuses on the interrelationships among law enforcement agencies, courts, and correctional processes and institutions. Critical thinking is applied to the criminal justice system and its practices.

Prerequisites: None

Corequisites: None

CRJS119 Freshman Seminar (Min SH: 1, Max SH: 1)

Introduces students to the culture and mission of the University, as well as the University services available to students. Students are also exposed to the Criminal Justice major, with specific focus on required and elective coursework, internship options, and early career exploration. Students will engage in active learning and the development of effective study skills.

Prerequisites: None

Corequisites: None

### CRJS205 Drug Abuse (Min SH: 3, Max SH: 3)

An introduction to the use and abuse of drugs in America. The history of such use and abuse, the pharmacology and legalization or criminalization of such drugs, the social response to drug use and abuse, effects of drugs on the body and the role of law enforcement are considered.

Prerequisites: ( CRJS102 )

Corequisites: None

### CRJS207 Hate Crimes (Min SH: 3, Max SH: 3)

Examines the broad scope and issues that foster hate crimes including how these criminal acts impact individuals as well as communities. Emphasis is placed on recent developments, topics and current research, court cases and statistics from a variety of sources.

Prerequisites: ( CRJS102 )

Corequisites: None

### CRJS210 Diversity in Criminal Justice (Min SH: 3, Max SH: 3)

Encompasses a critical examination of the issues and problems relating to the administration of justice in a culturally diverse society. Emphasis is placed on the study of gender, race, class, sexual orientation, and ethnicity and the respective challenges these diverse characteristics pose in the various agencies of the criminal justice system. Emphasis is also placed on the opportunities and challenges of providing criminal justice services within a multicultural society. Theoretical perspectives will be included.

Prerequisites: ( CRJS102 )

Corequisites: None

### CRJS215 American Gangs (Min SH: 3, Max SH: 3)

A study of the social and cultural history of American gangs including the influence and relationship between national, regional and local gangs. This course includes evaluation of gang identification and membership. Emphasis is placed on growing concern within the criminal justice community of the influence and spread of youth gangs and growing hybridization and migration of gangs in terms of location, member diversity and organization. Criminological theories of youth gang involvement will also be addressed.

Prerequisites: ( CRJS102 )

Corequisites: None

CRJS217 Women and Crime (Min SH: 3, Max SH: 3)

A study of the nature and extent of issues relating to women and criminal justice. The content includes a focus on crimes committed by women, theories of female criminality, processing of women offenders through the criminal justice system, the response of police and court officials to women as victims of crime, and opportunities for women as employees in criminal justice agencies.

Prerequisites: ( CRJS102 )

Corequisites: None

CRJS220 Introduction to Conservation Law Enforcement (Min SH: 3, Max SH: 3)

An introduction to the theory and practice of conservation law enforcement. Students will learn about the conservation law enforcement officer's role and duties in enhancing, protecting, and conserving natural areas and wildlife in the United States, with special focus on Pennsylvania. Attention is given to relevant and specific statutory provisions and regulations pertaining to natural resource protection and conservation. This course will also detail the training requirements and the unique set of risks inherent in this profession.

Prerequisites: ( CRJS102 )

Corequisites: (SOCI101 ) OR (CRJS102 )

CRJS240 Law Enforcement (Min SH: 3, Max SH: 3)

Examines the philosophical and historical background, Constitutional limitations, objectives, and processes in the enforcement of law. The nature and responsibilities of law enforcement are discussed and evaluated, including police accountability, civil liability, selection process, stress, and multicultural issues. Critical thinking and ethical decision making in law enforcement situations are developed through case analysis, exercises and simulations.

Prerequisites: ( CRJS102 )

Corequisites: None

CRJS260 Criminal Law (Min SH: 3, Max SH: 3)

Focuses on criminal law and practical application of the law. Specific emphasis on the parameters of criminal law, general principles of criminal liability, defenses to criminal liability,

and definition of the different types of criminal offenses. The course emphasizes practical application of the law.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS290 World Criminal Justice Systems (Min SH: 3, Max SH: 3)

Considers issues related to criminal justice from the perspective of a number of nations. The course is intended to enable students to develop a creative approach to American criminal justice by seeing these issues are dealt with in other cultures.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS300 Forensic Criminology (Min SH: 3, Max SH: 3)

Designed to provide students with an in depth study of the concepts of profiling, behavioral analysis, and threat assessment. The course examines a variety of serious offenses such as serial murder, serial rape, school violence, workplace violence and child abduction. Emphasis will be placed upon the underlying psychological factors and societal stressors that contribute to the above events.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS301 Juvenile Justice (Min SH: 3, Max SH: 3)

A study of major components of the juvenile justice system in the United States. Emphasis is placed on major components of the juvenile justice system including law enforcement, prosecution, courts, and corrections. Additional emphasis is placed on historical origins and philosophy of juvenile justice and evolution of reforms in juvenile justice. An overview of the legal framework in which the juvenile justice system operates highlights differences between adult and juvenile case processing.

Prerequisites: ( CRJS102 AND SOCI101 )

Corequisites: None

#### CRJS302 Criminology (Min SH: 3, Max SH: 3)

An examination of the development of criminological theory including historical influence, underlying premises and corresponding social responses to crime. Students will apply and analyze formal criminological theory in the examination and explanation of criminal behavior. Students will also examine the role that criminological theory plays in social science research and public policy development.

Prerequisites: ( CRJS102 AND SOCI101 )

Corequisites: None

#### CRJS304 Criminal Justice Ethics (Min SH: 3, Max SH: 3)

Examines prominent moral and ethical issues faced by criminal justice practitioners in the field of policing, law, corrections, and research. Emphasis will be on the application of moral and ethical theories to decision making. Students will conduct detailed examinations and evaluations of ethical issues and apply various ethical theories, codes, and canons to arrive at moral and ethical decisions.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS305 Corrections (Min SH: 3, Max SH: 3)

Studies the major components of the correctional system including prisons, jails, and community corrections. Emphasis is placed on understanding the history, use, and philosophy of punishment, including an examination of sentencing models for criminal offenders. Additionally, students will examine methods of treatment, supervision, management, and reentry of offenders. Correctional management, supervision, and treatment of special offender populations is also emphasized.

Prerequisites: ( CRJS102 AND SOCI101 )

Corequisites: None

#### CRJS309 Environmental Justice (Min SH: 3, Max SH: 3)

Explores prominent contemporary environmental issues. Engages students in analysis of various laws and policies developed to address key environmental threats, including policy and statutes related to the following: natural resource management, clean air and water, and waste disposal. Specific attention is given to development and analysis of environmental laws and policy.

Prerequisites: ( CRJS102 )

Corequisites: None

### CRJS310 Criminal Investigation (Min SH: 3, Max SH: 3)

Introduces students to the fundamental principles and concepts of the criminal investigative process. This course applies the procedures used in criminal investigations, including problem solving and scientific approaches to solving crimes. It is both a didactic (classroom lecture) and experiential (outdoors/hands on experience) with emphasis placed on the fundamental and advanced features of investigations.

Prerequisites: ( CRJS102 AND CRJS240 )

Corequisites: None

### CRJS312 Media Portrayals of Crime (Min SH: 3, Max SH: 3)

An examination of the portrayal of crime in the media (television, film, newspapers, music, video games, electronic/internet, social media). This includes but is not limited to: victims, offenders, criminal justice practitioners, and the criminal justice system. Of importance is how the media select what is newsworthy and influence public and political perception of criminal justice issues. Media influences on theoretical explanation for crime and criminal justice policies will also be examined.

Prerequisites: ( CRJS102 )

Corequisites: None

### CRJS315 Terrorism in the 21st Century (Min SH: 3, Max SH: 3)

A study of the origin and history of terrorism and its conceptual and theoretical framework in the world. This course provides an emphasis on the pre-1980's historical development of the phenomenon of terrorism and the role that this history plays in terrorism today. An overview and analysis of the major active modern terrorist groups and their respective philosophies are presented.

Prerequisites: ( CRJS102 )

Corequisites: None

### CRJS320 Topics in Criminal Justice (Min SH: 3, Max SH: 3)

Introduces in-depth topics relevant to the varied fields of criminal justice and aspects of the criminal justice system not otherwise substantially covered in existing courses, or which are of current topical interest. May be repeated for credit.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS322 Rural Criminology (Min SH: 3, Max SH: 3)

Examines crime and criminal justice issues from a rural perspective, including criminal offenses, victimizations, and recidivism. Special emphasis will be placed on offender processing in rural communities and challenges faced by rural offender populations as well as rural criminal justice practitioners. Specifically, the following topics will be covered in relation to rural communities: policing, courts, probation/parole, corrections, drug use, and green criminology among others. Throughout the course, comparisons will be made between rural and urban communities to illustrate the different impacts that crime and justice policies have on these areas.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS325 Community Corrections (Min SH: 3, Max SH: 3)

A study of community-based corrections to include offenders under legal restraint in community-based settings. The course examines the practices and programs used to supervise justice-involved individuals including pretrial diversion, restorative justice models, risk assessment and treatment programming, intermediate sanctions, and offender reentry programs. Special offender populations will also be discussed.

Prerequisites: ( CRJS102 )

Corequisites: None

#### CRJS330 World Criminal Justice Systems (Min SH: 3, Max SH: 3)

A study of the issues related to criminal justice from the perspective of a number of nations. The course is intended to enable students to develop a creative approach to American criminal justice by examining how issues such as policing, courts, and corrections are dealt with in other countries and cultures.

Prerequisites: ( CRJS102 )

Corequisites: None

CRJS335 Homeland Security (Min SH: 3, Max SH: 3)

Provides an overview of the history, function, and components of homeland security in the

Prerequisites: None

Corequisites: None

CRJS340 Police Management and Supervision (Min SH: 3, Max SH: 3)

Provides an understanding of the principles and practices of police management and supervision. It includes an examination of the functions and roles of supervisors, interpersonal communications, psychological aspects of supervision, discipline, handling complaints, and dealing with staffing issues.

Prerequisites: ( CRJS102 )

Corequisites: (CRJS240 )

CRJS360 Criminal Procedure (Min SH: 3, Max SH: 3)

A consideration of the procedures the criminal justice professional must use in implementing the criminal law. The course primarily focuses on the Fourth, Fifth, Sixth, and Fourteenth Amendments to the United States Constitution. The course examines issues related to the following: search and seizure, warrant requirements, right to counsel, pre and post-trial proceedings, and relevant case law.

Prerequisites: ( CRJS102 )

Corequisites: None

CRJS425 Senior Seminar in Criminal Justice (Min SH: 3, Max SH: 3)

A capstone course for Criminal Justice majors. It integrates knowledge acquired throughout the Criminal Justice program in preparation for real world experiences. Emphasis is placed on critical thinking, research, and communication skills. The process of obtaining employment in the criminal justice system is also a major emphasis of this course.

Prerequisites: ( CRJS302 AND CRJS490 )

Corequisites: None

CRJS490 Criminal Justice Research (Min SH: 3, Max SH: 3)



A study of research methods used in criminal justice including quantitative and qualitative paradigms. This course includes an evaluation of the scientific method; sampling; reliability; validity; and the relationship of statistics, theory, and research. Emphasis will be placed on the use of various types of research in the criminal justice discipline.

Prerequisites: ( CRJS302 AND MATH107 )

Corequisites: None

CVED200 Introduction to Deliberative Public Learning (Min SH: 3, Max SH: 3)

Students are introduced to the theory and practice of deliberative citizen discourse in a democracy. The course links study of theory with participation in actual public forums. Principles of deliberative discourse are studied in relation to theories of democracy and then applied in public forums. Students become effective moderators in public deliberative forums and interpreters of results. This course also prepares students for more advanced study in the theory and practice of civic engagement and public scholarship.

Prerequisites: None

Corequisites: None

DANC100 Beginning Modern Technique (Min SH: 3, Max SH: 3)

Offering an overview of modern technique styles on the beginning level constitutes the core of this course. Students will develop an understanding and appreciation for dance as a performing art. Through classroom activities the student's experience, knowledge, and perspective of the creative process of dance will be enhanced. Examination of Pioneer Modern Dancers will increase physical understanding of concepts and objectives of the class. Writing skills will be developed in response to videos, class discussions, research, and live performances.

Prerequisites: None

Corequisites: None

DANC105 Basic Ballet Technique (Min SH: 3, Max SH: 3)

Designed to teach basic skills in classical ballet, Basic Ballet Technique will increase the student's understanding of this movement style as a participant and an observer. It will also help students to develop an appreciation for this art form. An emphasis will be placed on understanding of anatomy and kinesiology, proper alignment, increase flexibility, and building technical strength. Most classes will be movement based. Lectures, class exercises, exams, and papers will examine the history, practice and theory of ballet.

Prerequisites: None

Corequisites: None

#### DANC200 Intermediate Modern Technique (Min SH: 3, Max SH: 3)

Develops physical understanding of modern technique styles on the intermediate level with attention to the elements of dance - time, space, and energy. Designed to create a greater understanding and appreciation for dance as a performing art. Examination of pioneer modern dancers and post-modern figures to increase physical understanding of concepts and objectives of the class. Writing skills are developed in response to videos, class discussions, research, and live performances.

Prerequisites: None

Corequisites: None

#### DANC205 Intermediate Ballet Technique (Min SH: 3, Max SH: 3)

Designed to teach intermediate skills in classical ballet technique, this course emphasizes a practical understanding of proper alignment, musicality, and performance energy. Studio time includes learning, refining, and strengthening these skills into longer movement combinations. Most classes are movement based. Examines the history, practice, and theory of ballet.

Prerequisites: None

Corequisites: None

#### DANC210 Dance Composition 1 (Min SH: 3, Max SH: 3)

Provides practical experience in manipulating the tools of choreography, exploration of compositional devices, and development of solos and small group works through improvisation, problem-solving, and cooperative assignments. Visual skills are enhanced when critiquing dances.

Prerequisites: None

Corequisites: None

#### DANC300 Dance Integration for Elementary Education (Min SH: 3, Max SH: 3)

Gives an awareness and understanding of how to teach elementary curricular concepts through dance. Students use traditional educational theories as a base for developing lesson plans through interactive teaching methods utilizing the performing arts.

Prerequisites: None

Corequisites: None

#### DANC301 Advanced Ballet Technique (Min SH: 3, Max SH: 3)

Refinement of technical skills in Classical Ballet at the advanced level. Mastery of kinesthetic, expressive, and aesthetic principles of contemporary ballet at an advanced level. Emphasizes a practical understanding of proper alignment, musicality, and performance energy. Studio time includes learning, refining, and strengthening these skills through performance of advanced movement combinations. Most classes are movement based. Examines the history, practice, and theory of ballet.

Prerequisites: ( DANC105 AND DANC205 )

Corequisites: None

#### DANC302 Dance in Western Culture (Min SH: 3, Max SH: 3)

Through theoretical analysis and practical application this course examines the historical development of Western theatrical dance from European peasants to Renaissance Court dances to trends in the 21st Century. Socio-cultural influences and contributions of artists are investigated, including the religious, political, and performative functions of dance in Western Culture.

Prerequisites: None

Corequisites: None

#### DANC303 Advanced Modern Technique (Min SH: 3, Max SH: 3)

Refinement of technical skill in modern dance at the advanced level, including complex movement capabilities, rhythmic structure, spatial relationships, with emphasis on aesthetic and expressive qualities that lead to performance. Designed to create a greater understanding and appreciation for dance as a performing art and humanity. Writing skills are developed in response to videos, class discussions, research, and live performances.

Prerequisites: ( DANC100 AND DANC200 )

Corequisites: None

### ECED100 Introduction to Early Childhood Education (Min SH: 3, Max SH: 3)

An examination of the historical, theoretical, and developmental foundations for young children, birth to 4th grade. While providing an orientation to early education of young children, topics will include the history of education, school law, ECED programs, current issues, families, and community.

Prerequisites: None

Corequisites: None

### ECED105 Becoming a Teacher Leader (Min SH: 3, Max SH: 3)

Designed for those currently working in early childhood settings. Students are introduced to what it means to be an ethical professional and leader in the field of Early Childhood Education. Exploration of the field's history provides the basis for development of a personal philosophy of education. Students also explore the importance of cultural competence and collaboration with peers and families in the implementation of effective educational programs. Technology is utilized to explore these issues.

Prerequisites: None

Corequisites: None

### ECED110 Child Development and Brain Building Science (Min SH: 3, Max SH: 3)

Designed for those who are currently working in early childhood settings. The course covers foundational knowledge of developmental trajectories of children from birth to age 5 with an emphasis on brain development. Students will learn how to create early childhood environments that promote physical, language, social and emotional, and cognitive development. Students will also explore the key roles individual differences, family, and socio-cultural context play in development, and acquire strategies to build relationships that support each child's individual development.

Prerequisites: None

Corequisites: None

### ECED119 First Year Seminar for Education Students (Min SH: 1, Max SH: 1)

Designed to embed education program requirements into a required course and to support student achievement of Education program requirements. This course also reviews campus

services and certification requirements, provides students with an overview of teacher education at Lock Haven University and helps them develop effective learning skills for college.

Prerequisites: None

Corequisites: None

#### ECED150 Diversity in Early Childhood Education (Min SH: 3, Max SH: 3)

An introduction to diversity, multicultural and global education. Students will explore their personal attitudes about global and cultural diversity impacting PreK-Grade 4 education. They will consider their own family history and consider how it may influence their effectiveness as teachers of children from international and diverse backgrounds. They will be introduced to effective instructional strategies and resources for global and multicultural education from birth through 4th grade.

Prerequisites: ( PSYC102 )

Corequisites: None

#### ECED200 Observing and Assessing Young Children (Min SH: 3, Max SH: 3)

An introduction to observing, documenting and assessing young children, aged birth-five years, using formal and informal assessment tools across all areas of development. This course requires 20 hours of observation in a preschool/preprimary setting. The content of this course relates to standards of the National Association for the Education of Young Children (NAEYC), the Pennsylvania Department of Education (PDE) and the Interstate New Teacher Assessment and Support Consortium (INTASC).

Prerequisites: None

Corequisites: None

#### ECED204 Primary Reading (Min SH: 3, Max SH: 3)

An introduction to theories and methods for helping primary grade children acquire reading and writing skills. The focus of this course is to provide students with information specific to children from 1st through 4th grade. Students will learn to: assess, instruct, and support primary children's reading and writing development; write appropriate activity plans; identify and choose appropriate literature for primary children; and integrate children's reading and writing development with children's literature across multiple curricular areas. Students will complete 10 hours of observation in a primary school setting.

Prerequisites: ( ECED212 )

Corequisites: None

ECED205 Positive Behavior Support for Young Children (Min SH: 3, Max SH: 3)

Designed for those who are currently working in early childhood settings. Students learn to utilize evidence-based strategies for promoting social and emotional development and preventing and addressing challenging behaviors in preschool-aged children. Through course readings, discussions, activities, and related experiences, participants will learn about a variety of these research-based practices.

Prerequisites: None

Corequisites: None

ECED212 Language Development in Early Childhood (Min SH: 3, Max SH: 3)

Designed to provide a foundation of basic knowledge regarding language development in young children, including dual language learners/English language learners. Observations and participation with young children are required.

Prerequisites: ( ECED100 AND PSYC111 ) OR ( ECED100 AND PSYC102 )

Corequisites: None

ECED220 Emerging Mathematics and Science for Children Birth through Age 4 (Min SH: 3, Max SH: 3)

Addresses the acquisition of knowledge and skills related to the development of mathematics and science concepts for preprimary children.

Prerequisites: ( ECED100 )

Corequisites: None

ECED225 Beginning Literacy (Min SH: 3, Max SH: 3)

An introduction to theories and methods for helping young children acquire literacy skills. The focus of this course is to provide students with information specific to children from Pre K through Kindergarten. Students will learn to assess and support young children's literacy, write appropriate activity plans, identify and choose appropriate picturebook literature for young children, and integrate children's literacy skills development and children's picturebook literature with multiple curricular areas.

Prerequisites: ( PSYC102 ) OR ( PSYC111 )

Corequisites: None

ECED230 Family, School and Community Collaboration (Min SH: 3, Max SH: 3)

An introduction to the complex social, cultural and family factors that influence children's development and learning, as well as, collaboration across family, school and community.

Prerequisites: ( ECED100 )

Corequisites: None

ECED240 Topics in PreK-4/Early Childhood Education (Min SH: 2, Max SH: 2)

Designed to review the PreK-4/Early Childhood Education program requirements for the developing portfolio. This Topics course will include an opportunity for students to observe children in diverse populations, discuss special topics in the field, and complete a framework for the developing portfolio.

Prerequisites: None

Corequisites: None

ECED325 Assessment and Evaluation in Early Childhood Education (Min SH: 3, Max SH: 3)

Designed to address the acquisition of knowledge and skills related to the development, as well as the interpretation, of assessments used in Early Childhood classrooms.

Prerequisites: None

Corequisites: None

ECED326 Positive Classroom Culture: Child Guidance and Classroom Management (Min SH: 3, Max SH: 3)

An introduction to constructing a developmentally appropriate and effective approach to positive classroom culture for grades PreK-4 that focuses on child guidance and classroom management. The content of this course relates to standards of the National Association for the Education of Young Children (NAEYC), the Pennsylvania Department of Education (PDE), and the Interstate New Teacher Assessment and Support Consortium (INTASC).

Prerequisites: None

Corequisites: None

ECED331 Planning and Administering Early Childhood Programs: Fostering Partnerships w/Fam and Communts (Min SH: 3, Max SH: 3)

Designed to exam the principles of effective program design and administration appropriate for infants to kindergarten in a variety of settings. Content includes child development theory, educational practice and governmental regulations.

Prerequisites: ECED230

Corequisites: None

ECED332 Developing Creative Expression (Min SH: 3, Max SH: 3)

This junior level course is designed to examine the content and methods available to facilitate children's expression through art, music and dramatic play within childcare, educational and academic settings.

Prerequisites: None

Corequisites: None

ECED340 Creating Healthy Environments for Infants and Toddlers (Min SH: 3, Max SH: 3)

Designed to examine the content and methods of environments for infant and toddlers in caring, educational, academic and family/home and play settings.

Prerequisites: None

Corequisites: None

ECED415 Integrating Curriculum and Instruction (Min SH: 3, Max SH: 3)

Designed to assist the students in synthesizing theory and content from a variety of pre-professional courses through actual teaching of preprimary and primary grade children. Students plan, teach, analyze, and reflect on segments of instruction under the supervision of college instructors in area school classrooms.

Prerequisites: None

Corequisites: None

ECED431 Science: Early Childhood Professional Semester (Min SH: 3, Max SH: 3)



Designed to examine the content and methods of science education for young children in caregiving, educational and academic settings as a part of the PreK-4/Early Childhood Education Professional Semester.

Prerequisites: None

Corequisites: None

#### ECED432 Language Arts for Young Children (Min SH: 3, Max SH: 3)

This course is designed to provide pre-service teacher candidates with the knowledge and skills to confidently teach children in PreK-grade 4 to communicate effectively. The course presents approaches to teach six language arts using four patterns of practice. Supports culturally diverse learners and English Language Learners (ELL). This course meets standards for the Pennsylvania Department of Education (PDE), the National Association for the Education of Young Children (NAEYC), and the Interstate New Teacher Assessment and Support Consortium (INTASC) and the General Education Competency of Written Communication.

Prerequisites: None

Corequisites: None

#### ECED433 Mathematics for Grades K-4 (Min SH: 3, Max SH: 3)

Provides an opportunity to pre-service teachers to develop and apply mathematical methods, materials, and understandings. This course will prepare the teacher candidate to teach mathematics to students in grades K-4. This course is designed to meet standards for the Interstate New Teacher Assessment and Support Consortium (INTASC), the National Association for the Education of Young Children (NAEYC), and the Pennsylvania Department of Education (PDE).

Prerequisites: None

Corequisites: None

#### ECED436 Social Studies Methods for K-4: Early Childhood Professional Semester (Min SH: 3, Max SH: 3)

Designed to examine the content and methods of social studies education for K-4 classroom settings. This course helps students develop the concepts and skills needed for effective instruction in all aspects of social studies for young children.

Prerequisites: None

Corequisites: None

ECED493 Student Teaching and Practicum Early Childhood 1 (Min SH: 6, Max SH: 6)

The capstone experience for pre-service teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

ECED494 Student Teaching and Practicum Early Childhood 2 (Min SH: 6, Max SH: 6)

The capstone experience for pre-service teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

ECED496 PreK-Grade 4 Accelerated Program \*\*used internally to post cred\*\* (Min SH: 3, Max SH: 6)

Prerequisites: None

Corequisites: None

ECON102 Principles of Macroeconomics (Min SH: 3, Max SH: 3)

An introduction to the study of the nation's economy as a whole, which looks at the aggregate behavior of consumers, business, and the government. It focuses on the issues of inflation, unemployment, and economic growth. The course explores why and how economies grow, economic fluctuations, the banking system, fiscal management, and how macroeconomic policy is implemented under different circumstances.

Prerequisites: ( MATH100 ) OR ( MATH112 )  
Corequisites: None

#### ECON103 Principles of Microeconomics (Min SH: 3, Max SH: 3)

An introduction to the study of microeconomic analysis, which examines the basic tools and concepts of consumer behavior, business decision-making, and the role of government. This course focuses on standard economic analysis of the firm as it relates to price decisions, cost, output, and revenue. The course examines real world problems in terms of consumer behavior, market structure, labor, and income distribution.

Prerequisites: ( MATH100 ) OR ( MATH112 )  
Corequisites: None

#### ECON301 Economics of the Environment (Min SH: 3, Max SH: 3)

An application of economic analysis to problems of the environment such as air, water, and land pollution; natural resource depletion; and preservation of species and natural areas. Specific aspects will include externalities, measurement of costs and benefits, alternative abatement strategies, allocation of property rights, and theories of renewable and nonrenewable resources.

Prerequisites: ( ECON102 ) OR ( ECON103 )  
Corequisites: None

#### ECON310 Intermediate Macroeconomics (Min SH: 3, Max SH: 3)

An intermediate study of economy in aggregate terms with analysis of national income, production, inflation, and employment. It also examines different economic models for both the short and long-run, and what these models imply about economic growth, monetary, fiscal and income policies for achieving economic stability.

Prerequisites: ( ECON101 ) OR ( ECON102 )  
Corequisites: None

#### ECON315 Intermediate Microeconomics (Min SH: 3, Max SH: 3)

Provides an in-depth examination of how to model consumption and production decisions, and their interactions in the markets. Particular forms of market failure are analyzed together with

possible government intervention on those markets, as well as the effect of such interventions on the decision of the firm.

Prerequisites: ( ECON101 ) OR ( ECON103 )

Corequisites: None

#### ECON328 Seminar-Social Science (Min SH: 3, Max SH: 3)

An in-depth study of aspects of economics and topics of current interest. Topics will be determined prior to the semester in which the course is offered and can differ for each course offering. Students may take this course more than once if the topic differs.

Prerequisites: ( ECON101 ) OR ( ECON102 ) OR ( ECON103 )

Corequisites: None

#### ECON330 Economic Development (Min SH: 3, Max SH: 3)

Provides a fundamental understanding of the process of international economic development. This course takes a comprehensive approach to examine topics such as economic geography, economic growth, industrialization, education, administrative and institutional governance, and how technology affects development. The course presents regional comparative development efforts, economic and historical development patterns, economic policy reform, foreign aid, and issues related to trade.

Prerequisites: ( ECON101 ) OR ( ECON102 )

Corequisites: None

#### ECON340 Money and Banking (Min SH: 3, Max SH: 3)

An examination of the role of money and credit in the U.S. economy. The course gives an overview of financial instruments, markets, and intermediaries along with the evolution and regulation of the financial system. Attention is given to bank lending and the money supply process as controlled by the Federal Reserve System. Formulation of monetary policy is studied as are alternative monetary theories and international aspects of banking and finance.

Prerequisites: ( ECON102 )

Corequisites: None

#### ECON350 Comparative Economic Systems (Min SH: 3, Max SH: 3)

A comparison of the market economy, and the socialist and centrally-administered economy. The content emphasizes the capitalist systems of the world and economic systems in transition from being centrally planned to market directed. The collapse of communism and the emergence of less developed economies is also covered.

Prerequisites: ( ECON102 )

Corequisites: None

ECON355 International Trade and Finance (Min SH: 3, Max SH: 3)

An examination of international economics, which is concerned with the trade among nations. Topics include, but are not limited to, trade theory, trade restrictions such as tariffs and non-tariff barriers, trade policies of less developed countries, the determination of exchange rates, international monetary problems, international organizations and trade agreements, and issues related to U.S. commercial policies.

Prerequisites: ( ECON101 ) OR ( ECON102 )

Corequisites: None

ECON360 Current Economic Problems (Min SH: 3, Max SH: 3)

An application of the analytical tools of economics to a variety of contemporary policy issues. Costs and benefits of social regulation are assessed in connection with such problems as inflation, poverty and income distribution, environmental pollution, economic growth and technological change, and provision of education and medical care.

Prerequisites: ( ECON101 ) OR ( ECON102 )

Corequisites: None

ECON410 Econometrics (Min SH: 3, Max SH: 3)

An introduction to empirical research of economics. Statistical and mathematical techniques are introduced and examined. Common econometric problems are identified and corrected. Application of econometric models is emphasized.

Prerequisites: ( ECON102 AND ECON103 AND MATH107 )

Corequisites: None

EDUC119 First Year Seminar for Education Students (Min SH: 1, Max SH: 1)

Designed to embed education program requirements into a required course and to support student achievement of Education program requirements. Must be taken by all Elementary Education majors.

Prerequisites: None

Corequisites: None

EDUC212 Classroom Management in the Middle and Secondary School Setting (Min SH: 2, Max SH: 2)

Examines behaviors that characterize this age group and helps teachers understand why adolescents behave as they do. Included are a variety of teaching methods and activities to stimulate and reinforce desirable behavior, effectively respond to undesirable behavior, and extinguish inappropriate behavior.

Prerequisites: None

Corequisites: None

EDUC330 Classroom Management in the Elementary and Middle School Setting (Min SH: 3, Max SH: 3)

Offers a holistic view beginning with a variety of methods and activities for helping teachers build positive learning environments (a community of learners), improve relations in the classroom (a broader community), and cope with challenging behaviors and special abilities. The teacher is viewed as a model and facilitator, a supervisor of instruction which is called to fashion environments that invite exploration, inquiry, and positive self-concepts by drawing from research in psychology and sociology.

Prerequisites: EDUC204

Corequisites: None

EDUC335 Assessment and Differentiation (Min SH: 3, Max SH: 3)

An investigation into the design and evaluation of assessments for student performance in the elementary classroom. Differentiated instruction and assessment will be addressed for K-8 learners including English Language Learners (ELL).

Prerequisites: None

Corequisites: None

#### EDUC340 Classroom Management (Min SH: 3, Max SH: 3)

Classroom teachers are struggling to cope with an increasing number of student behavioral problems. This course will present strategies designed to stop discipline problems before they start. Building a positive learning environment, techniques for improving teacher-pupil relationships, and coping with disruptive behaviors will be studied. Based on sound, carefully researched theory, the course will offer a variety of methods and activities designed to help teachers implement management strategies.

Prerequisites: None

Corequisites: None

#### EDUC346 Disciplinary Literacy (Min SH: 3, Max SH: 3)

A study of the process of how to teach reading and writing to grades 3-8 learners in all curricular areas. Focus will be on the demands that readers face when reading disciplinary-specific texts.

Prerequisites: None

Corequisites: None

#### EDUC444 Summer Urban Seminar (Min SH: 3, Max SH: 3)

Provides an extended first-hand encounter with urban culture. It is intended to expand the opportunities of undergraduate teacher education students to work with diverse students in urban settings. The seminar includes a mix of carefully planned school, community, and cultural experiences. One of its unique features is an intensive community service project in which all students will participate during the weekend they are in Philadelphia. Open to all education majors who have complete 48 sh of work. Open to other majors as space permits. Offered very early Summer.

Prerequisites: None

Corequisites: None

#### EDUC472 Literacy and Language Arts: Elementary Professional Semester (Min SH: 3, Max SH: 3)

Taken only as a part of the Elementary Professional Semester. Designed to place emphasis on mastering methods, strategies and techniques and on using materials appropriately for a balanced literacy program. The course focuses on instruction and evaluation of writing, reading, speaking, and listening abilities plus the integration of these developing abilities across

curriculums, standards and instructional designs. Current literacy policies, research based practices, and educational curriculums are stressed. This course is open to students who meet requirements for enrollment in the Elementary Professional Semester.

Prerequisites: READ300

Corequisites: None

#### EDUC473 Social Studies Methods: Elementary Professional Semester (Min SH: 3, Max SH: 3)

Taken only as part of the Elementary Professional Semester. Development of concepts and skills for effective instruction in all aspects of the Social Studies. Interdisciplinary unit studies are stressed. Students prepare lesson and unit plans, work in teams, present demonstration lessons to peers and evaluate instructional materials. Students learn how to access reference literature and teaching materials, locate experts and other resource personnel for classroom activities as well as for activities outside of the classroom.

Prerequisites: None

Corequisites: None

#### EDUC474 Science Methods: Elementary Professional Semester (Min SH: 3, Max SH: 3)

Students practice techniques for teaching science to elementary children. The use of discovery learning is stressed. Science is treated more as a process than as a body of knowledge. Commercially produced science programs are reviewed; students create hands-on files, review and react in writing to science readings, create a science project and present it to children, and students prepare lessons to present to peers and children from the local schools. The use of manipulatives is required. Students study for, prepare and teach a coordinated set of activities in environmental studies including field trips to the University's conference center or other outdoor facilities.

Prerequisites: None

Corequisites: None

#### EDUC475 Teaching of Mathematics in the Elementary School: Elementary Professional Semester (Min SH: 3, Max SH: 3)

Students learn techniques for teaching mathematics to elementary students according to the National Council of Teachers of Mathematics (NCTM) Process Standards and the PA State Math Standards. Emphasis is given to appropriate progression from the concrete to the abstract in all learning. Use of manipulatives is required. The use of strategies to make content accessible to ALL students is a priority. Much time is spent cultivating a positive attitude toward



mathematics. Discovery learning, interdisciplinary study and the use of technology are woven into the course. Scheduled concurrently with subject matter methods and Clinical Field Experience.

Prerequisites: None

Corequisites: None

EDUC476 Creating Classroom Environments: Elementary Professional Semester (Min SH: 2, Max SH: 2)

Provides specific information and strategies for organizing, planning and implementing instruction in a classroom and creating a positive, productive atmosphere for learning. Questioning, listening and management techniques are stressed. Methods for helping learners become self-disciplined are emphasized and techniques for dealing with unacceptable behavior are considered in depth. Since this course is usually taken concurrently with other courses in teaching methods and with a required field experience course, all topics are consciously integrated with those of the other courses. In addition to mastering the various techniques considered, students are expected to develop a philosophical basis for creating an ordered classroom.

Prerequisites: None

Corequisites: None

EDUC477 Clinical Field Experiences: Elementary Professional Semester (Min SH: 2, Max SH: 2)

This laboratory course assists the student in synthesizing theory and content from a variety of a pre-professional courses and requires students to put this theory and content into practice during actual teaching of elementary school children. Students plan, teach and analyze segments of instruction under the supervision of college instructors in area school classrooms.

Prerequisites: None

Corequisites: None

EDUC478 Intro Educational Computing: Elementary Professional Semester (Min SH: 2, Max SH: 2)

Provides basic skills in the uses of microcomputers in educational settings and background about computer technology. Courseware in various instructional subject areas is examined and evaluated. Several modes for Computer-Aided Learning are demonstrated and experienced. Students receive an introduction to computer terminology, system components, operation, general uses of computers and resulting implications for society.

Prerequisites: None

Corequisites: None

#### EDUC493 Student Teaching and Professional Practicum: Elementary 1 (Min SH: 6, Max SH: 6)

The capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### EDUC494 Student Teaching and Professional Practicum: Elementary 2 (Min SH: 6, Max SH: 6)

The capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### ELML105 Introduction to Middle Level Methods (Min SH: 2, Max SH: 2)

An introduction to the middle level teaching and learning philosophy, the developmental, social and emotional needs of middle level students and the various teaching strategies and materials used for young adolescent learners.

Prerequisites: None

Corequisites: None

#### ELML119 First Year Seminar for Elementary and Middle Level Education (Min SH: 1, Max SH: 1)

Designed to provide an introduction to the culture and the mission of the university and an overview of elementary and middle level education (ELML). Students will be introduced to

basic college learning and study skills and will outline program requirements to support student achievement within the ELML Program. The students will be required to observe/participate in Elementary/Middle schools for 20 hours in addition to class hours.

Prerequisites: None

Corequisites: None

ELML200 Literature for Elementary and Middle Level Learners (Min SH: 2, Max SH: 2)

Designed to provide an introductory exploration of Language Arts methods in the elementary/middle level grades through major literary genres and authors. The students will be required to observe/participate in the schools for 10 hours in addition to class hours.

Prerequisites: None

Corequisites: None

ELML210 Learning Theory for Middle Level Learners (Min SH: 3, Max SH: 3)

Designed to give students a foundation of learning theories and processes for elementary and middle-level learners. Emphasis will be given to effective research-based practices, learning theories, curriculum, and the development of instructional materials. The students are required to complete 20 hours of observation in the schools.

Prerequisites: None

Corequisites: None

ELML250 Assessment and Differentiation in the 4-8 Classroom (Min SH: 3, Max SH: 3)

An investigation into the design and evaluation of assessments for student performance in the elementary/middle level classroom. Differentiated instruction and assessment will be addressed for middle level learners including English Language Learners (ELL). Ten hours of observation will be used to view middle level adapted assessment practices include PA Alternate System of Assessment (PASA) administration in addition to class.

Prerequisites: ( ELML210 )

Corequisites: None

ELML320 Science for the Elementary and Middle Level Learner (Min SH: 3, Max SH: 3)

For preprofessional educators to synthesize all of the college level coursework to date into the proper framework for teaching science to students in grades four to eight. This course will deal with the physical science, life science, and earth and space science areas. Students will engage in personal scientific investigation.

Prerequisites: None

Corequisites: None

ELML321 Language Arts for the Elementary and Middle Level Learner (Min SH: 3, Max SH: 3)

Focuses on content, methods, and demonstration of proficiency in the literacy areas of reading, written composition, oral communications, grammar, and spelling/vocabulary. Students are expected to develop materials and lesson plans that are appropriate to teach language arts in grades 4 through 8.

Prerequisites: None

Corequisites: None

ELML322 Mathematics for the Elementary and Middle Level Learner (Min SH: 3, Max SH: 3)

Designed for all Elementary/Middle Level majors. It provides a brief history of math with cultural contributions. Problem solving and other research based approaches will be stressed. Attention will be given to how children learn mathematics, drawing on brain-based research. Emphasis on measurement, algebra and key features of Number Theory as they pertain to the 4-8 grade learner will be emphasized with specific attention to inter-curricular connections.

Prerequisites: None

Corequisites: None

ELML323 Social Sciences for the Elementary and Middle Level Learner (Min SH: 3, Max SH: 3)

An examination of the content of social studies curriculum for the upper elementary and middle level learner and how it is integrated into the overall curriculum. Students are expected to develop materials, create lesson plans, and integrate social studies into the middle school curriculum. A team approach with other teachers and clinical experience in the schools examining "best practice" will be employed.

Prerequisites: None

Corequisites: None

### ELML330 Language Acquisition Theory and Writing Instruction (Min SH: 3, Max SH: 3)

Designed to address the needs of pre-service teachers for literacy development through writing for students learning English, especially as a second language. Emphasis will be given to writing competencies, effective research based practices, theories of language acquisition, and challenges faced by English Language Learners. Students will participate 10 hours in the schools. This course is aligned with the Pennsylvania Department of Education requirements addressed in PA Chapter 49-2.

Prerequisites: None

Corequisites: None

### ELML402 Effective Instructional Literary Strategies for Diverse Learners (Min SH: 3, Max SH: 3)

Designed to prepare pre-service Elementary/Middle Level teachers to develop and present literacy instruction for culturally diverse learners. Emphasis will be on literacy components, research-based practice, and challenges that culturally diverse learners face in learning how to read and write. It includes 10 field experience hours in the schools. This course is aligned with the PDE requirements addressed in PA Chapter 49-2 and meets Standards for the Association of Middle Level Education (AMLE).

Prerequisites: None

Corequisites: None

### ELML405 Interventions and Classroom Management Strategies Elementary and Middle Level Learners (Min SH: 3, Max SH: 3)

A holistic view of methods and activities for helping teachers build positive learning environments, determine interventions to improve relations in the classroom, and cope with challenging behaviors and special abilities. Explores teacher as model, facilitator, and supervisor of instruction called to fashion environments that invite exploration, inquiry, and positive self-concepts. Ten hours of field practice is required in addition to class time.

Prerequisites: None

Corequisites: None

### ELML410 Science Methods 1 (Min SH: 1, Max SH: 1)

For preprofessional educators to practice the techniques of teaching science. The use of inquiry based learning is stressed. Science is treated more as a process than as a body of

knowledge. Commercially produced science programs are reviewed. Sixteen participation hours are required in addition to class time.

Prerequisites: None

Corequisites: None

#### ELML412 Science Methods II (Min SH: 2, Max SH: 2)

For preprofessional educators to practice the techniques of teaching science. The use of inquiry based learning is stressed. Science is treated more as a process than as a body of knowledge. Commercially produced science programs are reviewed. Students will prepare lessons to present to peers and children in the local schools. A demonstrated understanding of science manipulatives is required. Thirty-two participation hours are required in addition to class time.

Prerequisites: None

Corequisites: None

#### ELML414 Science Methods III (Min SH: 3, Max SH: 3)

For preprofessional educators to practice the techniques of teaching science, including a working understanding of the 5-E Model. The use of inquiry based learning is stressed. Science is treated more as a process than as a body of knowledge. Commercially produced science programs are reviewed. Students will prepare lessons to present to peers and children in the local schools. A demonstrated understanding of science manipulatives is required. Forty-eight participation hours are required in addition to class time.

Prerequisites: None

Corequisites: None

#### ELML415 Advanced Middle Level Methods (Min SH: 3, Max SH: 3)

Designed to give middle level education students experiences designing and evaluating individual lessons and a full unit plan. The advanced focus of this course is on meeting individual student needs, recognizing multiple intelligences and preferred learning styles, differentiating lessons to meet the needs of all students and analyzing student achievement data in four content areas specifically for grades 4, 5, and 6.

Prerequisites: None

Corequisites: None

ELML420 Language Arts Methods for the Elementary and Middle Grades (Min SH: 1, Max SH: 1)

Designed to engage participants in the preparation of appropriate technology and curriculum materials for elementary and middle level learners based on defined needs and assessment data. Students will be guided to reflect and analyze their personal teaching experiences through the creation of a website and Teacher Work Sample (TWS). Ten hours of observation outside classroom hours are used to identify elementary and middle level student characteristics that will be used to guide instruction.

Prerequisites: None

Corequisites: None

ELML421 Language Arts Methods 1 (Min SH: 1, Max SH: 1)

Designed to provide an examination of the content and methods for a dual concentration in English, language arts, reading and mathematics or science (biology or geology) education for the elementary and middle level learner. This course includes 16 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML422 Language Arts Methods 2 (Min SH: 2, Max SH: 2)

Designed to provide an in-depth examination of the content and methods for a single concentration English, language arts, reading education for the elementary and middle level learner. This course includes 32 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML431 Mathematics Methods 1 (Min SH: 1, Max SH: 1)

Designed to provide an examination of the mathematics content and methods that support a single or dual concentration (Option I or II) in social studies, science (biology or geology), or English, language arts, reading education for the elementary and middle level learner. This course includes 16 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML432 Mathematics Methods II (Min SH: 2, Max SH: 2)

Designed to provide an in-depth examination of the content and methods for a dual concentration (Option II) in mathematics and science (biology or geology) or English, language arts, reading education for the elementary and middle level learner. This course includes 32 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML433 Mathematics Methods III (Min SH: 3, Max SH: 3)

Designed to provide an in-depth examination of the content and methods for a single concentration (Option I) in mathematics education for the elementary and middle level learner. This course includes 48 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML441 Social Studies Methods 1 (Min SH: 1, Max SH: 1)

Designed to provide an examination of the social studies content and methods that support a single or dual concentration in mathematics, science (biology or geology), or English, language arts, reading education for the elementary and middle level learner. This course includes 16 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML442 Social Studies Methods II (Min SH: 2, Max SH: 2)

Designed to provide an in-depth examination of the content and methods for a dual concentration (Option II) in social studies and mathematics or science (biology or geology) education for the elementary and middle level learner. This course includes 32 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None



ELML443 Social Studies Methods III (Min SH: 3, Max SH: 3)

Designed to provide an in-depth examination of the content and methods for a single concentration (Option I) in social studies education for the elementary and middle level learner. This course includes 48 hours of field experience in addition to class time.

Prerequisites: None

Corequisites: None

ELML493 Student Teaching and Practicum: Elementary and Middle Level Learner 1 (Min SH: 6, Max SH: 6)

The first of two capstone experience for pre-service teachers. Two student teaching experiences are provided at two levels that are appropriate to certification areas and grade level ranges. Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions. The program follows the guidelines of the Pennsylvania Department of Education (PDE) and the Association of Middle Level Education (AMLE).

Prerequisites: None

Corequisites: None

ELML494 Student Teaching and Practicum: Elementary and Middle Level Learner 2 (Min SH: 6, Max SH: 6)

The capstone experience is the second of two student teaching placements, one at each level that is appropriate to certification areas and grade level ranges. Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions. The program follows the guidelines of the Pennsylvania Department of Education (PDE) and the Association of Middle Level Education (AMLE).

Prerequisites: None

Corequisites: None

ENGL090 College Writing Skills (Min SH: 3, Max SH: 3)

Intensive practice in critical reading skills and forms of college writing. (Course is not a remedial course; credits count toward graduation as elective credits.)

Prerequisites: None

Corequisites: None

ENGL100 Composition (Min SH: 3, Max SH: 3)

Introduction to the basic principles of effective English written communication.

Prerequisites: None

Corequisites: None

ENGL110 Introduction to Literature (Min SH: 3, Max SH: 3)

An introduction to fiction, poetry, and drama that seeks to develop students' understanding of literature.

Prerequisites: None

Corequisites: None

ENGL119 First Year Seminar for English Major Students (Min SH: 1, Max SH: 1)

An introduction to the Lock Haven University Teacher Education Conceptual Framework and national standards for foreign language and English. The course guides students through the Stage I teacher education requirements and early field experience tasks, and addresses topics taught in generic freshman seminars.

Prerequisites: None

Corequisites: None

ENGL205 Introduction to Literary Studies (Min SH: 3, Max SH: 3)

An introduction to the English major with emphasis on methods and theories of literary analysis. The course covers how to write about literature, how to conduct literary research, the history of the book, and approaches to literary theory.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL206 Methods of Teaching English 1 (Min SH: 3, Max SH: 3)

The first course in a two-course English teaching and learning methods sequence, this class is an introduction to professional attitudes and discipline-specific pedagogical skills necessary to implement effective classroom instruction and educational technology. Emphasis is on theory, methods, materials, media, and strategies for teaching English Language Arts in the secondary setting and for Pennsylvania certification. The course includes field experiences and practice teaching.

Prerequisites: PSYC103

Corequisites: None

#### ENGL220 World Literature (Min SH: 3, Max SH: 3)

A survey of world literature. This course explores literature written in English and in English translation from different parts of the world. The course focuses on reviewing how different cultures and different linguistic systems construct and represent salient experiences of our lives such as growing up, gender differences, social movements, aesthetic movements, political conflicts, experiences of war, peace, freedom, spirituality, etc. Texts will be discussed in relation to their genre and also to intertextual and non-literary contexts such as the historical, social, or political environments that govern the creation, enjoyment and endurance of a literary work.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

#### ENGL225 Core Texts in the Western Tradition (Min SH: 3, Max SH: 3)

An introduction to Greek and Roman mythology and the Bible that prepares students to recognize and explain the significance of allusions in diverse literary traditions and contexts.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

#### ENGL230 British Literature Before 1800 (Min SH: 3, Max SH: 3)

A comprehensive survey of British literature from the Anglo-Saxon beginnings to the end of the 18th century.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL231 British Literature After 1800 (Min SH: 3, Max SH: 3)

A comprehensive survey of 19th and 20th century British Literature.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL235 Teaching Literature to Adolescents and Young Adults (Min SH: 3, Max SH: 3)

A pre-professional study of young adult literature designed for teachers and others who use literature in teaching adolescents. In addition to a critical survey of material written for or suitable for young adults, consideration is given to techniques and strategies for using these materials in middle, junior, and senior high schools to develop adolescents' enjoyment of and engagement with reading and to promote reading maturity. Additional topics include current trends in the fields and specialized sources of information about young adults and their reading.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL237 Creative Nonfiction Workshop (Min SH: 3, Max SH: 3)

A workshop that teaches how to use the techniques of fiction writing in the writing of nonfiction.

Prerequisites: ( ENGL100 AND ENGL110 ) OR ( ENGL100 AND ENGL220 ) OR ( HONR111 AND HONR112 ) OR ( ENGL110 AND HONR111 ) OR ( ENGL100 AND HONR112 ) OR ( ENGL220 AND HONR111 )

Corequisites: None

ENGL240 American Literature Before the Civil War (Min SH: 3, Max SH: 3)

A study of selected American literature from its pre-Columbian origins to literature written before the Civil War, with emphasis upon the development of major literary movements.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL242 American Literature After the Civil War (Min SH: 3, Max SH: 3)

A study of selected American literature from the Civil War to the present, with emphasis upon the development of major literary movements.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL264 Fiction Workshop (Min SH: 3, Max SH: 3)

An introduction to the writing of short fiction through a balance of lectures, readings, writing exercises and the traditional workshop.

Prerequisites: ( ENGL100 AND ENGL110 ) OR ( ENGL100 AND ENGL220 ) OR ( HONR111 AND HONR112 ) OR ( ENGL110 AND HONR111 ) OR ( ENGL100 AND HONR112 ) OR ( ENGL220 AND HONR111 )

Corequisites: None

ENGL266 Drama Workshop: Playwriting 1 (Min SH: 3, Max SH: 3)

A workshop in the writing of plays and screenplays. Students will assess drama from the viewpoint of the dramaturge rather than the literary critic with a new understanding of how and why it works or doesn't work. Students will define, identify, and critique in professional and student-written plays and screenplays elements such as characterization, plot, organization, use of stage/film conventions, and balance of visual and verbal story-telling.

Prerequisites: ( ENGL100 ) OR ( HONR111 ) OR ( ENGL110 ) OR ( ENGL220 ) OR ( HONR112 )

Corequisites: None

ENGL268 Poetry Workshop (Min SH: 3, Max SH: 3)

A workshop in the writing of poetry in which students study and discuss published poems and apply similar literary techniques to their own work; participate in workshop discussions; pursue independent writing projects; evaluate and discuss the work of fellow students; and meet with the instructor for individual consultation.

Prerequisites: ( ENGL100 AND ENGL110 ) OR ( ENGL100 AND ENGL220 ) OR ( HONR111 AND HONR112 ) OR ( ENGL110 AND HONR111 ) OR ( ENGL100 AND HONR112 ) OR ( ENGL220 AND HONR111 )

Corequisites: None

ENGL280 Introduction to the Study of Language (Min SH: 3, Max SH: 3)

Surveys historical and comparative linguistics, psycholinguistics, etymology, phonology, morphology, syntax and semantics. Special attention is paid to the history of the English language, usage, literacy, and nonstandard varieties of English.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL312 Secondary Education 2: English (Min SH: 4, Max SH: 4)

The second in a sequence of early field experiences designed to provide student an opportunity to observe and participate in several diverse school settings. Extends and applies the theoretical base presented in Methods 1, as students develop and refine the professional attitudes and discipline-specific pedagogical skills necessary to implement effective literacy instruction.

Prerequisites: None

Corequisites: None

ENGL315 Composition Usage and Editing Techniques (Min SH: 3, Max SH: 3)

An overview of techniques for evaluating and editing expository and argumentative prose.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL328 Seminar-Humanities (Min SH: 3, Max SH: 3)

A thematic or topical approach to literature, with emphasis on close textual analysis and an exploration of the relationship between literature and the historical or social contexts. Texts might be drawn from American, British, or world literature, and could include poetry, prose, drama, or nonfiction. Topics might include, among others: images of women, representations of the American West, medical themes in literature, novels about war, domestic fiction, or literary realism.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL336 Shakespeare (Min SH: 3, Max SH: 3)

Survey of William Shakespeare's major works, including comedies, tragedies, histories, and sonnets.

Prerequisites: ( ENGL100 AND ENGL110 ) OR ( ENGL100 AND ENGL220 ) OR ( ENGL220 AND HONR111 ) OR ( ENGL110 AND HONR111 ) OR ( ENGL100 AND HONR112 ) OR ( HONR111 AND HONR112 )

Corequisites: None

ENGL345 Business Writing (Min SH: 3, Max SH: 3)

A study and application of current theories and practices of effective professional communication, focusing on using common business formats to write for specific audiences in a variety of contexts.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL357 Advanced Composition, Rhetoric and Writing (Min SH: 3, Max SH: 3)

Study of the history of ideas about rhetoric and the effective use of language and images. The course focuses on practical applications for composing, critiquing, and teaching written, visual, and oral texts.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL360 Technical Writing (Min SH: 3, Max SH: 3)

An overview of the skill sets necessary for communicating scientific and technical material. The course will explore the wide variety of documents technical writers will have to create as well as their various audiences. The course will also focus on standard American usage and systems of documentation.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL400 Advanced Topics in British Literature (Min SH: 3, Max SH: 3)

Intensive study of a theme, genre, issue, or period in British literature.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL402 Advanced Topics in American Literature (Min SH: 3, Max SH: 3)

Intensive study of a theme, genre, issue, or period in American literature.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL404 Advanced Topics in World Literature (Min SH: 3, Max SH: 3)

Intensive study of a theme, genre, issue, or period in world literature.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL405 Grammars of English (Min SH: 3, Max SH: 3)

An analysis of English grammar from the perspectives of traditional grammar and transformational generative grammar. Primary attention will be given to understanding English morphology and syntax, the grammar parts of speech, Standard English and dialects, and evidence and arguments for correctness in usage.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

ENGL408 Advanced Topics in Creative Writing (Min SH: 3, Max SH: 3)

Advanced craft lessons and workshop in fiction, poetry, drama, screenwriting, and creative nonfiction.

Prerequisites: ( ENGL264 ) OR ( ENGL266 ) OR ( ENGL268 ) OR ( ENGL237 )

Corequisites: None

ENGL425 Major American Writers (Min SH: 3, Max SH: 3)

Examines one or several major American writers.



Prerequisites: ( ENGL100 AND ENGL110 ) OR ( ENGL220 ) OR ( ENGL230 ) OR ( ENGL231 ) OR ( ENGL240 ) OR ( HONR112 )

Corequisites: None

ENGL435 Major British Writers (Min SH: 3, Max SH: 3)

Focuses on the major works of one or several major British writers.

Prerequisites: ( ENGL100 AND ENGL110 ) OR ( ENGL220 ) OR ( ENGL230 ) OR ( ENGL231 ) OR ( ENGL240 ) OR ( ENGL242 ) OR ( HONR112 )

Corequisites: None

ENGL493 Student Teaching and Practicum 1 Secondary Education English (Min SH: 6, Max SH: 6)

Provides the capstone experience for pre-service teachers through two student teaching experiences at two levels (appropriate to certification areas and grade level ranges).

Supervised practice in classrooms with certified teachers and regular practicum sessions introduce the student to the range and scope of a professional educator's responsibilities. University professors supervise teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

ENGL494 Student Teaching and Practicum 2 Secondary Education English (Min SH: 6, Max SH: 6)

ENGL493 Student Teaching and Professional Practicum 1: Secondary Education English (6.0 sh)

Prerequisites: None

Corequisites: None

ENVT101 Introduction to Environmental Studies (Min SH: 3, Max SH: 3)

An introduction to the historical and contemporary problems and dilemmas in environmental studies, their scientific bases, sociological implications, ethical dimensions, and avenues for constructive response.

Prerequisites: None

Corequisites: None

ENVT328 Seminar-Liberal Arts: Topics in Environmental Studies (Min SH: 3, Max SH: 3)

A thematic or topical approach to environmental issues. Topics might include the following: contemporary environmental problems, representations of nature in the arts and in culture, and environmental activism.

Prerequisites: None

Corequisites: None

ENVT450 Capstone Research Project (Min SH: 1, Max SH: 3)

An intensive independent research project related to the discipline of Environmental Studies. Ideally the project will also relate to the student's major concentration.

Prerequisites: ( ENVT101 )

Corequisites: None

FINA305 Financial Risk and Enterprise Risk Management (Min SH: 3, Max SH: 3)

A description and application of quantitative (financial) and qualitative (enterprise) methods of analyzing and managing risk within organizations: Financial risk topics include the examination of derivatives for hedging risk, measuring Value-at-Risk, and exploring external impacts such as market, credit and systematic risks. Enterprise risk topics include constructing frameworks for managing strategic, operational, and outsourcing of business risks. Students will also examine ways to assess and measure risk and organize corporate governance policies will also be covered.

Prerequisites: ( ACCT115 AND COMP150 )

Corequisites: None

FINA310 Life and Health Insurance (Min SH: 3, Max SH: 3)

An introduction to the life and health insurance branches of the insurance industry. Students will examine the central role of life insurance in financial planning and the private market for individual life and health insurance solutions.

Prerequisites: ( ACCT115 AND COMP150 )

Corequisites: None

FREN101 French 1 (Min SH: 3, Max SH: 3)

The fundamentals of pronunciation, vocabulary, and patterns of expression. Oral and written practice intended to develop the skills of speaking, reading, writing, and listening to French.

Prerequisites: None

Corequisites: None

FREN102 French 2 (Min SH: 3, Max SH: 3)

The fundamentals of pronunciation, vocabulary, and patterns of expression. Oral and written practice intended to develop the skills of speaking, reading, writing, and listening to French.

Prerequisites: None

Corequisites: None

FREN201 French 3 (Min SH: 3, Max SH: 3)

A review of fundamentals, together with continued vocabulary development, more complete construction, and more advanced oral and written exercises.

Prerequisites: None

Corequisites: None

FREN202 French 4 (Min SH: 3, Max SH: 3)

A review of fundamentals, together with continued vocabulary development, more complete construction, and more advanced oral and written exercises.

Prerequisites: None

Corequisites: None

FREN203 French Civilization 1 (Min SH: 3, Max SH: 3)

The first semester examines modern France, emphasizing cultural traits, patterns of daily living, and current issues. The second semester follows the development of France from its earliest beginnings to the present, and traces its outstanding achievements in art, literature, architecture, science, etc.

Prerequisites: None  
Corequisites: None

#### FREN204 French Civilization 2 (Min SH: 3, Max SH: 3)

The first semester examines modern France, emphasizing cultural traits, patterns of daily living, and current issues. The second semester follows the development of France from its earliest beginnings to the present, and traces its outstanding achievements in art, literature, architecture, science, etc.

Prerequisites: None  
Corequisites: None

#### FREN301 French Comp and Conversation 1 (Min SH: 3, Max SH: 3)

In the first semester, extensive vocabulary development by reading and discussion of situational materials.

Prerequisites: None  
Corequisites: None

#### FREN303 French Literature 1 (Min SH: 3, Max SH: 3)

Readings from the main works of French literature from the early Middle Ages to the present. Discussion of the characteristics of each work and of each literary movement. Critical readings. In this and subsequent literature courses, it is assumed that the student has the ability to read French with considerable ease, to follow lectures in the language, and to participate freely in discussions.

Prerequisites: None  
Corequisites: None

#### FREN304 French Literature 2 (Min SH: 3, Max SH: 3)

Readings from the main works of French literature from the early Middle Ages to the present. Discussion of the characteristics of each work and of each literary movement. Critical readings. In this and subsequent literature courses, it is assumed that the student has the ability to read French with considerable ease, to follow lectures in the language, and to participate freely in discussions.

Prerequisites: None  
Corequisites: None

#### FREN305 French Linguistics (Min SH: 3, Max SH: 3)

Introduces general concepts of structural linguistics, with special emphasis on comparison of the sound systems of French and English. Intensive work on the development of authentic pronunciation of French, including phonetic transcription.

Prerequisites: None  
Corequisites: None

#### FREN306 Current French Periodicals (Min SH: 3, Max SH: 3)

Reading and discussion of the latest French newspapers and magazines, coupled with the study of contemporary France. Attention will be given to recent developments in French idiom and vocabulary, including "Franglais". Current tapes of French news broadcasts will help develop listening comprehension.

Prerequisites: None  
Corequisites: None

#### FREN310 Advanced French Grammar (Min SH: 3, Max SH: 3)

An intensive study of French, providing review of basic grammar as well as presentation of more advanced topics not treated in French I-IV. Translation practice and structure drills will focus on problem areas arising from particular differences in English and French language structure.

Prerequisites: None  
Corequisites: None

#### FREN320 Francophone Identities (Min SH: 3, Max SH: 3)

An exploration of diverse voices, social groups and societies in francophone literatures through works by francophone writers from all over the world. Designed as an introduction to the literatures and cultures of the francophone world, the course considers issues of social status, history, resistance, representation and identity. Taught in French.

Prerequisites: ( FREN202 )

Corequisites: None

#### FREN328 Seminar-Humanities (Min SH: 3, Max SH: 3)

A survey of major films produced by leading French directors since the 1960s. Films will be studied as expressions of French culture and related to the special circumstances of French life, society and history that they reflect. Films will be discussed both in general aesthetic terms and in terms of specifically French values and specifically French way of life. Special attention will also be devoted to the differences between French and American filmmaking. Films are presented with English substitutes; no knowledge of French is necessary.

Prerequisites: None

Corequisites: None

#### GEOG100 Physical Geography (Min SH: 3, Max SH: 3)

An introduction to the physical geographical elements of the world. The earth's principal spheres (atmosphere, lithosphere, hydrosphere and biosphere) are explored through time and space as they respond to change. Major areas of study are the water cycle and budget, global soil systems, natural vegetation zones, climatic regions, earth dynamics, and ecological energetics.

Prerequisites: None

Corequisites: None

#### GEOG101 World Regional Geography (Min SH: 3, Max SH: 3)

Examines the economic, political, environmental, and cultural processes that influence the spatial interaction between less and more developed regions of the world with particular emphasis on the extent to which regions are being affected by globalization.

Prerequisites: None

Corequisites: None

#### GEOG212 Geography Developing World (Min SH: 3, Max SH: 3)

An examination of the nature, characteristics, challenges, and possibilities associated with development in economically peripheral regions of the world. Spatial aspects of uneven development and globalization will be addressed through analyzing environmental settings,

historical circumstances, institutions, and cultural forces associated with underdevelopment and poverty.

Prerequisites: None

Corequisites: None

#### GEOG305 Conservation Natural Resources (Min SH: 3, Max SH: 3)

An introduction to the conservation ideas from an optimistic viewpoint. Basic earth materials must be employed or converted to sustain our material culture. The basic resources are investigated and discussed. Major areas of study are water, minerals, soils, energy, forests, wildlife, pollution, and environmental quality.

Prerequisites: None

Corequisites: None

#### GEOG315 Political Geography (Min SH: 3, Max SH: 3)

The course is an in-depth study of how geography has influenced political phenomena throughout history. Political processes and environmental interaction at various levels of the political hierarchy are examined. Present day political problems are viewed in their aerial context.

Prerequisites: None

Corequisites: None

#### GEOG328 Seminar-Social Science (Min SH: 3, Max SH: 3)

Uses a thematic and topical approach to examine issues in geography such as ethnic conflict, regional integration and separatism, regional development, sustainable development, poverty and uneven development, environmental degradation, and overpopulation (to be determined by the professor). Particular emphasis is placed on historical, political, and economic forces as they relate to contemporary issues associated with globalization.

Prerequisites: None

Corequisites: None

#### GEOG401 Special Problems (Min SH: 1, Max SH: 4)

Individual research under the guidance of the Geography staff. For advanced students in Geography.

Prerequisites: None

Corequisites: None

#### GEOG440 Economic Geography (Min SH: 3, Max SH: 3)

This course in Economic Geography emphasizes the need for universal control of the spatially distributed natural resources. Economic Geography can be regarded as a science concerned with the rational development, and testing of theories that explain and predict the spatial distribution and location of various characteristics on the surface of the earth. These characteristics are related to the consumption, production, and exchange of goods and services. The scientific approach to the analysis of this spatial distribution and its interrelationships involves two aspects, which are equally important. The first is the collection of facts or data, and the second is the synthesis of these facts into meaningful theories of great interest to economic geographers in the quantitative analysis of spatial distributions to discern the presence and form of patterns.

Prerequisites: None

Corequisites: None

#### GEOG445 Geography of Latin America (Min SH: 3, Max SH: 3)

A systematic, conceptual, methodological framework is devised as a basis to view the various regions. Included is the survey of Mexico, countries of Central American, major countries and areas of the West Indies, and all the South American countries. Emphasis is placed upon regional comparisons. The relations of Latin American countries among themselves and the rest of the world are stressed.

Prerequisites: None

Corequisites: None

#### GEOS101 Earth Science (Min SH: 3, Max SH: 3)

An introduction to Earth-system processes in the context of astronomy, meteorology, geology, and oceanography. This course examines the Earth's relationship to the Sun, Moon, and planets in the solar system. The Earth's major processes, including the hydrologic cycle, the rock cycle, plate tectonics, global wind circulation, ocean circulation, global climatic phenomena, and human-induced changes in the environment are examined through lectures and hands-on laboratory investigations.



Prerequisites: None

Corequisites: None

#### GEOS107 Natural Disasters (Min SH: 3, Max SH: 3)

Focused on the causes, effects, and mitigation of natural disasters around the world. Topics covered will include plate tectonics, earthquakes, volcanoes, tsunamis, landslides, meteor impacts, and major weather events such as tornadoes, floods, and hurricanes. Topics will include methods used by scientists to monitor and study these natural phenomena and the economic/societal impact of and response to the events.

Prerequisites: None

Corequisites: None

#### GEOS120 Oceanography (Min SH: 3, Max SH: 3)

A comprehensive study of major components of oceans, including the origin of evolution of ocean floors, energy and mineral resources of oceans, chemical constituents and reactions in seawater, air-sea interactions, marine organisms and the relationships between these organisms and the environments of oceans. Ocean-related environmental concerns, including beach erosion, wetland loss, sea-level fluctuations, and point sources and non-point sources of pollution are discussed. (This course is required for majors in Secondary Education/Earth and Space Science, Secondary Education/General Science, and Biology/Marine Biology. Therefore they will receive preference for registering for the course. A required four-day field trip to Wallops Island, VA for which the students have an out of pocket expense of \$100 at the field station, plus meal expenses on the trip to and from the Marine Science consortium station.)

Prerequisites: None

Corequisites: None

#### GEOS125 Geology of Gemstones (Min SH: 3, Max SH: 3)

An introduction to the composition, origin, occurrence, properties, and identification of gemstones. The course illustrates how internal Earth processes produce various minerals commonly used as gemstones and how surficial Earth processes act to release and concentrate gemstones into economically viable deposits. Students will learn the geologic setting of gemstones, basic principles of mineralogy, crystallography, and gemology. Course topics will emphasize the rarity of gemstone deposits as it applies to geologic conditions necessary for their formation.

Prerequisites: None

Corequisites: None

### GEOS130 Principles of Geology I (Min SH: 3, Max SH: 3)

An introduction to the composition, structure, and internal physical processes of the earth, nature of minerals and rocks, surface erosional and depositional features, and the agents that form them. Topics include plate tectonics, earthquakes, volcanism, minerals, igneous rocks, weathering, erosion, and glacial processes, groundwater and stream processes, sedimentary rocks, and metamorphic rocks.

Prerequisites: None

Corequisites: None

### GEOS131 Principles of Geology II (Min SH: 3, Max SH: 3)

Designed to gain an appreciation of the deepness of geologic time and the vastness of space and to develop an understanding of the geologic and biologic processes through which the Earth and life on Earth evolved over geologic time. Students acquire hands-on experience on the use of scientific equipment and mapping tools in the field and in laboratory settings. Applications of stratigraphic principles to interpret Earth's history and the trend in evolution of life are emphasized.

Prerequisites: ( GEOS130 ) OR ( GEOS110 )

Corequisites: None

### GEOS135 Geology of National Parks (Min SH: 3, Max SH: 3)

An introduction to basic geologic concepts through examples from our national parks and monuments. The course illustrates how Earth's internal processes are responsible for earthquakes, volcanoes, and the formation of mountain ranges, and how the action of wind, water, and ice at Earth's surface results in erosion and exposure of older rocks. Students will learn how national park geology relates to the theory of plate tectonics, a framework that has revolutionized thinking in the geosciences.

Prerequisites: None

Corequisites: None

### GEOS140 Sustainability Science (Min SH: 3, Max SH: 3)

An investigation of interconnectedness of global trends in population growth, natural resources, energy, water resources, biodiversity, agriculture, land use and urbanization, human health, food security, inequality in economic development, and global environmental threats in the context of climate change. The strategies and decision making skills to formulate pathways for economic growth that is socially inclusive and environmentally sustainable at the global scale will be discussed.

Prerequisites: None

Corequisites: None

#### GEOS213 Introduction to Geographic Information Systems (Min SH: 3, Max SH: 3)

An introduction to geographic information systems (GIS) with emphasis on capturing, storing, editing, querying, displaying, and analyzing geographically referenced data. Lecture and laboratory materials are designed to provide students with hands-on experience on real-world applications of GIS in their respective fields.

Prerequisites: None

Corequisites: None

#### GEOS215 Environmental Geology (Min SH: 3, Max SH: 3)

Students will traverse the spectrum of applied geology focusing upon its relation to human activities. Included among topics are water availability; geologic hazards such as earth quakes, landslides, and land subsidence; mineral and energy resources; engineering geology, waste disposal and pollution; land-use planning; coasts and coastal management; and medical and legal aspects of geology.

Prerequisites: ( GEOS110 ) OR ( GEOS130 )

Corequisites: None

#### GEOS230 Geomorphology (Min SH: 3, Max SH: 3)

A study of landforms and the factors involved in their formation including geologic processes, composition, structure, and climate. The laboratory emphasizes the recognition of various landforms using topographic and aerial photographs.

Prerequisites: ( GEOS110 ) OR ( GEOS130 )

Corequisites: None

GEOS260 Geology Field Methods (Min SH: 1, Max SH: 1)

An introduction to common geology field methods and tools used to describe, identify, measure, collect, and record geological field data necessary to produce geologic maps and cross-sections, and to develop a geologic history based on multiple lines of evidence. The course is designed for weekend or summer session outdoor exercises in local or regional geologic settings.

Prerequisites: ( GEOS130 AND GEOS131 )

Corequisites: None

GEOS301 Invertebrate Paleontology (Min SH: 3, Max SH: 3)

An introduction to the study of invertebrate fossils including: system of classification, types of fossil preservation, nomenclature, characteristic structures, ecology and evolution of the paleontologically important invertebrate phyla.

Prerequisites: ( GEOS210 ) OR ( BIOL240 ) OR ( GEOS131 )

Corequisites: None

GEOS305 Mineralogy and Petrology (Min SH: 4, Max SH: 4)

An introduction to the origin, occurrence, crystallography, and chemical and physical properties of geologically important minerals. Includes a study of the classification and interpretation of igneous and metamorphic rocks.

Prerequisites: ( GEOS110 ) OR ( GEOS130 )

Corequisites: None

GEOS313 Advanced Geographic Information Systems (Min SH: 3, Max SH: 3)

Deals with advanced topics in geographic information systems (GIS), including spatial reference data, geometric transformation, raster data analyses, terrain mapping, viewsheds and watersheds, spatial interpolation, geocoding, dynamic segmentation, path analyses, geostatistics, mobile GIS, and GIS models and modeling. Lecture and laboratory exercises are designed to provide students with hands-on experience with real-world applications of GIS in solving problems in diverse fields.

Prerequisites: ( BIOL213 ) OR ( GEOS213 )

Corequisites: None

GEOS315 Sedimentology (Min SH: 3, Max SH: 3)

The study of sedimentary materials, processes, depositional environments, and the products of sedimentation. Laboratories focus upon collection, analysis, and presentation of field data and the description and interpretation of both consolidated and unconsolidated sedimentary materials applying various petrologic and petrographic techniques.

Prerequisites: ( GEOS210 ) OR ( GEOS131 )

Corequisites: None

GEOS328 Seminar-Science (Min SH: 3, Max SH: 3)

The course looks at how scientists search for knowledge and try to gain an understanding of natural phenomena. Students explore the roles science and technology play in human activities both locally and globally. Specific topics vary and are based on the expertise and interest of the faculty member responsible for teaching the course that semester.

Prerequisites: None

Corequisites: None

GEOS360 Hydrogeology (Min SH: 4, Max SH: 4)

A course that emphasizes practical hydrogeologic principles, stressing interactions between geology and both surface and underground water. Topics include occurrence, production, and management of groundwater, water quality, flooding and flood control, and sources of information for the practicing hydrogeologist.

Prerequisites: ( GEOS110 AND MATH141 ) OR ( GEOS130 AND MATH141 )

Corequisites: None

GEOS361 Aqueous Environmental Geochemistry (Min SH: 3, Max SH: 3)

An upper-level course designed to help students develop in-depth knowledge of geochemical processes and factors controlling chemical composition and chemical reactions that impact the quality of both surface water and groundwater in natural and anthropogenically disturbed/perturbed geological systems.

Prerequisites: ( CHEM121 AND GEOS110 ) OR ( CHEM121 AND GEOS130 )

Corequisites: None

#### GEOS415 Stratigraphy (Min SH: 3, Max SH: 3)

The principles of lithostratigraphy and biostratigraphy form the core of this course. Geochronology and the recently developed techniques of seismic, magnetic, and isotopic stratigraphy supplement those classical principles. Laboratories emphasize the field identification and interpretation of vertical and lateral relationships of sedimentary sequences.

Prerequisites: ( GEOS315 )

Corequisites: None

#### GEOS420 Geology of Energy and Mineral Resources (Min SH: 4, Max SH: 4)

Geologic occurrence and methods of locating, mining, evaluating, and processing fossil fuels and industrial and ore minerals. Geology of major, worldwide fuel and mineral deposits and environmental problems associated with their exploitation.

Prerequisites: ( GEOS221 ) OR ( GEOS305 )

Corequisites: None

#### GEOS430 Structural Geology (Min SH: 4, Max SH: 4)

The constant movements of lithospheric plates relative to one another throughout the immensity of geologic time account for the regional and local displacement and deformation of the Earth's outer layers. These deformational processes along with the changes in the size and shape of the coherent rock masses and the internal arrangement of their constituent elements are the focus of this area of geological investigation.

Prerequisites: ( GEOS210 ) OR ( GEOS131 )

Corequisites: None

#### GEOS450 Geophysics and Tectonics (Min SH: 4, Max SH: 4)

Geophysical methods used to study the Earth and other planetary bodies, including geophysical foundations of plate-tectonic theory. The course includes geophysical techniques used in mineral-resource exploration, engineering, and characterization of waste-disposal sites.

Prerequisites: ( GEOS210 ) OR ( GEOS131 )

Corequisites: None

GEOS451 Coastal Environmental Oceanography (Min SH: 3, Max SH: 3)

Advanced topics in coastal geomorphology and environmental issues pertinent to coastal settings, including human impacts on coastal landforms, shoreline erosion, wetland loss, sea-level fluctuations, nutrients in estuaries, metals in bays, and climate change. Lecture, field trips, and laboratory exercises are designed to provide students with hands-on experience with field and laboratory equipment used to solve real-world problems in diverse coastal settings.

Prerequisites: ( GEOS120 ) OR ( GEOS130 )

Corequisites: None

GEOS458 Advanced Applied Nanotechnology Laboratory (Min SH: 3, Max SH: 3)

Laboratory experience drawn from an undergraduate foundation in sciences including areas of current research in nanotechnology. Experimental methods and analysis are used, with emphasis on group and individual work in the planning, execution, and presentation of research. Students may repeat for credit.

Prerequisites: ( PHAP206 )

Corequisites: None

GEOS490 Capstone Research Project (Min SH: 2, Max SH: 2)

Students engage in an intensive independent research project related to their major concentration that will culminate in a research paper and presentation based on data collected and interpreted using scientific methods.

Prerequisites: None

Corequisites: None

GERM101 German 1 (Min SH: 3, Max SH: 3)

An introduction to the fundamentals of German grammar and syntax, with special attention to pronunciation, reading, speaking, listening and writing of simple sentences and prose selections.

Prerequisites: None

Corequisites: None

GERM102 German 2 (Min SH: 3, Max SH: 3)

An introduction to the fundamentals of German grammar and syntax, with special attention to pronunciation, reading, speaking, listening and writing of simple sentences and prose selections.

Prerequisites: None

Corequisites: None

#### GERM201 German 3 (Min SH: 3, Max SH: 3)

A review of the fundamentals of German language and pronunciation; reading of short German prose works illustrating aspects of style; development of vocabulary and linguistic fluency.

Prerequisites: None

Corequisites: None

#### GERM202 German 4 (Min SH: 3, Max SH: 3)

A review of the fundamentals of German language and pronunciation; reading of short German prose works illustrating aspects of style; development of vocabulary and linguistic fluency.

Prerequisites: None

Corequisites: None

#### GERM203 German Culture 1 (Min SH: 3, Max SH: 3)

The study of significant aspects of German culture, including current events and movements. Special attention is given to the outstanding persons, events and forces in art, music, theater, philosophy, politics, education, and religion, with a view towards understanding the German ethos.

Prerequisites: None

Corequisites: None

#### GERM204 German Culture 2 (Min SH: 3, Max SH: 3)

The study of significant aspects of German culture, including current events and movements. Special attention is given to the outstanding persons, events and forces in art, music, theater, philosophy, politics, education, and religion, with a view towards understanding the German ethos.



Prerequisites: None

Corequisites: None

#### GERM301 German Comp and Conversation 1 (Min SH: 3, Max SH: 3)

Advanced course to develop fluency in speaking and writing. Classroom time is devoted mainly to conversation about everyday life. Compositions will be written on contemporary topics. Grammar is treated as necessary.

Prerequisites: None

Corequisites: None

#### GERM302 German Comp and Conversation 2 (Min SH: 3, Max SH: 3)

Advanced course to develop fluency in speaking and writing. Classroom time is devoted mainly to conversation about everyday life. Compositions will be written on contemporary topics. Grammar is treated as necessary.

Prerequisites: None

Corequisites: None

#### GERM303 German Literature 1 (Min SH: 3, Max SH: 3)

Readings from selected authors representative of the main periods of modern literature. Lectures on literary history and the lives of the more important writers supplement the discussion of works being studied. Students are expected to develop and express critical opinions.

Prerequisites: None

Corequisites: None

#### GERM304 German Literature 2 (Min SH: 3, Max SH: 3)

Readings from selected authors representative of the main periods of modern literature. Lectures on literary history and the lives of the more important writers supplement the discussion of works being studied. Students are expected to develop and express critical opinions.

Prerequisites: None

Corequisites: None

GERM305 Advanced German Grammar 1 (Min SH: 3, Max SH: 3)

A thorough review of the grammatical structure of the German language. Students learn to communicate correctly and effectively in German by means of extensive oral and written exercises that focus on specific areas of grammar.

Prerequisites: None

Corequisites: None

GERM306 Advanced German Grammar 2 (Min SH: 3, Max SH: 3)

A thorough review of the grammatical structure of the German language. Students learn to communicate correctly and effectively in German by means of extensive oral and written exercises that focus on specific areas of grammar.

Prerequisites: None

Corequisites: None

GERM328 Seminar-Humanities (Min SH: 3, Max SH: 3)

A survey of German film since 1970. Films will be studied as expressions of German culture and of a specifically German view of the world. Films are shown with English subtitles; no knowledge of German is necessary.

Prerequisites: None

Corequisites: None

GERM402 German Prose 2 (Min SH: 3, Max SH: 3)

A survey of German prose fiction since the eighteenth century. Students will study such modern writers as Hermann Hesse, Franz Kafka, Heinrich Boll, Thomas Mann, and Max Frisch. Literary works are studied both as products of their age and culture and for their own thematic interest. Changes in style, technique, and worldview are examined in historical perspective.

Prerequisites: None

Corequisites: None

### HIST101 World History 1 (Min SH: 3, Max SH: 3)

A global survey of the evolution of societies and civilizations from prehistory to the early modern era. It covers the history of not only Europe and the Mediterranean basin, but also Africa, Asia and the Americas. Recurrent themes are the environment, community, politics, economy, technology, belief systems and culture.

Prerequisites: None

Corequisites: None

### HIST102 World History 2 (Min SH: 3, Max SH: 3)

A survey of world history from the early modern period to the present. Its central focus is the gradual integration of diverse populations as global contact expanded during the period in question. Students consider the construction of historical periodization from a multi-cultural perspective while examining a variety of themes that illuminate the interaction of cultures through conflict and cooperation.

Prerequisites: None

Corequisites: None

### HIST111 Global History 1 (Min SH: 3, Max SH: 3)

A global survey of the evolution of societies and civilizations from prehistory to the early modern era. It covers the history of Europe and the Mediterranean basin, but also Africa, Asia and the Americas. Recurrent themes are the environment, community, politics, economy, technology, belief systems and culture. Restricted to History and Secondary Education, Social Studies majors

Prerequisites: None

Corequisites: None

### HIST112 Global History 2 (Min SH: 3, Max SH: 3)

A survey of world history from the early modern period to the present. Its central focus is the gradual integration of diverse populations as global contact expanded during the period in question. Students will consider the construction of historical periodization from a multi-cultural perspective while examining a variety of themes that illuminate the interaction of cultures through conflict and cooperation. Restricted to History and Secondary Education, Social Studies majors

Prerequisites: None  
Corequisites: None

#### HIST119 First Year Student Seminar (Min SH: 1, Max SH: 1)

An introduction to the university learning environment for first year history majors. Students learn the goals of a liberal arts degree and specifically of a BA in History. The course also covers specific learning strategies, classroom technologies and institutional resources that might help them achieve their goals.

Prerequisites: None  
Corequisites: None

#### HIST150 American History (Min SH: 3, Max SH: 3)

A rapid survey of political, economic, diplomatic, social, and cultural developments in the United States from the beginning of the colonial period to the present. This course does not fulfill the general education requirement in history.

Prerequisites: None  
Corequisites: None

#### HIST200 Historical Thinking and Writing (Min SH: 3, Max SH: 3)

An introduction to historical methods, with emphasis upon sources, interpretation, presentation and scholarly debate. Thematic content (i.e., geographic region, era, or subject) and/or case studies to be determined by the instructor.

Prerequisites: ( ENGL100 ) OR ( HONR111 )  
Corequisites: None

#### HIST201 History of the United States 1 (Min SH: 3, Max SH: 3)

A survey of U.S. history from the foundations of English colonialism at Jamestown to the end of Reconstruction (1607-1877). This course will encompass political, economic, military, and social developments during the Colonial Era, the Revolution, the early national period, the age of Jackson, the Civil War, and Reconstruction.

Prerequisites: None  
Corequisites: None

### HIST202 History of the United States 2 (Min SH: 3, Max SH: 3)

A survey of U.S. history since 1877. Framed around the rise of the U.S. as an industrial nation and a world power, the course investigates accompanying social, political, economic, environmental and cultural developments. These include immigration and migration, alliances with other nations, causes and consequences of wars, changing political ideologies, racial, ethnic, and gender identities and issues, causes and consequences of protest movements, causes and consequences of economic change, and changes in family and community.

Prerequisites: None

Corequisites: None

### HIST203 Introduction to Public History (Min SH: 3, Max SH: 3)

An introductory survey to the field of public history giving special attention to the history, philosophy, and purposes of applied history. A key theme is the professional responsibilities of historians in preserving and interpreting the past through historical agencies, archives, museums and sites of local history.

Prerequisites: None

Corequisites: None

### HIST205 History of the United States Labor Movement (Min SH: 3, Max SH: 3)

A study of the American labor movement from early national beginnings to the present placed within the framework of general historical development. It seeks to explore the world of both the wage earner and the organizations created to achieve common goals. Emphasis is focused on the growth of American unionism and the development of collective bargaining.

Prerequisites: None

Corequisites: None

### HIST210 Colonial America (Min SH: 3, Max SH: 3)

A survey of American life from the beginnings of English settlement to 1789, with emphasis upon the development of political, economic and cultural institutions.

Prerequisites: None

Corequisites: None

### HIST222 Introduction to Cultural Heritage Management (Min SH: 3, Max SH: 3)

Introduces cultural heritage as a fluid concept, influenced by a variety of forces and beliefs, through which history is preserved, represented, and interpreted for the present and the future. Course material and instruction will critically explore both material culture, the physical remains of the past, and intangible culture expressed through, for example, performing arts or food traditions. Readings and discussion will explore cultural heritage as an essential element in the construction of identity for both the individual and the nation and will examine how selection, preservation, and interpretation of cultural heritage are shaped by social, economic, and political influences. This course will introduce students to the processes by which cultural heritage is identified, preserved, managed, marketed, utilized, endangered, and protected.

Prerequisites: None

Corequisites: None

### HIST230 Appalachian Regional History (Min SH: 3, Max SH: 3)

Traces the unique history of Appalachia, a region that runs from Alabama through New York and includes Central and Western Pennsylvania. Students will scrutinize and discuss primary sources and historical analyses as they consider the construction of the notion of "Appalachia." The course will introduce students to patterns of settlement and exploitation of resources, discuss variations within the region, and examine Appalachia's history within both a national and an international context.

Prerequisites: None

Corequisites: None

### HIST245 History of Pennsylvania (Min SH: 3, Max SH: 3)

Pennsylvania from its colonial beginnings to the present; special attention to the political, economic, and social factors which have shaped the past; the Commonwealth's impact upon the national scene.

Prerequisites: None

Corequisites: None

### HIST300 Early American Republic (Min SH: 3, Max SH: 3)

An exploration of various themes in United States history from the end of the Revolution through the era of Andrew Jackson (1783-1845). Topics to be covered include the emergence of political institutions, economic growth, the struggle to create a functional foreign policy, westward expansion, the rise of sectional tensions, and the changing characteristics of a developing society.

Prerequisites: None

Corequisites: None

#### HIST301 Medieval Europe (Min SH: 3, Max SH: 3)

A survey of European history during the Middle Ages (ca. 500-1500 CE), from the collapse of the Roman Empire to the dawn of the Early Modern era. The course covers the major social, political, and religious, intellectual, and artistic developments of the period.

Prerequisites: None

Corequisites: None

#### HIST302 Civil War and Reconstruction (Min SH: 3, Max SH: 3)

A study of the American Civil War era, 1845-1877. Topics to be emphasized include the antebellum South; the origins of the Civil War; the war in its military, political, diplomatic, social and economic aspects; and reconstruction, South and North.

Prerequisites: None

Corequisites: None

#### HIST304 Recent US History (Min SH: 3, Max SH: 3)

An exploration of major transformations in U.S. society and foreign policy since World War II. Topics include the origins of the Cold War, domestic life in the 1950's, the civil rights movement, Vietnam, sixties protests, the women's movement, Watergate, the political shift to the right in the 1980's, and recent changes in the U.S. economy.

Prerequisites: None

Corequisites: None

#### HIST305 Renaissance and Reformation (Min SH: 3, Max SH: 3)

A survey of the cultural and intellectual achievements of the Italian and Northern Renaissances and Protestant Reformation. The course highlights European contacts with the wider world and outside influences on European intellectual and artistic movements. Emphasis is placed on secularism, humanism, and individualism during the era of the Italian and Northern Renaissances and important movements of the Protestant Reformation including Lutheranism, the Swiss reform movements, Anglicanism, the Catholic Counter-Reformation, and the European religious wars.

Prerequisites: None

Corequisites: None

HIST306 History of the American Frontier (Min SH: 3, Max SH: 3)

A study of the westward movement and its influence upon the American development. Social and economic aspects of the frontier experience will be emphasized.

Prerequisites: None

Corequisites: None

HIST307 Diplomatic History of US (Min SH: 3, Max SH: 3)

Foreign relations from the beginning of our national history to the present: the growth and influence of a policy of "isolation"; the creation and development of the Monroe Doctrine; the emergence of the United States as a world power; the problems incident to the assumption of global responsibilities.

Prerequisites: None

Corequisites: None

HIST310 French Revolution and Napoleon (Min SH: 3, Max SH: 3)

The Old Regime, the Enlightenment, and the causes of the French Revolution. Revolutionary events of the decade 1789-1799 and military, legal, economic, and political aspects of the Napoleonic era. The emergence of the bourgeoisie.

Prerequisites: None

Corequisites: None

HIST311 International Business History (Min SH: 3, Max SH: 3)



An examination of selected topics in the development of modern business cultures. The expansion of the industrial, world economy will serve as the general chronological framework, with major units devoted to: family firms and trading diasporas, chartered and joint stock companies, banking and insurance, commercial adaptations of new technologies, the creation of mass markets, "business imperialism," the multinational corporation, and business cultures within late industrializers and "emerging" markets.

Prerequisites: None

Corequisites: None

#### HIST312 US in Prosperity and Depression, 1918-1941 (Min SH: 3, Max SH: 3)

An examination of the culture, economics and politics of the U.S. between the two world wars. Topics include the impact of World War I, the emergence of a mass consumer culture in the 1920's, the Great Depression and its effects on U.S. society, the rise of the modern labor movement, the New Deal and the origins of the welfare state, and the legacy of these developments for contemporary America.

Prerequisites: None

Corequisites: None

#### HIST313 Nationalism in Asia (Min SH: 3, Max SH: 3)

An examination of the rise of modern nationalism in India, China, Japan and Southeast Asia in the nineteenth and twentieth century. Emphasis will be on a thematic, theoretical and comparative approach highlighting the similarities and differences in society and culture of each of these regions and their response to nationalism.

Prerequisites: None

Corequisites: None

#### HIST314 Oral History (Min SH: 3, Max SH: 3)

A workshop that introduces students to the theory, method, and practice of oral history. Students read and discuss theory, develop a research agenda, conduct field interviews, present results of a transcribed interview, and reflect on the relationship between theory and practice.

Prerequisites: None

Corequisites: None

HIST315 Social History of Europe Since 1750 (Min SH: 3, Max SH: 3)

An interdisciplinary survey of the pattern of social history of modern Europe with particular reference to the interaction of institutions and struggles of social classes. Use is made of social sciences auxiliary to the study of history, in particular economics, demography and sociology.

Prerequisites: None

Corequisites: None

HIST316 Early Christianity (Min SH: 3, Max SH: 3)

An exploration of the origins of Christianity in the first century CE and its development and spread through the seventh century CE. The class emphasizes the influence of eastern religious traditions and culture on Christianity, the Roman reaction to Christianity, the formation and organization of early Christian communities, early Christian spirituality and religious practices. The course also emphasizes the divergence of eastern and western Christian traditions, the influence of Christianity on the rise of Islam, and Islam's impact on the Christian world.

Prerequisites: None

Corequisites: None

HIST318 US Women's History (Min SH: 3, Max SH: 3)

An exploration of the experiences of women in the United States from colonial times to the present. The course examines the way that U.S. history has been shaped by gender, that is, the impact of gender on women's economic status and social roles. It also explores the diversity of experiences of women of different classes and ethnic backgrounds. Finally, the course examines women's contributions to U.S. culture or politics.

Prerequisites: None

Corequisites: None

HIST322 History of Modern China (Min SH: 3, Max SH: 3)

Traces the political, social, economic, and intellectual evolution of China from approximately 1800 to present. Special emphasis will be placed upon Western imperialism in China, the Revolution of 1911, the rise of the Nationalist and Communist Parties, the Chinese Civil War, the People's Republic, and post-Mao China. No previous exposure to China is presumed.

Prerequisites: None

Corequisites: None

HIST324 Environmental History of Asia (Min SH: 3, Max SH: 3)

A study of the ecological landscape of Asia from the earliest times with a focus on the diverse aspects of its environmental history. Addresses human migrations, changes in land use patterns, water management systems, forests, grazing lands, and climatic change, in the context of oceanic and overland interactions among the inter-communicating regions within Asia, and between Asia and the rest of the World.

Prerequisites: None

Corequisites: None

HIST327 History of Modern Japan (Min SH: 3, Max SH: 3)

Traces the evolution of Japan from an isolated island nation to a world power. Deals with the political, economic, social, military and intellectual history of Japan from 1600 to the present. Particular emphasis will be placed on the Takugawa Bakafu, the Meiji Restoration, the rise of Militarism and Nationalism, the Russo-Japanese War, the occupation of China, World War II, the Reconstruction, and the modern Japanese economy. No previous exposure to Japan is presumed.

Prerequisites: None

Corequisites: None

HIST328 Seminar-Social Science (Min SH: 3, Max SH: 3)

A thematic approach to an historical topic, with an emphasis on relevance to contemporary society. Designed for discussion among upper-class students of all majors, the course emphasizes interdisciplinary approaches and includes insights and perspectives from the humanities, other social sciences, or the sciences.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

HIST332 History of the Islamic World to 1798 (Min SH: 3, Max SH: 3)

Examines selected topics in Islamic history before 1798, introducing students not only to important personages, events, and themes, but also to historical interpretation and method. The course will be divided into four units, outlining the expansion of the Islamic world from the early community at Media to the zenith of the Ottoman Empire; specifically, the religious and

political foundations of Islam, conversion and expansion, Islamic civilization, and the great empires.

Prerequisites: None

Corequisites: None

#### HIST333 History of the Islamic World Since 1798 (Min SH: 3, Max SH: 3)

An examination of selected topics of the modern Islamic history, introducing students not only to important personages, events, and themes, but also to historical interpretation and method. The course will be divided into seven units from the pivotal 1790's to the present; specifically: decline and renewal in the late eighteenth century, the age of European colonialism, nineteenth and twentieth century nationalism, the politics of oil and the fundamentalist challenge.

Prerequisites: None

Corequisites: None

#### HIST334 China and India in Historical Perspective (Min SH: 3, Max SH: 3)

A comparative study of the history, culture, political economy, and environment of China and India in the context of the contemporary globalization process. Both countries are poised to become giants of the 21st century. The purpose is to look at the present developments, keeping in view their progress over several centuries, and to study the impact they have had and will have on the world.

Prerequisites: None

Corequisites: None

#### HIST335 History of Modern Russia (Min SH: 3, Max SH: 3)

Major developments of Russian history since 1815. Emphasis upon the decline of Tsarism, rise of revolutionary movements, World War I and the Russian Revolution of 1917. Soviet ideology, foreign and domestic policies from Lenin to the present.

Prerequisites: None

Corequisites: None

#### HIST337 Cold War America: US History 1945-1989 (Min SH: 3, Max SH: 3)

An examination of the political, economic, social and cultural trends in United States history from the end of World War II in 1945 to 1989.

Prerequisites: ( ENGL100 )

Corequisites: None

HIST338 History and Preservation of American Architecture (Min SH: 3, Max SH: 3)

A study of American architectural history as material evidence of the country's social, cultural, economic and technological development. Examines the meaning, uses, and changes of selected architectural forms addressing a broad array of structures, monuments, and landscapes. Emphasizes the principles and methods of public history, especially historic preservation. Includes attention to professional careers and ongoing projects in historic preservation.

Prerequisites: ( HIST200 ) OR ( HIST203 )

Corequisites: None

HIST342 History Modern Europe 1815-1914 (Min SH: 3, Max SH: 3)

A chronological and topical approach. Evaluation of major political, economic, social and cultural trends, with particular emphasis on industrialization and economic and social changes, development of the power of the nation-state, imperialism, and the origins of World War I.

Prerequisites: None

Corequisites: None

HIST343 History Mod Europe 1914-Present (Min SH: 3, Max SH: 3)

A chronological and topical approach. Evaluation of major political, economic, social and cultural trends, with particular emphasis on the impact of two world wars, fascism, establishment of the USSR, western European resurgence after World War II, and the shaping of the post-Cold War order.

Prerequisites: None

Corequisites: None

HIST345 Military History of US (Min SH: 3, Max SH: 3)

A study of the American military experience from colonial times to the present. Topics include the development of military organizations, institutions, practices, and traditions, and the origins and evolution of past wars in their military, diplomatic, political, economic, and social dimensions.

Prerequisites: None

Corequisites: None

#### HIST347 The Ancient Mediterranean (Min SH: 3, Max SH: 3)

An analysis of the evolution of ancient Mediterranean societies and cultures from the prehistory of the area until the decline of the Roman Empire, the rise of Islam, and the end of the Mediterranean as a cultural unit. It focuses on the major social, political, cultural, and religious institutions and practices of ancient Mesopotamia, Egypt, Palestine, Phoenicia, Asia Minor, Greece, and Rome.

Prerequisites: None

Corequisites: None

#### HIST358 History of Modern South Asia and Indian Ocean (Min SH: 3, Max SH: 3)

Provides the student with a basic understanding of the history and civilization of India, Pakistan and Bangladesh, from South Asia's earliest history up to the present. Special emphasis will be placed on the Classical Age of Indian History, the great Mughal Empire, the British Empire, and independent South Asia. No previous exposure to South Asia is presumed.

Prerequisites: None

Corequisites: None

#### HIST362 History of Africa to 1800 (Min SH: 3, Max SH: 3)

An examination of selected topics in pre-colonial African history. with the aim of introducing students not only to important personages, events and themes, but also to historical interpretation and method. The course will be divided into six units ranging from prehistory to the eighteenth century, specifically: food and society, ancient civilizations, human migration, state formation, Islamic society, and the transatlantic slave trade.

Prerequisites: None

Corequisites: None

HIST363 History of Africa Since 1800 (Min SH: 3, Max SH: 3)

A survey of modern African history from 1800 to the present, with the aim of analyzing contemporary issues from an historical perspective. In particular, the course will revolve around the question of whether the colonial period was simply a brief, superficial phase in African history, or a time of upheaval and transformation. Emphasis will be placed on African agriculture, rural communities, industrialization, urbanization, and colonial and contemporary politics.

Prerequisites: None

Corequisites: None

HIST366 History of Modern Southeast Asia (Min SH: 3, Max SH: 3)

Traces the evolution of Southeast Asia from its early modern history as a focal region for European and American colonialism and conquest, to the emergence of the contemporary independent states. Emphasis will be placed on Dutch colonialism in Indonesia, the British in Burma and Malaysia, America in the Philippines, French Indochina, the Vietnam War, and Southeast Asia since 1975.

Prerequisites: None

Corequisites: None

HIST367 Colonial Latin American History (Min SH: 3, Max SH: 3)

Surveys the history of the vast area known as Latin America from Pre-Columbian times to the wars of independence of the early nineteenth century. Examines the major Pre-Columbian civilizations, the early encounter with Iberians, processes of conquest and transformation that resulted in the creation of unique American societies. Focuses on the development of the economic, political, social, cultural and religious institutions of this region.

Prerequisites: None

Corequisites: None

HIST370 History of Latin America (Min SH: 3, Max SH: 3)

The development of Latin America from the period of discovery to the present. The relation of economic, social and cultural factors to the various political units. The influence of relations with Europe and the U.S.

Prerequisites: None

Corequisites: None

#### HIST372 Historical Perspectives on Appalachian Health Care (Min SH: 3, Max SH: 3)

Students will study the development of health care systems and issues in Appalachia, a region that contains central Pennsylvania. This course will provide students with an opportunity to scrutinize and discuss primary sources and historical analyses that address the following issues: identification of the region and recognition of the unique health needs of its inhabitants; the development of the medical profession and its relationship to other health care providers; and evaluation of the effectiveness of the traditional medical system in Appalachia.

Prerequisites: None

Corequisites: None

#### HIST375 History of Mexico and Central America (Min SH: 3, Max SH: 3)

A general history of Middle America from the conquest by the Spanish to the present, with emphasis upon the national rather than the colonial experience. Special emphasis on Mexico and Cuba and on the relationships of Middle America with the U.S.

Prerequisites: None

Corequisites: None

#### HIST377 Modern Latin American History (Min SH: 3, Max SH: 3)

A survey of the history of Latin America from the Wars of Independence (1820s) to the present. Through lecture, readings, discussion and various media, students will analyze the economic and political development of Latin America, its authoritarian and revolutionary past and its recent transitions to democracy. The role of popular culture in national development and identity as well as relations with the U.S. will also be examined.

Prerequisites: ( HIST\*\*\* )

Corequisites: None

#### HIST385 History of Modern South Africa (Min SH: 3, Max SH: 3)

An exploration of modern South African political, social and economic problems within an historical context. Thus, the course will survey the development of colonial political institutions, industries, social class and popular movements with the aim of better defining the protests and reforms of recent years. Topics covered will include: pre-colonial Southern



African societies, Dutch colonization and Afrikaner society, the mineral revolution and industrialization, rural impoverishment and labor migration, colonial labor and segregation policies, labor unions, African nationalism, and the rise and apparent fall of the apartheid regime.

Prerequisites: None

Corequisites: None

#### HIST390 Contemporary World Problems (Min SH: 3, Max SH: 3)

A detailed study of the historical background and significance of several major contemporary problems. Issues treated will vary from year to year in response to the changing world scene. Typical problems are the Arab-Israeli conflict, arms limitation, northern Ireland, the status of Taiwan, among others.

Prerequisites: None

Corequisites: None

#### HIST395 Historiography (Min SH: 3, Max SH: 3)

An examination of the nature of historical inquiry and historical knowledge through a study of the principles of historical methodology. A survey of the history of historical writing with emphasis upon the critical historical scholarship of the last two centuries.

Prerequisites: None

Corequisites: None

#### HIST480 Capstone Research Seminar (Min SH: 3, Max SH: 3)

A research seminar, with emphasis upon historical sources, interpretation, presentation and scholarly debate. Thematic focus (i.e., era or theme) to be determined by the instructor, according to the following criteria: 1) global in scope, 2) local history application, 3) subject of historical debate.

Prerequisites: ( HIST200 AND HIST3\*\* )

Corequisites: None

#### HLTH100 Medical Terminology (Min SH: 1, Max SH: 1)

An introductory study of medical language including basic word structure, medical prefixes and suffixes. It is designed to help students interpret medical terms as used in medical practice.

Prerequisites: None

Corequisites: None

#### HLTH102 Orientation to Health Science (Min SH: 1, Max SH: 1)

Explores career options and graduate or professional school opportunities for Health Science majors. Class activities primarily consist of presentations by allied health professionals regarding job requirements, prerequisite education and related matters.

Prerequisites: None

Corequisites: None

#### HLTH104 Foundations of Health Education (Min SH: 1.5, Max SH: 1.5)

Introduces students to the profession of health education. Emphasis is placed on the history of the profession; major determinants of health status; the contributions of the behavioral sciences, education and public health; and health behavior change theory. Students will analyze the roles and responsibilities of health educators.

Prerequisites: None

Corequisites: None

#### HLTH105 Introduction to Health (Min SH: 3, Max SH: 3)

An introductory survey of basic health issues, emphasizing the development of health literacy skills to enhance students' efficacy in reaching and maintaining a lifestyle conducive to health and wellness. A foundation of health content will be introduced to serve as a basis for further study in the following topics areas: stress management, sexuality, tobacco, alcohol and other drugs, injury prevention, weight management, nutrition, and exercise.

Prerequisites: None

Corequisites: None

#### HLTH108 Medical Terminology for Health Professions (Min SH: 3, Max SH: 3)

An in-depth study of medical terms. Terminology of body systems will also be covered. Emphasis will be placed on terminology of disease, diagnosis and treatment procedures related to each body system.

Prerequisites: None

Corequisites: None

#### HLTH110 Orientation Athletic Training (Min SH: 1, Max SH: 1)

Introduces students to the profession of athletic training, different career settings for athletic trainers, and the role of the athletic trainer in the patient care model. The course also exposes students to introductory athletic training skills and athletic training room management.

Prerequisites: None

Corequisites: None

#### HLTH115 Human Anatomy and Physiology 1 (Min SH: 4, Max SH: 4)

The course is the first in a two course sequence designed to introduce students to human anatomy and physiology in both healthy and disease states. Students explore fundamental concepts of chemistry, cells and histology as applied to the study of sensory organs, integumentary, skeletal, muscular, and nervous systems.

Prerequisites: None

Corequisites: None

#### HLTH119 First Year Student Seminar (Min SH: 1, Max SH: 1)

Designed to introduce students to the culture and mission of the university within the context of Health Science. Students are encouraged to explore the purpose of a college education and provided an opportunity to engage with the academic discipline. Students are introduced to learning strategies and study skills. Class discussion, students engage in active learning, common co-curricular activities, service and/or civic opportunities are incorporated to promote connection with fellow students, faculty, university and the community.

Prerequisites: None

Corequisites: None

#### HLTH120 Human Anatomy and Physiology 2 (Min SH: 4, Max SH: 4)

The second of a two course sequence to introduce students to a study of the normal structure and function of the human body. Students explore the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.

Prerequisites: None

Corequisites: None

#### HLTH122 Essentials of Human Anatomy and Physiology (Min SH: 3, Max SH: 3)

An overview of normal structure and function of the human body at an introductory level to prepare students for advanced study. The laboratory component includes practical application of course content using the scientific method. Students will explore integumentary; skeletal; muscular; nervous; cardiovascular; respiratory; digestion and metabolism; urinary; lymphatic and immune; endocrine and reproductive systems.

Prerequisites: None

Corequisites: None

#### HLTH140 Introduction to Public Health (Min SH: 3, Max SH: 3)

An overview of the key aspects of public health, including its history, mission, essential services, core functions, infrastructure, resources, workforce, achievements, challenges and career options.

Prerequisites: ( HLTH105 )

Corequisites: None

#### HLTH200 Introduction to Disease (Min SH: 3, Max SH: 3)

Designed to provide health science students with a background of information that is needed for future advanced studies in specific allied health professions. Course topics include the following: medical terminology and documentation, basic evaluation skills, the inflammatory and healing processes, and an introduction to the diseases that occur within the body's systems.

Prerequisites: ( HLTH115 AND HLTH120 )

Corequisites: None

#### HLTH204 Foundations of School and Community Health Education (Min SH: 3, Max SH: 3)

An introduction to the profession of health education. There is an emphasis on the history of the profession, theoretical foundations of health education, philosophical underpinnings of health, health education and promotion, determinants of health, accessing and evaluating health information, basic epidemiology, ethics, and the responsibilities of health education specialists in the school and community settings.

Prerequisites: None

Corequisites: None

HLTH208 Stress Management and Life Skills for Health Promotion (Min SH: 3, Max SH: 3)

Designed to explore the interrelationship of physical, mental, and psychological aspects of overall health to stress management. The emphasis is on the development of health literacy skills to enhance students' efficacy in researching and maintaining a lifestyle conducive to stress management. Students will be guided through identifying and analyzing how their stress impacts their health. Specific emphases are on preventive measures of disease, development of a stress management plan, and lifelong skills to promote health.

Prerequisites: None

Corequisites: None

HLTH214 Planning and Assessment in School Health Education (Min SH: 2, Max SH: 2)

An overview of planning and assessment of health education in the Pre-K through 12 setting. Emphasis is placed on designing comprehensive health education plans, fully integrating health skills with content.

Prerequisites: None

Corequisites: (HLTH204 )

HLTH215 Community Health (Min SH: 1.5, Max SH: 1.5)

An overview of community health agencies and processes involved in community health education. Particular emphasis is placed on environmental health, uses of epidemiological data, and political processes and their influence on community health.

Prerequisites: ( HLTH105 ) OR ( HLTH104 )

Corequisites: None

HLTH218 Public Health and the Environment (Min SH: 3, Max SH: 3)

Designed to introduce students to the fundamental concepts surrounding environmental and occupational health. Students will apply concepts in these areas to current environmental health issues including the following: risk assessment, policy generation and regulation, and human health impacts of environmental and occupational factors.

Prerequisites: ( HLTH115 AND HLTH120 )

Corequisites: None

HLTH225 Comparative Healthcare (Min SH: 3, Max SH: 3)

An analysis and comparison of healthcare and health related issues in the United States and other countries. This course examines both international health issues and healthcare systems from a comparative perspective.

Prerequisites: None

Corequisites: None

HLTH235 Community Health Education Methods and Strategies (Min SH: 3, Max SH: 3)

Designed to teach students the communication skills necessary to implement health education communication at the individual, group, community, and policy levels. Course content includes communication and learning theories, educational sessions and professional presentations, material development, social and legislative advocacy, and facilitating groups. Students will apply and practice oral communication concepts within the context of health education.

Prerequisites: ( HLTH105 )

Corequisites: None

HLTH240 Introduction to Epidemiology (Min SH: 3, Max SH: 3)

An introduction of basic epidemiologic concepts and methods including infectious disease, environmental epidemiology and psychosocial/behavioral epidemiology.

Prerequisites: ( HLTH105 )

Corequisites: None

HLTH245 Essentials of Human Movement (Min SH: 3, Max SH: 3)

Designed to strengthen the content knowledge of human movement. This course also provides the foundation for critical application of analysis of physical activity, movement and sport technique, and exercise.

Prerequisites: ( HLTH122 )

Corequisites: None

#### HLTH301 CPR and Emergency Care (Min SH: 3, Max SH: 3)

Designed to provide the student with the knowledge to evaluate both life-threatening situations and non life-threatening situations. Emphasis is placed on the evaluation and management of medical emergencies or trauma injuries and the necessary care for these conditions. Students who meet the minimum qualifications set by the Emergency Care Institute of Safety will receive Emergency Medical Responder certification.

Prerequisites: ( HLTH115 AND HLTH120 ) OR ( HLTH122 )

Corequisites: None

#### HLTH305 Introduction to Biomechanics (Min SH: 3, Max SH: 3)

Designed to introduce students to an understanding of human movement and to provide the foundation for critical analysis of physical activity and exercise. The approach includes the use of both quantitative and qualitative problems and applications are designed to illustrate biomechanical principles.

Prerequisites: ( HLTH128 AND HLTH129 ) OR ( HLTH115 )

Corequisites: None

#### HLTH307 Cultural Aspects of Health (Min SH: 3, Max SH: 3)

An exploration of race, ethnicity and culture as constructs of health. The course is designed to enhance cultural awareness and improve cultural competence when working with diverse populations within the United States.

Prerequisites: None

Corequisites: None

#### HLTH310 CPR and First Aid Instructor Training (Min SH: 2, Max SH: 2)

Prepares students to teach cardiopulmonary resuscitation (CPR) and first aid skills to others. Emphasis is placed on the role of the instructor to supervise and critique skill practice sessions. Detailed training with the CPR manikins is given. Upon successful completion of the course, students will receive American Red Cross instructor certification in CPR, Automated External Defibrillator (AED), and First Aid.

Prerequisites: None

Corequisites: None

#### HLTH315 Consumer Health (Min SH: 3, Max SH: 3)

Designed to promote current health literacy in relation to issues in consumer health, self-care management, and health care.

Prerequisites: None

Corequisites: None

#### HLTH320 Drug Education (Min SH: 3, Max SH: 3)

Provide students with current, accurate, and documented information about drug abuse in society. Special attention will be given to prevention, treatment, and drug education programs.

Prerequisites: ( HLTH105 ) OR ( HLTH154 ) OR ( HLTH104 )

Corequisites: None

#### HLTH325 Death Education (Min SH: 3, Max SH: 3)

A comprehensive view of death and dying. This course offers learning strategies designed to develop skills that facilitate dialogue among students, patients, families, and healthcare providers.

Prerequisites: ( HLTH105 )

Corequisites: None

#### HLTH330 School Health Programs (Min SH: 2, Max SH: 2)

Intended for students interested in health education. It includes the information and skills for planning and implementing policies and programs aligned with the Whole School, Whole Community, and Whole Child (WSCC).



Prerequisites: ( HLTH204 )

Corequisites: None

#### HLTH332 Psychological Aspects of Injury and Illness (Min SH: 3, Max SH: 3)

Designed to expose students to the psychological aspect of injury, illness, and rehabilitation. Students analyze literature related to psychological issues that can significantly impact the quality of rehabilitation and the patient's life. Various psychological factors such as motivation, confidence, anxiety, goal setting techniques, relaxation training that influence the rehabilitation process are investigated throughout this course.

Prerequisites: None

Corequisites: None

#### HLTH334 Teaching Nutrition and Personal Health (Min SH: 3, Max SH: 3)

Designed to address the basic elements of nutrition and personal health for the health and physical education major. Special attention will be given to K-12 nutrition and personal health education lesson and unit planning.

Prerequisites: ( HLTH204 AND HLTH214 )

Corequisites: None

#### HLTH336 Teaching Drug Education (Min SH: 3, Max SH: 3)

Designed to provide students with current information concerning substance abuse. Special attention will be given to K-12 drug education curricula, special school programs, community drug education programs, overview of addictions, family systems, substance abuse and teaching strategies.

Prerequisites: ( HLTH204 AND HLTH214 )

Corequisites: None

#### HLTH341 Teaching Human Sexuality (Min SH: 3, Max SH: 3)

Intended for students interested in health education and teaching human sexuality. Course content includes the information and skills needed to facilitate the planning and implementation of human sexuality education. Emphasis is placed on topics within human sexuality that are typically included in kindergarten to grade 12 sexuality education.

Prerequisites: ( HLTH204 AND HLTH214 )

Corequisites: None

HLTH350 Health Program Planning (Min SH: 3, Max SH: 3)

Designed to develop skills relating to the development and implementation of robust health education and promotion programs. Emphasis is placed upon systematic application of commonly used planning models in health programming. Strategies for effective needs and resource assessment, collaborative community processes, intervention planning and design, and successful implementation will be reviewed.

Prerequisites: ( HLTH204 )

Corequisites: None

HLTH353 Physiology of Exercise (Min SH: 3, Max SH: 3)

An exploration of the function of the body under the stress of acute and chronic physical activity. Laboratory exercises will be used to aid in student comprehension.

Prerequisites: ( HLTH115 AND HLTH120 ) OR ( HLTH122 )

Corequisites: None

HLTH355 Health Program Planning and Evaluation (Min SH: 4, Max SH: 4)

Designed to develop skills relating to the development, implementation, and evaluation of robust health education and promotion programs. Strategies for effective needs and resource assessment, intervention planning and design, successful implementation and comprehensive evaluation will be reviewed.

Prerequisites: ( HLTH204 )

Corequisites: None

HLTH363 Applied Sport and Exercise Science (Min SH: 3, Max SH: 3)

Provides students the fundamentals of fitness assessment, exercise prescription, and sports nutrition from a Health Science perspective. Students will develop and apply the skills required to perform a fitness assessment and subsequent exercise prescription in the physically active population. Course content also includes the nutritional requirements for optimal exercise performance.

Prerequisites: ( HLTH353 )  
Corequisites: None

#### HLTH401 Current Issues in Health (Min SH: 3, Max SH: 3)

An exploration of the dynamic and rapidly changing field of health. Selected current health topics drawn largely from the current popular and professional literature will be presented, evaluated, analyzed, and discussed.

Prerequisites: ( HLTH105 )  
Corequisites: None

#### HLTH402 Evaluation in Health Education and Promotion Programs (Min SH: 3, Max SH: 3)

Explores the processes for evaluation of health education policy, projects and programs. The emphasis is placed on developing and interpreting evaluations including evaluation design, measurement and using evaluation outcomes for decision-making. Qualitative and quantitative assessments are included to provide the learner with a variety of tools to assess the efficacy of health programs.

Prerequisites: None  
Corequisites: None

#### HLTH406 Biomechanics of Musculoskeletal Injury (Min SH: 3, Max SH: 3)

Designed to provide students in health-related professions with an advanced clinical background in the relationship between human biomechanics and musculoskeletal injury. The course examines the coordination of movement and the forces placed on various tissues of the body by physical activity, specifically in athletics and industrial work environments. Students explore various prevention/treatment interventions and are exposed to clinical problems in orthopedics, rehabilitation, and epidemiologic research.

Prerequisites: ( HLTH305 )  
Corequisites: None

#### HLTH407 Advanced Human Physiology and Mechanisms of Disease (Min SH: 4, Max SH: 4)

Designed to explore alterations in the functioning of human organ systems, including the etiology, pathogenesis, and clinical manifestations of common disease states. Topics covered are those with significance to the biomedical professions.

Prerequisites: ( HLTH115 AND HLTH120 )

Corequisites: None

HLTH410 Applied Community and Public Health (Min SH: 3, Max SH: 3)

Designed to provide an in-depth application of competencies acquired in prerequisite courses in the Health Science-Community Health track. This course will verify the students' ability to demonstrate professional skills in assessing, planning, coordinating, advocating and evaluating health education programs and services. This course includes the knowledge and skills required by The National Commission for Health Education Credentialing, Inc.

Prerequisites: ( HLTH204 AND HLTH350 AND HLTH402 )

Corequisites: None

HLTH414 Current Issues in Exercise Science (Min SH: 3, Max SH: 3)

An examination of the current literature regarding selected topics in exercise science.

Prerequisites: ( HLTH353 )

Corequisites: None

HLTH415 Introduction to Pharmacology (Min SH: 3, Max SH: 3)

An introductory course in pharmacology that focuses on principles of drug actions and major classes of drugs emphasizing mechanisms of action, rationale for therapeutic use, side effects, and relevant toxicities. Emphasis will be placed on pharmacotherapeutics so as to promote an understanding of the rational use of drugs in the clinical setting.

Prerequisites: ( CHEM121 AND HLTH120 ) OR ( BIOL410 )

Corequisites: None

HLTH420 Clinical Evaluation and Rehab (Min SH: 3, Max SH: 3)

Designed for those students pursuing physical or occupational therapy, physician assistant, chiropractic, or other health related professions. Principles of evaluation and treatment of orthopedic dysfunction and procedures in physical/occupational therapy, as well as instruction in proper medical note taking, are taught by both lecture and laboratory sessions. This course is designed to be taken prior to the student's field experience.

Prerequisites: ( HLTH128 AND HLTH130 AND HLTH200 AND HLTH305 ) OR ( HLTH151 AND HLTH200 AND HLTH251 AND HLTH305 )

Corequisites: None

HLTH425 Clinical Exercise Physiology (Min SH: 3, Max SH: 3)

An examination of the clinical aspects of exercise physiology emphasizing the relationships between exercise and chronic diseases and disorders. Exercise testing techniques will include electrocardiogram administration and interpretation.

Prerequisites: ( HLTH200 AND HLTH353 ) OR ( ATTR260 )

Corequisites: None

HLTH430 Women's Health Issues (Min SH: 3, Max SH: 3)

Addresses relevant issues regarding women's health and puts this knowledge to use. Provides a forum for the presentation of medical and scientific information on the health needs of women. For the context of this course, women's health issues are defined as any matters that affect women's health differently from that of men.

Prerequisites: ( HLTH105 ) OR ( HLTH154 ) OR ( HLTH104 )

Corequisites: None

HLTH435 Advanced Measurement Techniques in Exercise Physiology (Min SH: 3, Max SH: 3)

Provides students with the knowledge and technical skills required to measure, assess, and evaluate human anatomy and physiological function. Students will be exposed to traditional instrumentation along with new technological advancements within the exercise science field.

Prerequisites: ( HLTH353 AND MATH107 )

Corequisites: None

HLTH440 Research in the Health Sciences (Min SH: 3, Max SH: 3)

An orientation to research and evaluation for students in the health sciences. The emphasis is placed on evaluating research design and statistical analysis for professionals in the health science field. Students will develop and present a research proposal on a health science topic of interest.

Prerequisites: ( MATH107 )

Corequisites: None

HLTH451 Advanced Human Anatomy (Min SH: 4, Max SH: 4)

A study of the gross anatomical relationships between major structures, organs, vessels, and nerves. Human cadaver observation and dissection of all major systems of the body will be conducted by students and included in the laboratory sessions.

Prerequisites: ( BIOL107 AND HLTH120 )

Corequisites: None

HLTH470 Sex Education for the Health Sciences (Min SH: 3, Max SH: 3)

An examination of human sexuality from a health and medical perspective. Emphasis is placed on sexual anatomy and physiology, sexual health, effects of medical conditions on sexual functioning and other related issues in the health sciences.

Prerequisites: ( HLTH105 AND HLTH120 )

Corequisites: None

HLTH485 Professional Field Experience in Health Science (Min SH: 1, Max SH: 12)

Intended to expose students to on-site operations and test their potential and interest in the health science professions. Students will learn from professionals in the field and be exposed to programs, procedures, and settings. Supervision is provided by both university faculty and the cooperating agency.

Prerequisites: ( HLTH115 AND HLTH120 AND HLTH200 )

Corequisites: None

HLTH490 Health Science Capstone (Min SH: 1, Max SH: 1)

Designed to be a culminating educational experience for the health science student, the health science capstone course integrates coursework, knowledge, skills and experiential learning to enable the student to demonstrate a broad mastery of learning across the curriculum. The course provides an opportunity to integrate previous courses and experiences in and outside of the health science major.

Prerequisites: ( HLTH440 ) OR ( HLTH404 ) OR ( ATTR404 )

Corequisites: None

HLTH498 Health Science Seminar (Min SH: 1, Max SH: 3)

An analysis of topics related to health science within a framework provided by the instructor. Examples include but are not limited to: contemporary issues in healthcare; a comparative analysis of healthcare systems in different countries; health issues related to population, economics, social and other factors; healthcare issues of special populations; the healthcare crisis in the United States; and emerging healthcare technologies and fields.

Prerequisites: None

Corequisites: None

HONR101 Ethics-Historical and Global Perspectives (Min SH: 3, Max SH: 3)

Exposes students to a wide variety of ethical theories and moral conventions from different cultures and ages. Students will learn to appreciate diverse perspectives on ethical issues, to evaluate the moral reasoning behind them, and to write a well-researched paper on Ethical theories and their cultural milieu.

Prerequisites: None

Corequisites: None

HONR102 Global Honors: World History 2 (Min SH: 3, Max SH: 3)

A survey of world history from the early modern period to the present. Its central focus is the gradual integration of diverse populations as global contact expanded during the period in question. Students consider the construction of historical periodization from a multi-cultural perspective while examining a variety of themes that illuminate the interaction of cultures through conflict and cooperation.

Prerequisites: None

Corequisites: None

HONR105 Honors: Mathematics in Contemporary Society (Min SH: 3, Max SH: 3)

This course presents a variety of mathematical topics that are relevant to contemporary intelligent citizenship. The chosen topics will be studied in detail through guided experimentation, discovery, conjecture formulation, and analysis. Collaborative learning will be emphasized throughout the course. This course is open to any student in the Honors Program.

Prerequisites: None  
Corequisites: None

#### HONR107 Global Politics (Min SH: 3, Max SH: 3)

An introduction to the field of international relations. The course reviews the evolution of the modern international system and introduces basic theories and models used by political scientists and others in analyzing world politics. Primacy emphasis on the post-Cold War "world order" and major issues confronting the international state system.

Prerequisites: None  
Corequisites: None

#### HONR110 Honors: Concepts in Biological Sciences (Min SH: 3, Max SH: 3)

An inquiry-based introductory-level course designed to explore biology from cellular to ecosystem levels within an evolutionary framework. Classroom and laboratory activities are intended to familiarize students with key concepts in biology including the scientific method, diversity of life, cellular division, function of organ systems and organisms, and ecological systems.

Prerequisites: None  
Corequisites: None

#### HONR111 Composition: Global Honors (Min SH: 3, Max SH: 3)

Introduction to the basic principles of effective English written communication with an emphasis on multicultural local or global issues.

Prerequisites: None  
Corequisites: None

#### HONR112 Global Honors: Introduction to Literature (Min SH: 3, Max SH: 3)

An introduction to fiction, poetry, drama, and creative nonfiction that seeks to develop the student's understanding of literature on a global scale.

Prerequisites: None  
Corequisites: None



HONR115 Honors: Earth Resources and Environment (Min SH: 3, Max SH: 3)

An inquiry-based introductory-level course designed to explore occurrences, distribution, and uses of Earth resources, including minerals, rocks, soil, energy, and water. Environmental degradation resulting from exploration and exploitation of Earth resources will be investigated in the context of historical development in central Pennsylvania. The concept of sustainable development of natural resources and land will be examined through lecture, laboratory exercises, field observations, and hands-on experience with field and laboratory equipment commonly used by geoscientists.

Prerequisites: None

Corequisites: None

HONR180 Honors: Introduction to Psychological Science (Min SH: 3, Max SH: 3)

Introduces students to the field of psychology, the scientific study of behavior, including actions, thoughts, and feelings.

Prerequisites: None

Corequisites: None

HONR200 Global Honors: Nutrition for Wellness (Min SH: 3, Max SH: 3)

Designed to explore fundamental knowledge of contemporary nutrition practices. The course emphasizes the multi-directional relationships between nutrition and physical, social, emotional, environmental, and intellectual dimensions of wellness. As part of the Global Honors curriculum, additional emphasis will be given to exploring nutrition problems presented in the scientific literature. The course specifically targets students' personal eating habits, an understanding of societal and cultural influences on those habits, as well as the health consequences of those habits.

Prerequisites: None

Corequisites: None

HONR303 Honors: Argumentation and Debate (Min SH: 3, Max SH: 3)

Designed to improve analytical skills in the construction of arguments, debating skills in defending those arguments, and critical listening skills needed to analyze and evaluate the arguments of others. Students will study thinking, argumentation, and their practical application to extemporaneous debate.

Prerequisites: None

Corequisites: None

#### HONR328 Liberal Arts Seminar (Min SH: 3, Max SH: 3)

A thematic approach to issues of global significance. The course helps students recognize the impacts of personal and collective actions. Seminar topics foster awareness of the interconnections among peoples, landscapes, and societies across cultures and global regions. Possible topics include the following: climate change; food supplies among diverse populations; free and fair trade issues; healthcare access; war and global populations; invasive species; incarceration across the world; mourning rituals in different countries and cultures.

Prerequisites: None

Corequisites: None

#### HPED102 Foundations of Physical Education Seminar (Min SH: 2, Max SH: 2)

Designed as an orientation to the culture and mission of the university and to the physical education profession. Students are encouraged to explore the purpose of a college education within an academic discipline and are introduced to learning strategies and study skills for success in the major. This includes the nature and scope of the field, underlying scientific principles, a brief historical background, qualities of and the role of successful professionals, and field experiences. Students start a professional portfolio. Class discussion, active learning, common co-curricular activities, service and/or civic opportunities are incorporated to promote connection with fellow students, faculty, university and the community.

Prerequisites: None

Corequisites: None

#### HPED115 Teaching Invasion Sports 1 (Min SH: 3, Max SH: 3)

A methods course with a lab involving knowledge, fundamental skills, strategy and rules of soccer, football, and hockey. Emphasis is placed on skill learning, performance analysis, and progressions. This methods/lab course encompasses teaching methods, class management, and safety appropriate for all grade levels. Students will complete peer and self-evaluations.

Prerequisites: None

Corequisites: None

HPED119 First Year Seminar for Health and Physical Education Students (Min SH: 1, Max SH: 1)

Designed to embed education program requirements into a required course and to support student achievement of Education program requirements.

Prerequisites: None

Corequisites: None

HPED125 Teaching Invasion Sports 2 (Min SH: 3, Max SH: 3)

A methods course with a lab involving knowledge, fundamental skills, strategy and rules of basketball, team handball, and ultimate frisbee. Emphasis is placed on skill learning, performance analysis, and progressions. This methods/lab course encompasses teaching methods, class management, and safety appropriate for all grade levels. Students will complete peer and self-evaluations.

Prerequisites: None

Corequisites: None

HPED130 Teaching Net Sports (Min SH: 3, Max SH: 3)

A methods course with a lab involving knowledge, fundamental skills, strategy and rules of tennis, badminton, and volleyball. Emphasis is placed on skill learning, performance analysis, and progressions. This methods/lab course encompasses teaching methods, class management, and safety appropriate for all grade levels. Students will complete peer and self-evaluations.

Prerequisites: None

Corequisites: None

HPED132 Beginning Swimming (Min SH: 1, Max SH: 1)

For non-swimmers, or those not comfortable in the water, to develop basic skills and confidence.

Prerequisites: None

Corequisites: None

HPED133 Intermediate Swimming (Min SH: 1, Max SH: 1)

For swimmers who wish to learn or improve stroke skills and aquatic fitness.

Prerequisites: None

Corequisites: None

HPED134 Swimming/Emergency Water Safety (Min SH: 1, Max SH: 1)

This Swimming/Emergency Water Safety course in advanced swimming techniques is designed to enable the students to become proficient in basic swimming strokes and related aquatic skills. The students will also develop fundamental water safety skills. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

HPED140 Wellness for Life (Min SH: 3, Max SH: 3)

Introduction to the interdependence of personal wellness and fitness. Students will gain the knowledge and skills necessary to develop a proactive approach to a wellness-oriented lifestyle. Emphasis will be placed on the development of a personal understanding of exercise options and their relevancy to health risk management. Students will also be introduced to health risk and fitness appraisal techniques.

Prerequisites: None

Corequisites: None

HPED145 Globalization and Cultural Differences in Sports (Min SH: 3, Max SH: 3)

Designed to examine sports and its relationship to cultural, political, international, and/or global practices. Students will analyze how sports impact societal values and actions around the world.

Prerequisites: None

Corequisites: None

HPED160 Coaching Methods and Application (Min SH: 3, Max SH: 3)

Designed to explore the science behind coaching, including pedagogy, sport skill analysis, nutrition, strength and conditioning, and care and prevention of injuries.

Prerequisites: None

Corequisites: None

#### HPED162 Principles of Coaching (Min SH: 3, Max SH: 3)

Designed to explore the foundation and methods of coaching. Major concepts such as coaching philosophy, budget, team management, motivation, problems in coaching and ethics and legal issues, will be investigated.

Prerequisites: None

Corequisites: None

#### HPED210 Teaching Rhythmic Activities and Dance (Min SH: 3, Max SH: 3)

Introduces students to fundamental movement patterns, rhythms and dance included in PK-12 school curricula, emphasizing folk, line and square dancing. Students will discover and experience the relationship of aesthetic expression within these movement forms while performing and analyzing a variety of rhythmic and dance activities, including some dances that have been the tradition of many cultures. Emphasis will be placed on the teaching techniques specifically used for these movement patterns and dance focusing on use in grades PK-12 and for adult recreation. This course meets Pennsylvania state standards for physical education teacher education programs and the standards of the Society for Health and Physical Educators (SHAPE) necessary for national accreditation by the Council for the Accreditation for Educator Preparation (CAEP).

Prerequisites: None

Corequisites: None

#### HPED213 Teaching Elementary Physical Education (Min SH: 3, Max SH: 3)

Prepares Health and Physical Education majors to plan, teach, and assess developmentally appropriate movement and physical activity learning experiences in elementary physical education. Students will learn and apply theories and concepts designed for teaching children to move efficiently, engage in sequential learning activities, and value physical activity. Students will engage in clinical teaching experiences as a part of the course. This course meets state and national standards for physical education programs.

Prerequisites: ( HPED102 )

Corequisites: None

#### HPED214 Teaching Lifetime Activities (Min SH: 2, Max SH: 2)

A methods course with a lab involving knowledge, fundamental skills, strategy and rules of lifetime activities such as golf, archery, bowling, and softball. Emphasis is placed on skill learning, performance analysis, and progressions. This methods/lab course encompasses teaching methods, class management, and safety appropriate for all grade levels. Students will complete peer and self-evaluations.

Prerequisites: None

Corequisites: None

#### HPED222 Lifeguard Instructor (Min SH: 1, Max SH: 1)

Designed to train the student to teach courses in the American Red Cross (ARC) program, specifically, Basic Water Rescue, Lifeguard Training and Lifeguard Training Review, Lifeguard Management and Waterfront Lifeguarding. Students will also be able to teach CPR and Automated External Defibrillation (CPR/AED) for the Professional Rescuer and First Aid. Additionally students will be recertified as a lifeguard. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

#### HPED225 Swimming/Lifeguard Training (Min SH: 1, Max SH: 1)

Designed to train lifeguard personnel to develop the knowledge and skills required to provide the safest water safety conditions for the patrons of public and private aquatic facilities. Students have the opportunity to become certified in American Red Cross Lifeguarding, CPR & Automated External Defibrillation (CPR/AED) for the Professional Rescuer (PR), Oxygen Administration, First Aid, and Waterfront Lifeguarding. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

#### HPED226 Techniques of Coaching Volleyball (Min SH: 1, Max SH: 1)

Introduces the various skills, knowledge and disposition needed to become a qualified and effective volleyball coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

#### HPED228 Synchronized Swimming (Min SH: 0.5, Max SH: 0.5)

Students are introduced to the components of synchronized swimming with an emphasis on sculling, stroke adaptation and figure execution. Basic choreographic techniques are also explored. Students must have the ability to swim in deep water and knowledge of the basic swimming strokes: front crawl, sidestroke, backstroke, breaststroke, and elementary backstroke.

Prerequisites: None

Corequisites: None

#### HPED230 Aquacise (Min SH: 0.5, Max SH: 0.5)

The students are introduced to a lifetime sport exercise option utilizing the aquatic medium. Exercise areas, such as free-standing water drills, pool side standing drills, circuit training, running, and relaxation techniques, are emphasized. Students must have ability to swim in deep water and knowledge of the basic swimming strokes: front crawl, sidestroke, backstroke, breaststroke, and elementary backstroke.

Prerequisites: None

Corequisites: None

#### HPED234 Water Safety Instructor (Min SH: 1, Max SH: 1)

Designed to train the student to teach the following American Red Cross (ARC) courses: 1) Parent & Child Aquatic Program; 2) Longfellow's Whale Tales Educational Program; 3) Progressive Swimming Courses (levels I-VI); 4) Water Safety Outreach Program; and 5) Safety Training for Swim Coaches. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

#### HPED245 Health and Physical Education in the Elementary School (Min SH: 3, Max SH: 3)

Students will gain the knowledge and skills necessary to develop a proactive approach to a positive, vigorous, and wellness-oriented lifestyle. The course will focus on the health content and process of the instructional phase of the health and physical education program in the elementary school through classroom and laboratory activities.

Prerequisites: None

Corequisites: None

HPED252 Physical Activity, Movement and Sport for Individuals with Disabilities (Min SH: 3, Max SH: 3)

Designed to provide global comparisons of the theory and content related to the recommended strategies and tools for providing physical activity, movement and motor skill applications, and sport opportunities for individuals with disabilities across the lifespan.

Prerequisites: None

Corequisites: None

HPED255 Teaching Fitness in K-12 Schools (Min SH: 3, Max SH: 3)

A methods course with a lab providing students with health-related physical fitness theory and content that will prepare them to work with K-12 students in physical education lessons. The course will also prepare students to use current technology for physical activity/wellness engagement and for assessing health and fitness status and physical activity/wellness engagement levels.

Prerequisites: ( HPED102 )

Corequisites: None

HPED262 Techniques of Coaching Basketball (Min SH: 1, Max SH: 1)

Introduces the various skills, knowledge and disposition needed to become a qualified and effective basketball coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, and philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

HPED263 Techniques of Coaching Soccer (Min SH: 1, Max SH: 1)



Introduces the various skills, knowledge and disposition needed to become a qualified and effective soccer coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, and philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

#### HPED264 Techniques of Coaching Softball (Min SH: 1, Max SH: 1)

Introduces the various skills, knowledge and disposition needed to become a qualified and effective softball coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, and philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

#### HPED265 Techniques of Coaching Tennis (Min SH: 1, Max SH: 1)

Introduces the various skills, knowledge and disposition needed to become a qualified and effective tennis coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, and philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

#### HPED266 Techniques of Coaching Track and Field (Min SH: 1, Max SH: 1)

Introduces the various skills, knowledge and disposition needed to become a qualified and effective track and field coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, and philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

### HPED267 Techniques of Coaching Wrestling (Min SH: 1, Max SH: 1)

Introduces the various skills, knowledge and disposition needed to become a qualified and effective wrestling coach at the high school and college levels. Major concepts as they relate to organization and administration, teaching of fundamental skills, skills analysis, coaching personalities, styles, and philosophies, and psychological aspects of coaching will be explored.

Prerequisites: None

Corequisites: None

### HPED302 Motor Learning Applied to Physical Education (Min SH: 3, Max SH: 3)

Introduces various theories and principles explaining motor behavior, psychological factors related to or affecting motor skill acquisition and performance. Emphasis is placed on the application of practice, skill transfer, memory, feedback including knowledge of results, knowledge of performance, neuromotor functioning, and differences in motor abilities that are involved in motor skill performance. This will be achieved through involvement in lectures, theories, laboratory tasks, and demonstrations.

Prerequisites: ( HLTH353 AND HPED352 )

Corequisites: None

### HPED310 Health/PE Professional Semester Techniques & Strategies Teaching (Min SH: 3, Max SH: 3)

Orient the students to the principles of a good physical education program. Special attention given to pedagogy and progressions that will lead to effective learning of physical activities. Application of the theory and methods is made during in-class teachings and participation in the public schools. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

### HPED311 Health/PE Professional Semester: Teaching Health (Min SH: 3, Max SH: 3)

An introduction to classroom teaching techniques in Health Education. Students gain experience in constructing units of instruction and in using a variety of teaching aids/strategies to enhance the teaching/learning process. Required for Health and Physical Education certification. Focuses on learning styles and active learning strategies. It is designed to meet

the National Association for Sport and Physical Education (NASPE) and the American Association for Health Education (AAHE) standards for accreditation.

Prerequisites: None

Corequisites: None

HPED312 Health/PE Professional Semester: Adapted Physical Education (Min SH: 3, Max SH: 3)

Offer basic preparation in adapted physical education to physical education and special education majors who wish to expand their knowledge and ability to work with exceptional students. Emphasis is on identifying students with special needs, the causes and characteristics associated with each type of need, and acquiring competencies in appropriate instructional and management procedures. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

HPED314 Health/PE Professional Semester: Measurement for Evaluation in Health and Physical Education (Min SH: 3, Max SH: 3)

Designed to equip students with basic knowledge of statistical concepts and evaluation techniques used in health and physical education. Emphasis will be placed on how to measure performance, and the use of performance data to improve learning. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

HPED350 Advanced Techniques and Coaching Swimming/Diving (Min SH: 2, Max SH: 2)

Prepares student with background and understanding of all areas for teaching and coaching competitive swimming and diving. In-depth attention given to competitive rules and regulations, swimming programs, and all individual skills; psychology of coaching swimmers and divers; types of training programs, pacework, and mechanical principles involved in swimming.

Prerequisites: None

Corequisites: None

#### HPED351 Management of Aquatic Programs and Facilities (Min SH: 2, Max SH: 2)

Students are introduced to the role of aquatic facilities in schools, communities and agencies. The planning and design of aquatic facilities are explored as well as basic management and operations.

Prerequisites: None

Corequisites: None

#### HPED352 Kinesiology (Min SH: 2, Max SH: 2)

Designed to increase one's understanding of human movement and to provide the foundation for critical application of analysis of physical activity and exercise. The course content includes both anatomical and biomechanical concepts. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: ( HLTH122 ) OR ( HLTH128 )

Corequisites: None

#### HPED400 Professional Development (Min SH: 1, Max SH: 1)

Facilitate authentic learning experiences for pre-service health and physical education majors. Students observe and participate in school health and physical education settings, K-12. Students develop a professional portfolio supporting their experiences and professional philosophy. Community professionals and resources are used to complement the learning experience through the presentation of seminar-practicum related to current teaching tools each week. This course meets the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

#### HPED450 Physical Education Professional Field Experience I (Min SH: 1, Max SH: 6)

A field experience designed to provide students with on-the-job experience in a variety of physical education-related, professional on-site operations. Students will learn from professionals in the field and be exposed to programs, procedures, and settings. Supervision is provided by both university faculty and the cooperating agency. Experiences may take place in public and private agencies, schools, and athletic settings.

Prerequisites: None

Corequisites: None

#### HPED452 Physical Education Professional Field Experience II (Min SH: 6, Max SH: 6)

A field experience designed to provide students with on-the-job experience in a variety of physical education-related, professional on-site operations. Students will learn from professionals in the field and be exposed to programs, procedures, and settings. Supervision is provided by both university faculty and the cooperating agency. Experiences may take place in public and private agencies, schools, and athletic settings.

Prerequisites: None

Corequisites: None

#### HPED463 Organization and Administration of HPER (Min SH: 3, Max SH: 3)

Designed to explore the philosophy of health and physical education, leadership skills, facilities and equipment management, personnel management, budgeting, risk management, public relations, marketing, consultation, and current issues. Students will be guided in the preparation of position papers, research reports, and presentations on topics covered with the intent of providing realistic pre-professional experiences in the field. It is designed to meet the National Association for Sport and Physical Education (NASPE) standards for accreditation.

Prerequisites: None

Corequisites: None

#### HPED493 Elementary Student Teaching and Professional Practicum (Min SH: 6, Max SH: 6)

Provides the capstone experience for pre-service teachers through two student teaching experiences at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers and regular practicum sessions introduce the student to the range and scope of a professional educator's responsibilities. University professors supervise the student teachers and facilitate weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### HPED494 Secondary Student Teaching and Professional Practicum (Min SH: 6, Max SH: 6)

Provides the capstone experience for pre-service teachers through two student teaching experiences at two levels (appropriate to certification areas and grade level ranges).

Supervised practice in classrooms with certified teachers and regular practicum sessions introduce the student to the range and scope of a professional educator's responsibilities. University professors supervise the student teachers and facilitate weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### HUM119 First Year Student Seminar (Min SH: 1, Max SH: 1)

Introduces the culture and mission of the university within the context of an academic discipline. Students are encouraged to explore the purpose of a college education and are provided an opportunity to become engaged with an academic discipline. Students are introduced to learning strategies and study skills. Common activities and the incorporation of a peer mentor component facilitate connection with fellow students, faculty, the university and the community.

Prerequisites: None

Corequisites: None

#### ITAL101 Italian 1 (Min SH: 3, Max SH: 3)

An introduction to the basics of the foreign language in question; the course is especially designed for students who wish to spend a semester at a university in a country where the language is spoken. The primary emphasis of the course will be on developing basic listening, reading and speaking skills in the language and increasing the students' awareness of the foreign culture.

Prerequisites: None

Corequisites: None

#### ITAL102 Italian 2 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building on the material learned in the level I course. Especially designed for students who wish to improve their basic knowledge of the language in order to be able to study at the foreign university that supplied the instructor (completion of this course followed by a semester of study abroad at the university will satisfy the foreign language requirement).

Prerequisites: None

Corequisites: None

ITAL201 Italian 3 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 2 course and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

ITAL202 Italian 4 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 1, 2 and 3 courses and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

JAPN101 Japanese 1 (Min SH: 3, Max SH: 3)

An introduction to the basics of the foreign language in question; the course is especially designed for students who wish to spend a semester at a university in a country where the language is spoken. The primary emphasis of the course will be on developing basic listening, reading and speaking skills in the language and increasing the students' awareness of the foreign culture.

Prerequisites: None

Corequisites: None

JAPN102 Japanese 2 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building on the material learned in the level I course. Especially designed for students who wish to improve their basic knowledge of the language in order to be able to study at the foreign university that supplied the instructor (completion of this course followed by a semester of study abroad at the university will satisfy the foreign language requirement).

Prerequisites: None

Corequisites: None

JAPN201 Japanese 3 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 2 course and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

JAPN202 Japanese 4 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 1, 2 and 3 courses and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

LANG119 First Year Seminar for Foreign Language Students (Min SH: 1, Max SH: 1)

An introduction to the Lock Haven University Teacher Education Conceptual Framework and national standards for foreign language and English. The course guides students through the Stage I teacher education requirements and early field experience tasks, and addresses topics taught in generic freshman seminars.

Prerequisites: None

Corequisites: None

LANG125 Introduction to Cultures (Min SH: 3, Max SH: 3)

An introduction to the people and cultures of a specific country or geographical area. Through lectures, discussions, and an array of visual materials, the course, taught in English, addresses such topics as traditions, religious practices, major historical events, social and political trends, language, film, cuisine, theatre and music, as well as literature. (Course may be taken multiple times and not count as a repeat.)

Prerequisites: None

Corequisites: None



LANG207 Secondary Education 1: Foreign Language (Min SH: 3, Max SH: 3)

Course description is missing.

Prerequisites: None

Corequisites: None

LANG313 Secondary Education 2: Foreign Language (Min SH: 4, Max SH: 4)

Course description is missing.

Prerequisites: None

Corequisites: None

LANG328 Seminar-Humanities (Min SH: 3, Max SH: 3)

Language Seminar

Prerequisites: None

Corequisites: None

LANG415 Student Teaching and Practicum Secondary 1: Foreign Language (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

LANG416 Student Teaching and Practicum Secondary 2: Foreign Language (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student

to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### MANG101 Introduction to Management Information Systems (Min SH: 3, Max SH: 3)

Provides an introduction to Management Information Systems (MIS) including management concepts and the use of information and information technologies within and between business organizations. It provides students with the tools and background to understand and interpret information issues from a managerial perspective.

Prerequisites: ( COMP150 )

Corequisites: None

#### MANG105 Introduction to Business (Min SH: 3, Max SH: 3)

Introduces Business and Accounting majors to the university learning environment, effective learning strategies and study skills, their chosen program of study, and career choices in the field. The course addresses each business function, and provides fundamental understanding needed for more advanced courses in the field of business.

Prerequisites: None

Corequisites: None

#### MANG220 Personal Financial Management (Min SH: 3, Max SH: 3)

An introduction to personal financial planning concepts and techniques. Financial planning for decision making and comprehensive lifetime money management are emphasized. The course is a major elective for students majoring in Business Administration or Accounting.

Prerequisites: None

Corequisites: None

#### MANG302 Business Law 1 (Min SH: 3, Max SH: 3)

Introduces students to the US legal system and fundamental principles of business law, particularly in the areas of contract law, tort law, criminal law, constitutional law, intellectual property law, sales law, and employment law.

Prerequisites: None

Corequisites: None

#### MANG305 Operations/Production Management (Min SH: 3, Max SH: 3)

Introduces students to the operations and production functions of a business or organization. Topics in managing and designing operations will be investigated both conceptually and quantitatively

Prerequisites: ( COMP250 AND MATH180 ) OR ( COMP250 AND MATH141 )

Corequisites: None

#### MANG307 Budgeting Theory and Practice (Min SH: 3, Max SH: 3)

An advanced seminar focusing on budgeting practices and theories. The central purpose is to develop an understanding of the institutional arrangements, issues, and processes involved in budgeting of resources in private, governmental, and non-profit organizations. Students will develop and improve their analytical skills, giving them the ability to function in careers in financial analysis and budgeting.

Prerequisites: ( ACCT115 AND COMP150 )

Corequisites: None

#### MANG315 Management Concepts and Strategies (Min SH: 3, Max SH: 3)

Introduces students to basic concepts, theories and skills of management within organizations and their importance in supporting the organization's purpose and achievement of objectives.

Prerequisites: None

Corequisites: None

#### MANG317 Entrepreneurship (Min SH: 3, Max SH: 3)

An examination of the organization, implementation, and management of firms in terms of innovation with an emphasis on creating, planning, and development phases of entrepreneurial activities.

Prerequisites: ( MANG315 AND MRKT200 )

Corequisites: None

MANG320 Human Resource Management (Min SH: 3, Max SH: 3)

A knowledge and skill-based examination of issues, policies, and practices that deal with the management, needs, and activities of the organization's people. Topics include the study of workforce planning, recruiting, selection, job analysis, employee appraisal, training and development, compensation, employee relations, workplace safety, international differences, and legal constraints that impact human resource management.

Prerequisites: ( MANG315 )

Corequisites: None

MANG322 Innovation (Min SH: 1, Max SH: 1)

An introduction to innovation. Students will learn where and how to find new venture ideas, and how to evaluate them. Included will be various forms of differentiations from existing products, services, processes, and target customers.

Prerequisites: None

Corequisites: None

MANG325 Financial Management (Min SH: 3, Max SH: 3)

Introduces students to the concepts of financial management with emphasis on the corporate sector. Financial analysis techniques are demonstrated for both short- and long-term planning and control within the firm.

Prerequisites: ( ACCT110 AND ECON102 AND ECON103 )

Corequisites: None

MANG326 Fundamental of Investment Management (Min SH: 3, Max SH: 3)

An introduction to investments including investment analysis, portfolio management, and capital markets. Designed to provide the basic concepts and principles of investing, the course examines investment policies, types of securities, factors that influence price changes, timing purchases/sales preparing investment programs to meet objectives, investment risk and return, and portfolio balancing.

Prerequisites: ( MANG325 )

Corequisites: None

MANG342 Fundamentals of Management Science (Min SH: 3, Max SH: 3)

Introduces students to Operations Research/Management Science (OR/MS) and its application to improving managerial decision-making. The focus will be on developing models of business problems and generating solutions using software applications. Course topics include application of linear programming, integer programming, and network, queuing, and simulation models to business problems.

Prerequisites: ( COMP235 )

Corequisites: None

MANG345 Sustainability Entrepreneurship (Min SH: 3, Max SH: 3)

Investigates entrepreneurial opportunities created by environmental and social degradation. Students will learn to identify opportunities that offer feasible, sustainable growth potential and will develop strategies for starting and running a sustainable business.

Prerequisites: ( MANG317 )

Corequisites: None

MANG346 Entrepreneurial Leadership and Ethics (Min SH: 1, Max SH: 1)

An introduction to understanding leadership skills, especially in a small, quickly-growing venture. It also covers the basics of business ethics, specifically as they pertain to new venture situations.

Prerequisites: ( MANG315 ) OR ( MANG317 )

Corequisites: None

MANG347 Funding an Entrepreneurial Venture (Min SH: 1, Max SH: 1)

An examination of the primary sources of entrepreneurial funding: family, friends, patrons, venture capitalists, crowdfunding, banks and the Small Business Administration (SBA). Students will learn the difference, for each of these groups, in what is required, the documentation necessary, and the steps needed for success.

Prerequisites: None

Corequisites: None

MANG348 How to Hire, Fire, Train, and Handle Regulations (Min SH: 1, Max SH: 1)

An introduction to understanding human resource management issues, policies, and practices. Topics include the study of recruiting, performance appraisal, training, equal opportunity and employment law.

Prerequisites: ( MANG315 AND MANG317 )

Corequisites: None

MANG350 Small Business Management (Min SH: 3, Max SH: 3)

Designed to help students develop practical knowledge and skills needed to think and operate as successful small business practitioners. Management process skills critical to successful performance will be covered. The course is structured in three parts: one on franchises, one on family businesses, and one on firm valuation.

Prerequisites: ( MANG315 AND MANG317 )

Corequisites: None

MANG352 Organizational Behavior (Min SH: 3, Max SH: 3)

Integrates management concepts and strategies with the study of individual, group, and managerial behavior in organizations. Students will prepare for managerial and leadership roles in modern organizations. Topics include personality, values, perception, emotional intelligence, job satisfaction, communication, motivation, culture, conflict, stress, and power/politics.

Prerequisites: ( MANG315 )

Corequisites: None

MANG355 Social Entrepreneurship (Min SH: 3, Max SH: 3)

Introduces concepts, opportunities, and challenges in applying business and private sector practices to solve social, cultural, or environmental problems. Topics include social and environmental problems, entrepreneurial solutions and applications, management skills for social entrepreneurial organizations, social performance measurement, and microfinance.

Prerequisites: ( MANG317 )

Corequisites: None

MANG360 Finance and Accounting for Small Business (Min SH: 3, Max SH: 3)

An examination of foundational concepts of financial management and accounting issues specific to small businesses. Students will review capital budgeting and working capital management theories and apply them to small business problems via the case study method. The course also explores valuation of the small business with limited information, the venture capital process, and more traditional sources of debt financing.

Prerequisites: ( MANG325 )

Corequisites: None

MANG400 Business, Society and Government (Min SH: 3, Max SH: 3)

Explores the interdependent relationship between business, society, and government, with emphasis on the social responsibilities and ethical problems related to management.

Prerequisites: ( MANG315 )

Corequisites: None

MANG425 International Business (Min SH: 3, Max SH: 3)

Provides a broad knowledge of international business concepts, theories, and strategies. The course adds an international emphasis to the student's knowledge of the management concepts. Using a global perspective, the course integrates content from such functional management courses as accounting, finance, information technology, marketing, human resources, and operations production.

Prerequisites: ( MANG315 AND MANG325 )

Corequisites: None

MANG430 International Financial Management (Min SH: 3, Max SH: 3)

Exploration of contemporary economic and financial events and trends in the context of a multinational corporation. Students are introduced to advanced concepts including financing international business operations and investments, decision making in the multinational firm, the international monetary system, foreign exchange transactions, and international financial institutions.

Prerequisites: ( MANG325 )

Corequisites: None

MANG475 Capstone Seminar in Strategic Management (Min SH: 3, Max SH: 3)

Explores major concepts and topics of the field of strategic management. As a capstone seminar, it is an integrating experience in which students apply knowledge and skills gained from previous coursework in the functional areas of business.

Prerequisites: ( MANG325 )

Corequisites: None

MANG480 Topics in Business (Min SH: 3, Max SH: 3)

An in-depth exploration of a topic in business, management, or finance. Topics will be determined prior to the semester in which the course is offered.

Prerequisites: None

Corequisites: None

MATH009 Computational Skills (Min SH: 3, Max SH: 3)

An arithmetic or pre-algebra course that is intended for students who need to improve their basic computational skills. It contains work with whole numbers, fractions, decimals, ratios and proportions, percents, descriptive statistics, geometry and measures, signed numbers, and solving simple equations and problems.

Prerequisites: None

Corequisites: None

MATH100 Essentials of Algebra (Min SH: 3, Max SH: 3)

A one-term introductory algebra course intended for students who have a firm background in arithmetic but need to improve their algebra skills in preparation for general education mathematics courses. It covers real and rational numbers and algebraic expressions, solving equations and inequalities, polynomials, graphs, systems of equations, radicals, and quadratic equations.

Prerequisites: ( MATH009 )

Corequisites: None



MATH101 Topics in Math (Min SH: 3, Max SH: 3)

A presentation of topics from number theory, topology, set theory, algebra, and analysis. Each of the topics included in the course is subjected to careful mathematical analysis.

Prerequisites: ( MATH009 )

Corequisites: None

MATH102 Number Systems (Min SH: 3, Max SH: 3)

A presentation of the mathematical ideas and skills for teachers of grades K-8. Topics included in Number Systems are problem solving, sets and relations, systems of numeration, number systems, and consumer mathematics.

Prerequisites: ( MATH100 ) OR ( MATH112 ) OR ( MATH113 ) OR ( MATH141 ) OR ( MATH215 )

Corequisites: None

MATH107 Basic Statistics 1 (Min SH: 3, Max SH: 3)

A presentation of both basic concepts and computational methods involved in the analysis of sample distributions, with consideration given to probability theory; and a thorough introduction to statistical inference.

Prerequisites: ( MATH100 ) OR ( MATH112 ) OR ( MATH113 ) OR ( MATH141 )

Corequisites: None

MATH108 Basic Statistics 2 (Min SH: 3, Max SH: 3)

The major topics are regression and analysis of variance. Multiple regression, along with both one and two-way analysis of variance, are studies.

Prerequisites: ( MATH107 )

Corequisites: None

MATH110 Consumer Math (Min SH: 3, Max SH: 3)

A practical course designed to provide the student with information and computational skills necessary for money management. Topics include: interest, taxes, buying, credit, banking, insurance, annuities, international business, investments, and financial planning.

Prerequisites: ( MATH009 )

Corequisites: None

#### MATH112 Intermediate Algebra (Min SH: 3, Max SH: 3)

Assists students in acquiring a thorough knowledge and proficiency in college algebra. The contents of the course includes an introduction to sets of real numbers and properties, polynomial and rational expressions, rational exponents and radicals, equations and inequalities, complex numbers, and the Cartesian coordinate system. It also introduces the concept of functions and their graphs. The presentation of topics is balanced between theory and application.

Prerequisites: ( MATH100 )

Corequisites: None

#### MATH113 Precalculus (Min SH: 3, Max SH: 3)

An introduction to concept of functions and study of several elementary functions. The contents of the course include properties and graphs of polynomial, exponential, logarithmic, and trigonometric functions. This material is treated in the modern spirit with emphasis placed on both the development of pertinent concepts as well as the acquisition of essential techniques. The presentation of the topics is balanced between theory and application.

Prerequisites: ( MATH112 )

Corequisites: None

#### MATH115 Statistics and Geometry (Min SH: 3, Max SH: 3)

A presentation (along with MATH102 Number Systems) of the mathematical ideas and skills for teachers of grades K-6. Topics included in Statistics and Geometry are probability, statistics, measurement, and two and three-dimensional geometry.

Prerequisites: ( MATH100 )

Corequisites: None

#### MATH119 First Year Student Seminar (Min SH: 1, Max SH: 1)

Designed to embed education program requirements into a required course and to support student achievement of Education Program requirements. This course addresses topics taught

in freshman seminars. Restricted to first-year secondary education mathematics majors or B.A. mathematics majors.

Prerequisites: None

Corequisites: None

#### MATH125 Introduction to Secondary Mathematics (Min SH: 1, Max SH: 1)

An introduction to the history of education and mathematics education, leading up to an examination of the various standards used in teaching mathematics in the 21st century. The organizational structure of secondary schools and the diverse needs of grades 7-12 students are embedded in the previously mentioned topics.

Prerequisites: None

Corequisites: None

#### MATH135 Applied Algebra and Trigonometry (Min SH: 3, Max SH: 3)

Concepts of functions and their graphs are defined and basic combinations of functions are introduced. Properties and graphs of linear, quadratic, and periodic functions are discussed. Trigonometric functions, identities and equations are discussed and graphs of various combinations of trigonometric functions are explored. Some properties such as areas and volumes of geometrical figures are discussed and vectors are introduced. Regression line and estimation of parameters are discussed. Applications in Physical Sciences are also explored.

Prerequisites: ( MATH112 )

Corequisites: None

#### MATH141 Calculus 1 (Min SH: 3, Max SH: 3)

A review of algebraic functions, trigonometric functions, and elementary analytic geometry. Limits of functions and continuity are introduced. The derivative of a function is defined and properties of the derivative are applied to a variety of problems. The integral is defined and the Fundamental Theorem of Calculus is introduced and used in the evaluation of integrals.

Prerequisites: ( MATH113 )

Corequisites: None

#### MATH142 Calculus 2 (Min SH: 3, Max SH: 3)

A presentation of the calculus of transcendental functions. Integration is studied in depth, specifically techniques of integration and applications, as well as improper integrals. Conic sections and indeterminate forms are studied.

Prerequisites: ( MATH141 )

Corequisites: None

MATH180 Mathematics for Management (Min SH: 3, Max SH: 3)

An introduction to the basic techniques for solving systems of linear equations and their extension to the simplex method for solving linear programming problems. Conditional probability is re-examined and extended to Markov Processes.

Prerequisites: ( MATH107 AND MATH112 )

Corequisites: None

MATH200 Secondary Mathematics Methods 1 (Min SH: 3, Max SH: 3)

Provides the first in a two-course sequence of methods of teaching mathematics in grades 7-12. This course includes field experiences and practice teaching. The concentration in this course is on the nature of mathematics, psychology of learning mathematics, teaching of mathematics, history of mathematics education, national and state standards, lesson planning, mathematics-oriented technology, and diversity issues. In addition to these, as the specific topics arise, the course helps students understand the mathematics concepts they will be teaching.

Prerequisites: ( MATH141 AND PSYC103 AND SPEC204 )

Corequisites: None

MATH205 Foundations of Mathematics (Min SH: 3, Max SH: 3)

The necessary foundation for students to make the transition to advanced mathematics. Basic topics of Mathematical Logic with deductive reasoning as applied to mathematical proofs are studied in detail. Mathematical Induction, Set Theory and Theory of Relations and Functions are studied with appropriate proofs.

Prerequisites: ( MATH141 )

Corequisites: None

MATH211 Linear Methods (Min SH: 3, Max SH: 3)

An exploration of vector spaces, matrices, linear transformations. Systems of linear equations are defined and the properties of these structures are developed through examples and, to a lesser degree, proof-theoretic techniques. Inner product spaces, eigenvalues, and eigenvectors are also explored. Euclidean vector spaces are emphasized throughout.

Prerequisites: ( MATH141 )

Corequisites: None

#### MATH218 Technology in Secondary Mathematics (Min SH: 1, Max SH: 1)

An introduction to the use of technology in teaching mathematics. The history of using technology in teaching mathematics and current trends are examined. Topics include, but are not limited to, calculators (standard, scientific, and graphing), handheld computers, laptops, Computer Assisted Instruction, Computer Algebra Systems, virtual manipulatives, dynamic geometry software, statistical software, and interactive whiteboards.

Prerequisites: None

Corequisites: None

#### MATH225 History of Mathematics (Min SH: 3, Max SH: 3)

A development of the history of mathematics, interwoven with biographical sketches and outstanding achievements. Begins with the great civilizations of antiquity and progresses through the twentieth century. Addresses contributions from underrepresented groups in a variety of ways. Students study how contributions from culturally diverse populations have significantly aided the development of the field of mathematics, and how mathematics has changed the culture of diverse populations.

Prerequisites: ( MATH141 )

Corequisites: None

#### MATH243 Calculus 3 (Min SH: 3, Max SH: 3)

A study of multivariate calculus and its applications, along with three-dimensional analytic geometry. A study of sequences and series, culminating with power series representation for functions, is presented. Polar equations and their graphs are studied.

Prerequisites: ( MATH142 )

Corequisites: None

MATH244 Calculus 4 (Min SH: 3, Max SH: 3)

A conclusion to the undergraduate study of calculus with a detailed treatment of vector analysis, culminating in the three integral theorems of vector analysis: the divergence theorem, Green's theorem, and Stokes' theorem.

Prerequisites: ( MATH243 )

Corequisites: None

MATH301 Differential Equations (Min SH: 3, Max SH: 3)

An introduction to techniques of solving first and second order ordinary differential equations along with their applications including initial value and boundary value problems. Methods of solution for first order differential equations are developed. Basic theory of linear differential equations is presented with special emphasis on second order differential equations. Laplace transforms and the major theorems are studied and utilized in problem solving. Systems of linear differential equations and series solutions are introduced.

Prerequisites: ( MATH243 )

Corequisites: None

MATH302 Number Theory (Min SH: 3, Max SH: 3)

The study of the divisibility properties of the integers. Topics include the congruence relations, arithmetic functions, Gauss' Law of Quadratic Reciprocity, and Diophantine equations as well as applications such as cryptography.

Prerequisites: ( MATH205 )

Corequisites: None

MATH307 Foundations of Geometry (Min SH: 3, Max SH: 3)

An axiomatic study of various geometries including finite geometry, absolute (neutral) geometry, Euclidean geometry, Lobachevskian geometry, and Riemannian geometry. Historical and cultural frameworks for these geometries are provided.

Prerequisites: ( MATH205 )

Corequisites: None

MATH310 Modern Algebra 1 (Min SH: 3, Max SH: 3)

An investigation into algebraic structures including groups, rings, and fields. Special emphasis is placed on the concept of isomorphism and the application of these concepts to the algebra of the secondary education classroom.

Prerequisites: ( MATH205 )

Corequisites: None

#### MATH311 Elements of Linear Algebra (Min SH: 3, Max SH: 3)

An investigation of systems of linear equations, matrices, determinant function, vector spaces, inner product spaces, linear transformations, eigenvalues, and eigenvectors. It develops properties of these structures through proof-theoretic techniques. It explores applications to areas such as geometry, economics, physical sciences, and social sciences.

Prerequisites: ( MATH205 )

Corequisites: None

#### MATH312 Probability and Statistics (Min SH: 3, Max SH: 3)

The mathematical treatment of probability is covered. An introduction to probability theory is done using an axiomatic approach. A discussion of the frequently used probability distributions and counting techniques are covered. The properties and interrelations of some important probability distributions are studied using mathematical ideas of calculus and set theory. Statistical theory and methods are introduced and topics such as estimation and hypothesis testing are studied.

Prerequisites: ( MATH243 )

Corequisites: None

#### MATH313 Mathematical Statistics (Min SH: 3, Max SH: 3)

Theoretical treatment of statistical topics such as probability distribution functions--binomial, negative binomial, geometric, hypergeometric, Poisson, uniform, gamma, exponential, chi-square, F, beta, Pareto, lognormal, Weibull, t, and normal--moment generating functions, sampling distribution, order statistics, point and interval estimation, maximum likelihood estimation, hypothesis testing, Neyman-Pearson Lemma, and decision theory.

Prerequisites: ( MATH312 )

Corequisites: None

MATH316 Secondary Mathematics Methods 2 (Min SH: 4, Max SH: 4)

Provides the second in a two-course sequence of methods of teaching mathematics in grades 7-12. This course includes field experiences and practice teaching. The concentration in this course is on instructional strategies for specific content, the problems of practice, curriculum, unit and lesson planning, assessment, reading and writing strategies in mathematics, technology, diversity issues, adaptations for special needs, and professionalism. In addition to these, as the specific topics arise, the course helps students more deeply understand the mathematics concepts they will be teaching.

Prerequisites: None

Corequisites: None

MATH320 Linear Programming (Min SH: 3, Max SH: 3)

A presentation of the theory of linear programming as well as applications in which linear programming finds its utility, including operations research/management science, game theory, and graph theory.

Prerequisites: ( MATH211 ) OR ( MATH311 )

Corequisites: None

MATH327 Pedagogical Content Knowledge in Secondary Mathematics 1 (Min SH: 1, Max SH: 1)

A partial review of the mathematics taught in secondary schools, examining it from an advanced standpoint, and connecting it to the mathematics studied at the university.

Prerequisites: None

Corequisites: None

MATH328 Seminar-Mathematical Science (Min SH: 3, Max SH: 3)

This seminar has featured such topics as the study of the history of mathematics, the impact and potential effects of computers upon society, and the study of mathematics as it occurs with society in the forms of puzzles, games, and other types of recreation.

Prerequisites: None

Corequisites: None



### MATH350 Numerical Methods (Min SH: 3, Max SH: 3)

An introduction to numerical methods in the solution of non-linear equations, systems of linear equations, numerical integration, and numerical differentiation. The course will entail both mathematical rigor and computational aspects of some widely used numerical methods. Commercially-produced programs from the MATLAB library will be used.

Prerequisites: ( MATH243 )

Corequisites: None

### MATH401 Real Analysis (Min SH: 3, Max SH: 3)

A mathematically rigorous introduction to analysis of a real valued function of a single real variable. Mathematical logic, set theory, relevant topological and algebraic properties together with proof techniques are heavily utilized throughout the course. Convergence, continuity, differentiation, integration and their interconnections are studied with mathematical integrity.

Prerequisites: ( MATH205 AND MATH243 )

Corequisites: None

### MATH402 Real Analysis 2 (Min SH: 3, Max SH: 3)

A continuation of MATH401 - Real Analysis I. Convergence questions regarding sequences and series of real functions are investigated. The Lebesgue integral is defined and its existence and properties are investigated. Several basis theorems about Fourier series are explained and proved. Real-valued functions of several real variables are defined and several related theorems are deduced.

Prerequisites: ( MATH401 )

Corequisites: None

### MATH403 Biomathematics (Min SH: 3, Max SH: 3)

An introduction to the area of mathematical biology, and the aim is to develop mathematical representation, treatment and modeling of biological processes, using applied mathematical techniques and tools. An emphasis shall be placed upon methods from difference and differential equations. Topics include the study of single species population dynamics, population dynamics or interacting species, models for the spread of infectious diseases, population genetics and evolution, molecular and cellular biology models, and tumor models.

Prerequisites: ( MATH301 )  
Corequisites: None

#### MATH404 Applied Mathematics (Min SH: 3, Max SH: 3)

The investigation of the concept of mathematical model as it is used in Applied Mathematics. Different models are presented as a means of providing solutions to practical problems.

Prerequisites: ( MATH301 )  
Corequisites: None

#### MATH405 Complex Analysis (Min SH: 3, Max SH: 3)

Prerequisites: ( MATH243 )  
Corequisites: None

#### MATH410 Intro to Topology (Min SH: 3, Max SH: 3)

The course is an introduction to the elements of set theory and topology. Topics could include introductory set theory, a detailed study of the real line, topological spaces, metric spaces, functions and continuity, compactness, connectedness, completeness, product spaces, function spaces.

Prerequisites: ( MATH401 )  
Corequisites: None

#### MATH412 Actuarial Mathematics (Min SH: 3, Max SH: 3)

A formulation, analysis and interpretation of mathematical models in financial mathematics and interest theory, and how these concepts are applied in calculating present and accumulated values for various streams of cash flows as a basis for use in reserving, valuation, pricing, asset/liability management, investment income, capital budgeting, and valuing contingent cash flows. Financial instruments, including derivatives, and the concept of no-arbitrage are covered. This course covers materials for the second actuarial exam, Exam 2-Financial Mathematics (FM).

Prerequisites: ( MATH243 )  
Corequisites: None

MATH415 Student Teaching and Practicum Secondary 1: Mathematics (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

MATH416 Student Teaching and Practicum Secondary 2: Mathematics (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

MATH422 Applied Statistics (Min SH: 3, Max SH: 3)

Comprehensive treatment of regression analysis. Topics include simple and multiple linear regression, least square estimates, ANOVA, ANCOVA, F-test, R-square, selections of the "best subset" of predictor variables, contingency tables and basic categorical data analysis methods, checking model assumptions and Logistic regression. Computer packages, MINITAB or SPSS, will be used throughout the course. Emphasis will be given to conceptual understanding, data analysis, and applications.

Prerequisites: ( MATH312 )

Corequisites: None

MATH427 Pedagogical Content Knowledge in Secondary Mathematics 2 (Min SH: 2, Max SH: 2)

A continuation of MATH327 where the mathematics taught in secondary schools is examined from an advanced standpoint and connected to the mathematics studied at the university. The course includes field experience in secondary schools.

Prerequisites: None

Corequisites: None

#### MATH493 Student Teaching and Professional Practicum 1 (Min SH: 6, Max SH: 6)

The first of two capstone experiences (one at each level appropriate to certification areas and grade level ranges) for pre-service teachers through a student teaching experience required for certification in secondary mathematics. Supervised practice in classrooms with certified teachers and regular practicum sessions, according to prescribed guidelines, introduce the student to the range and scope of a professional educator's responsibilities.

Prerequisites: None

Corequisites: None

#### MATH494 Student Teaching and Professional Practicum 2 (Min SH: 6, Max SH: 6)

The second of two capstone experiences (one at each level appropriate to certification areas and grade level ranges) for pre-service teachers through a student teaching experience required for certification in secondary mathematics. Supervised practice in classrooms with certified teachers and regular practicum sessions, according to prescribed guidelines, introduce the student to the range and scope of a professional educator's responsibilities.

Prerequisites: None

Corequisites: None

#### MILS104 Leadership and Personal Development (Min SH: 1, Max SH: 1)

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. Upon completion of this semester, the cadets should be prepared to receive more complex leadership instruction.

Prerequisites: None

Corequisites: None

### MILS105 Introduction to Tactical Leadership (Min SH: 1, Max SH: 1)

This semester builds upon the fundamentals introduced in the previous semester by focusing on leadership theory and decision-making. “Life skills” lessons in this semester include: problem solving, critical thinking, leadership theory, followership, group interaction, goal setting, and feedback mechanisms. Upon completion of this semester, cadets should be prepared to advance to more complex leadership instruction concerning the dynamics of organizations.

Prerequisites: None

Corequisites: None

### MILS204 Innovative Team Leadership (Min SH: 1, Max SH: 1)

Provides the principle leadership instruction of the MS Basic Course. Includes lectures on communication, leadership application, and problem solving skills with increased use of practical exercises/concepts.

Prerequisites: None

Corequisites: None

### MILS205 Foundations of Tactical Leadership (Min SH: 1, Max SH: 1)

Continues student development focusing on officer leadership, principles of tactics, values, ethics, the Officer Corps, and the evolution of the United States Army from Vietnam into the Twenty-First Century.

Prerequisites: None

Corequisites: None

### MILS304 Adaptive Tactical Leadership (Min SH: 3, Max SH: 3)

The focus of instruction is on building the leadership competence and confidence required of an Army officer through practical application of leadership positions during small unit operations. Involves applying the military decision-making process in planning, preparation and execution of small unit missions and the use of a standard structure and format for relaying that information. The course includes training in physical fitness and general military technical/tactical instruction.

Prerequisites: None

Corequisites: None

#### MILS305 Leadership in Changing Environments (Min SH: 3, Max SH: 3)

The focus of instruction is on developing specific leader and soldier skills in preparation for attendance at the National Advanced Leadership Camp. Subjects include mission analysis and planning, operations orders, small unit offensive and defensive operations, terrain analysis/land navigation, combat patrolling and physical fitness.

Prerequisites: None

Corequisites: None

#### MILS404 Developing Adaptive Leaders (Min SH: 3, Max SH: 3)

The focus is on Leadership, ethics, management, and decision-making process. A study of U.S. Army staff organization at various command levels and the responsibilities of the staffs as a whole and of each staff section. Emphasis is placed on the staff planning sequence. Written and oral military communication skills are also reviewed.

Prerequisites: None

Corequisites: None

#### MILS405 Leadership in a Complex World (Min SH: 3, Max SH: 3)

The course prepares students for commissioning in the U.S. Army. Focus of the course includes study of U.S. national security interests, military justice, and the laws of land warfare. Career planning, military administration, and leadership review are other subjects covered in the final Military Science course before commissioning. The cadets will execute a Battle Staff ride and Capstone exercise.

Prerequisites: None

Corequisites: None

#### MILS450 Topics in Military Science (Min SH: 3, Max SH: 3)

An analysis of topics related to military science within a framework provided by the instructor. Possible topics may include, but are not limited to, contemporary issues in the U.S. military, such as Battle Command, Individual and Collective Training, Leader Development, Military Ethics, Joint Operations, Stability and Support Operations, and Modularity.

Prerequisites: None

Corequisites: None

#### MRKT200 Intro to Marketing (Min SH: 3, Max SH: 3)

Introduces students to marketing, which is the activity and processes for creating, communicating and delivering offerings that have value. Students will learn to analyze an industry for opportunities, segment and select appropriate target groups, analyze competitive offerings, plan for appropriate primary research, conduct online or retail tests, set up promotional plans, research appropriate media, and create a marketing budget -- all culminating in the creation of a full marketing plan.

Prerequisites: None

Corequisites: None

#### MRKT300 Consumer Behavior (Min SH: 3, Max SH: 3)

Focuses on the exchange processes involved in acquiring, consuming, and disposing of goods, services, experiences, and ideas. Concepts and research methods from marketing and the social and behavioral sciences are applied to understand decision processes in the context of the global marketplace. Students examine how marketers use consumer data, including demographics, psychographics, geography and usage patterns, in product development, service, promotion, pricing, and distribution channels.

Prerequisites: ( MRKT200 )

Corequisites: None

#### MRKT305 Internet Marketing and e-Commerce (Min SH: 3, Max SH: 3)

An introduction to internet marketing as a rapidly changing tool. Students examine successful models for online businesses, learn in what situations each is applicable and learn strategic marketing methods for each model. In addition to theory, there is a strong applications component to this course, including email, landing pages, autoresponders, web-generated databases, search and banner ads, blogs, persona development and analytics.

Prerequisites: ( MRKT200 )

Corequisites: None

#### MRKT310 Entrepreneurial and Social Media Marketing (Min SH: 3, Max SH: 3)

An introduction to the analysis and practice of marketing with limited financial and human resources. Students will learn theory and applications in recognizing opportunities, strategizing, testing, and rolling out launches, as well as marketing their new product or service to banks, venture capitalists, and other potential sources of funding. They will also learn to utilize a wide variety of appropriate no- or low-cost marketing tools - especially including social media tactics.

Prerequisites: ( MRKT200 )

Corequisites: None

#### MRKT316 How to Negotiate and Sell (Min SH: 1, Max SH: 1)

Introduces negotiation and sales skills. Students will learn to prepare for and conduct negotiations. They will also learn how to sell products or services to a potential client by communicating value and handling objections.

Prerequisites: ( MRKT200 )

Corequisites: None

#### MRKT320 Introduction to Pricing (Min SH: 1, Max SH: 1)

An introduction to the behavioral and psychological responses of buyers to various pricing strategies. The course includes how to analyze competitor prices, structure prices to fit consumer preferences, and determine prices for a new business.

Prerequisites: ( MRKT310 )

Corequisites: None

#### MRKT405 Behavioral Pricing (Min SH: 3, Max SH: 3)

Provides an in-depth understanding of behavioral/psychological responses of buyers to various pricing strategies. The course includes a study of value creation, price structure, value communication, pricing policy and levels, pricing over the product life cycle, strategy implementation, competition, measurements of price sensitivity, and pricing ethics and the law. This course will provide students with the knowledge and confidence to address pricing in their careers.

Prerequisites: ( MRKT200 )

Corequisites: None

#### MRKT410 Marketing Research (Min SH: 3, Max SH: 3)



Reinforces and extends the theory and application of marketing research. Students will learn how to conduct marketing research (i.e., the systematic and objective process of generating information to aid in making marketing decisions). They will identify what information is required, design the best method for collecting information (both on- and off-line), manage and implement the collection of data, analyze the results, and communicate the findings and their implications.

Prerequisites: ( MATH107 AND MRKT200 )

Corequisites: None

MRKT480 Topics in Marketing (Min SH: 3, Max SH: 3)

Introduces in-depth aspects of marketing and topics of current interest. Topics will be determined prior to the semester in which the course is offered.

Prerequisites: ( MRKT200 )

Corequisites: None

MTEC403 Clinical Microbiology (Min SH: 1, Max SH: 8)

Twelve months of clinical training in a hospital program accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

Prerequisites: None

Corequisites: None

MTEC404 Clinical Chemistry (Min SH: 1, Max SH: 8)

Twelve months of clinical training in a hospital program accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

Prerequisites: None

Corequisites: None

MTEC405 Clinical Hematology/Coagulation (Min SH: 1, Max SH: 8)

Twelve months of clinical training in a hospital program accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

Prerequisites: None  
Corequisites: None

MTEC406 Clinical Immunohematology (Min SH: 1, Max SH: 8)

Twelve months of clinical training in a hospital program accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

Prerequisites: None  
Corequisites: None

MTEC407 Clinical Immunology/Serology (Min SH: 1, Max SH: 8)

Twelve months of clinical training in a hospital program accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

Prerequisites: None  
Corequisites: None

MTEC408 Clinical Seminar (Min SH: 1, Max SH: 8)

Twelve months of clinical training in a hospital program accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists.

Prerequisites: None  
Corequisites: None

MUSI100 World Music (Min SH: 3, Max SH: 3)

Introduces students to world music from a variety of cultural approaches and enables students to develop a broader aesthetic perspective.

Prerequisites: None  
Corequisites: None

MUSI101 Introduction to Music (Min SH: 3, Max SH: 3)

Introduces students to the vocabulary, concepts, techniques, and style changes associated with the art music of Western civilization. Representative compositions from all the ages of music

history are explored in depth, particular attention being given to the stylistic characteristics of each selection. The historical background and major composers of each style period are introduced, and the changing role of the composer in society is discussed.

Prerequisites: None

Corequisites: None

#### MUSI103 Basic Musicianship (Min SH: 3, Max SH: 3)

Develops musicianship through the study of composition and performance of music. Guided activities in voice, keyboard, composition and classroom instruments will be available for performance experience. Learning to read music notation will be emphasized.

Prerequisites: None

Corequisites: None

#### MUSI105 Exploring Contemporary Trends in Jazz, Rock, & Musical Theatre (Min SH: 3, Max SH: 3)

Provides students with the opportunity to develop a structure for future listening experiences in the Rock, Jazz, and Popular Music genres. The unique characteristics of each genre will be explored.

Prerequisites: None

Corequisites: None

#### MUSI108 Music Explorations (Min SH: 2, Max SH: 2)

Introduces students to a multi-dimensional approach to music learning. Opportunities for musical creation and development of listening, performance and improvisation skills will be offered through a variety of music experiences, including collaborative performance sessions wherein non-band and non-orchestral instruments are employed. The course is an alternative general education elective for students desiring a non-traditional approach to music learning.

Prerequisites: None

Corequisites: None

#### MUSI110 Introduction to Singing (Min SH: 2, Max SH: 2)

A study of choral and vocal literature of various style periods. Emphasis given to musicianship and singing techniques. Activities include a performance with the University Choir once each semester, and solo and small ensemble performance (or a research paper) as part of the class work. Open to all students who can sing in tune as determined by the instructor prior to registration. This course is recommended as a prerequisite to MUSI111.

Prerequisites: None

Corequisites: None

#### MUSI111 University Choir (Min SH: 1, Max SH: 1)

Designed to acquaint the student with musical performance and to offer means and experiences to solve those problems (e.g., technical demands, interpretation of music, and exploration of representative). Ensembles include the following, i.e., University Band (Marching - Fall; Symphonic - Spring), University Choir, Jazz/Rock Ensemble, Percussion Ensemble, Small Vocal Ensembles (e.g., Cantori, Vocal Jazz Ensemble), and Small Instrumental Ensembles (e.g., Jazz/Rock Combo, Pit Orchestra).

Prerequisites: None

Corequisites: None

#### MUSI112 University Band (Min SH: 1, Max SH: 1)

Designed to acquaint the student with musical performance and to offer means and experiences to solve those problems (e.g., technical demands, interpretation of music, and exploration of representative). Ensembles include the following, i.e., University Band (Marching - Fall; Symphonic - Spring), University Choir, Jazz/Rock Ensemble, Percussion Ensemble, Small Vocal Ensembles (e.g., Cantori, Vocal Jazz Ensemble), and Small Instrumental Ensembles (e.g., Jazz/Rock Combo, Pit Orchestra).

Prerequisites: None

Corequisites: None

#### MUSI114 Jazz/Rock Ensemble (Min SH: 1, Max SH: 1)

Designed to acquaint the student with musical performance and to offer means and experiences to solve those problems (e.g., technical demands, interpretation of music, and exploration of representative). Ensembles include the following, i.e., University Band (Marching - Fall; Symphonic - Spring), University Choir, Jazz/Rock Ensemble, Percussion Ensemble, Small Vocal Ensembles (e.g., Cantori, Vocal Jazz Ensemble), and Small Instrumental Ensembles (e.g., Jazz/Rock Combo, Pit Orchestra).

Prerequisites: None

Corequisites: None

#### MUSI115 Ensemble Small Choral (Min SH: 1, Max SH: 1)

Designed to acquaint the student with musical performance and to offer means and experiences to solve those problems (e.g., technical demands, interpretation of music, and exploration of representative). Ensembles include the following, i.e., University Band (Marching - Fall; Symphonic - Spring), University Choir, Jazz/Rock Ensemble, Percussion Ensemble, Small Vocal Ensembles (e.g., Cantori, Vocal Jazz Ensemble), and Small Instrumental Ensembles (e.g., Jazz/Rock Combo, Pit Orchestra).

Prerequisites: None

Corequisites: None

#### MUSI116 Ensemble Small Instrument (Min SH: 1, Max SH: 1)

Designed to acquaint the student with musical performance and to offer means and experiences to solve those problems (e.g., technical demands, interpretation of music, and exploration of representative). Ensembles include the following, i.e., University Band (Marching - Fall; Symphonic - Spring), University Choir, Jazz/Rock Ensemble, Percussion Ensemble, Small Vocal Ensembles (e.g., Cantori, Vocal Jazz Ensemble), and Small Instrumental Ensembles (e.g., Jazz/Rock Combo, Pit Orchestra).

Prerequisites: None

Corequisites: None

#### MUSI121 Applied Music 1 (Min SH: 1, Max SH: 1)

A concentrated approach to musical performance (voice, piano, etc.) through individual instruction in private lessons. Encompasses playing technique, tone production, sight-reading, performance practice, and interpretation of significant music literature.

Prerequisites: None

Corequisites: None

#### MUSI122 Applied Music 2 (Min SH: 2, Max SH: 2)

Similar to MUSI121 with twice as much lesson time.

Prerequisites: None

Corequisites: None

MUSI125 Introduction to Musical Theater (Min SH: 3, Max SH: 3)

Introduces students to musical theater, its history, and application.

Prerequisites: None

Corequisites: None

MUSI203 Music Theory 1 (Min SH: 2, Max SH: 2)

Presents basic concepts in music theory, including fundamentals of music notation, basic principles of meter, intervals, major/minor scales, key signatures/circle of fifths, chord structures, melodic structures, and principles of part writing/voice leading using root position and inverted chords. Non-chord tones introduced. Motivic, phrase, and period structures are analyzed. The course will include basic exercises in sight-singing and ear training and also a study of blues, jazz, and other nontraditional idioms.

Prerequisites: None

Corequisites: (MUSI109 AND MUSI206 )

MUSI204 Music Theory 2 (Min SH: 2, Max SH: 2)

A continuation of Music Theory 1. Basic concepts of traditional harmony are extended and chord vocabulary is enlarged. Partwriting with inverted chords and non-chord tones is studied. Motivic, phrase, and period structures are analyzed. Sight-singing and ear training skills development are continued. Jazz forms, scales, chord structures and notational techniques will be reviewed and expanded upon.

Prerequisites: ( MUSI109 AND MUSI203 AND MUSI206 )

Corequisites: None

MUSI205 Music Technology (Min SH: 1, Max SH: 1)

A survey of music software and hardware for the professional musician. Topics include music notation, sequencing and MIDI, audio recording and editing, synthesis, multimedia, and web publishing.

Prerequisites: None

Corequisites: None

#### MUSI206 Sight Singing (Min SH: 2, Max SH: 2)

Provides music majors with basic sight-singing skills, including the use of solfege, singing of scales and arpeggiated chords and chord progressions, melodies in different clefs, and rhythmic reading.

Prerequisites: None

Corequisites: None

#### MUSI301 Music for Elementary Grades (Min SH: 3, Max SH: 3)

Provides experiences in (1) ways of using the activities of listening, moving, singing, playing classroom instruments, and creating music to teach concepts basic to music's structure, (2) strategies for making relationships between music and other subject areas, (3) locating and using resource materials, and (4) participation in clinical teaching situations with peer groups and with children.

Prerequisites: None

Corequisites: None

#### MUSI305 Jazz Studies (Min SH: 2, Max SH: 2)

Addresses cultural diversity and offers historical and musical insights into a style of music other than the traditional Western European tradition. American jazz style will raise student's awareness of unique musical developments within this country. Active listening skills through masterworks drawn from the historical style periods of jazz will be emphasized. Social and technological changes during the past 25 years will be examined in depth to derive possible directions for the future of jazz.

Prerequisites: None

Corequisites: None

#### MUSI306 Popular Music and Jazz Theory (Min SH: 3, Max SH: 3)

Presents concepts in popular music and jazz music theory. Students will study music notation, form, meter, intervals, scales, modes, chord sequences, chord functions and principles of voice leading using contemporary chord voicings.

Prerequisites: ( MUSI103 AND MUSI109 AND MUSI203 )

Corequisites: None

#### MUSI308 Music Marketing (Min SH: 3, Max SH: 3)

Offers insight into music marketing, its structure, historical economic trends and the impact of technology on business and marketing practices in the music industry. Current trends in music marketing practices, music promotion and management as well as retail sales will be examined. The use of technology including web site design, social networking sites and the distribution of digital media will be explored.

Prerequisites: None

Corequisites: None

#### MUSI312 Music Before 1750 (Min SH: 2, Max SH: 2)

Comprises a study of the history and literature of music of the Middle Ages, Renaissance, and Baroque periods. Using representative, period masterpieces, the class will examine the variety of genres, forms, techniques and practices of composition as developed by the major composers in France, Italy, Germany (Austria) and the Franco-Netherlands provinces. A study of the social history and the artistic ideals of the periods and geographic regions, as pertinent to musical development, will be included.

Prerequisites: None

Corequisites: None

#### MUSI313 Music of the Romantic Period (Min SH: 3, Max SH: 3)

A study of the history and literature of music of the 19th century. Includes an examination of the variety of genres, forms, techniques and styles of composition used and developed by major composers representing nations/cultural domains on the European continent from the West across to Russia. Attention is given to the national schools that emerged during this period.

Prerequisites: None

Corequisites: None

#### MUSI314 20th Century Music (Min SH: 3, Max SH: 3)



The history and literature of music dating from c.1880 to the present. It includes an examination of the various schools and new idioms and ideals that European, North, Central and South American composers have fostered. Emphasis is placed upon the new techniques and innovations that have become part of the musical language of this century.

Prerequisites: None

Corequisites: None

#### MUSI319 Symphonic Music (Min SH: 3, Max SH: 3)

A study of music for the symphony orchestra. Examples from several periods, composers, and styles are compared and evaluated. The growth and development of the symphony orchestra and the effect of this growth on the music produced are also considered.

Prerequisites: None

Corequisites: None

#### MUSI320 Music for the Theatre (Min SH: 3, Max SH: 3)

Study of music written in various dramatic forms in several cultures. Examples from opera, oratorio, ballet, musical comedy, operetta, and films are examined in terms of style, technique, historical context, and dramatic function. Comparisons of the uses of theater music in various cultures will be emphasized.

Prerequisites: None

Corequisites: None

#### MUSI322 Music Theory III (Min SH: 3, Max SH: 3)

A continuation of the Music Theory sequence. Modulation and tonicization by the use of secondary chords and other techniques are reviewed. Chromatic harmony (mode mixture, Neapolitan chords, augmented sixth chords, etc) is explored. The concept of enharmonic modulation is explored, along with extended harmonies and other advanced harmonic techniques common to the late 19th century. Jazz chord structure and notation will be reviewed and expanded upon. There will be an introduction and overview of standard musical forms.

Prerequisites: None

Corequisites: None

### MUSI323 Music Theory IV (Min SH: 3, Max SH: 3)

A continuation of the Music Theory sequence Enharmonic/"distant" sequence. Enharmonic/"distant" modulation, extended harmonies, nontraditional scales, chord planning, etc are studied leading to an overview of non-tonal harmonic procedures. Musical form is studied in detail. Jazz chord structure and notation will be reviewed and expanded upon, as well as common jazz scales, forms, and improvisational techniques.

Prerequisites: None

Corequisites: None

### MUSI328 Seminar-Humanities (Min SH: 3, Max SH: 3)

This seminar will provide a general survey of music as it is used in the daily lives of various ethnic groups. The study will enable the student to (1) understand the ways in which folk and ritual music represent a particular ethnic group, (2) recognize and distinguish the sounds of representative styles of ethnic music, and (3) develop techniques for the study of ethnic music that will enable the student to carry out independent research.

Prerequisites: None

Corequisites: None

### MUSI340 Music Theory IV/Orchestration and Music Technology (Min SH: 3, Max SH: 3)

Provides music majors with knowledge of the rudiments of orchestration, including ranges, keys, and clefs of different instruments; the timbral qualities of combinations of instruments; and the historical practice of orchestration by past masters.

Prerequisites: ( MUSI205 AND MUSI300 AND MUSI323 )

Corequisites: None

### MUSI343 Music Theory V/Orchestration (Min SH: 3, Max SH: 3)

Provides music majors with knowledge of the rudiments of orchestration, including ranges, keys, and clefs of different instruments; the timbral qualities of combinations of instruments; and the historical practice of orchestration by past masters.

Prerequisites: None

Corequisites: None

MUSI400 Music History After 1750 (Min SH: 2, Max SH: 2)

Provides music majors with knowledge of the history of Western Art Music from 1750-present, including the Classical, Romantic, and Contemporary eras.

Prerequisites: ( MUSI312 )

Corequisites: None

NANO100 Introduction to Nanoscience (Min SH: 1, Max SH: 1)

Introduces aspects of nanotechnology and its applications to science, medicine and industry. This course presents this evolving field and discusses potential future influence in everyday life. Course includes tours of the nanofabrication facilities at Lock Haven University and Pennsylvania State University.

Prerequisites: None

Corequisites: None

NANO105 Introduction to Nanoscale Science (Min SH: 3, Max SH: 3)

An introduction to the fundamental principles determining the properties of matter at the nanoscale with an overview of the major fields of application.

Prerequisites: None

Corequisites: None

NANO201 Materials, Safety and Equipment Overview for Nanofabrication (Min SH: 3, Max SH: 3)

Provides an overview of the materials, safety and equipment issues encountered in the practice of "top down" and "bottom up" nanofabrication. It focuses on environment, health, and safety (EHS) issues in equipment operation and materials handling. Topics to be covered include cleanroom operation, OSHA lab standard safety training, and health issues.

Prerequisites: ( CHEM120 AND PHYS130 AND PHYS131 ) OR ( CHEM120 AND PHYS170 AND PHYS171 )

Corequisites: None

NANO202 Basic Nanotechnology Process (Min SH: 3, Max SH: 3)

Hands-on introduction to the processing involved in "top down", "bottom up", and hybrid nanofabrication. The majority of the course details a step-by-step description of the equipment, facilities processes and process flow needed to fabricate devices and structures.

Prerequisites: ( CHEM120 AND PHYS130 AND PHYS131 ) OR ( CHEM120 AND PHYS170 AND PHYS171 )

Corequisites: None

#### NANO203 Materials in Nanofabrication (Min SH: 3, Max SH: 3)

An in-depth, hands-on exposure to the producing and positioning of the materials used in nanofabrication designed to give students experience in depositing, fabricating, and self-assembling a wide variety of materials tailored for their mechanical, electrical, optical, magnetic, and biological properties.

Prerequisites: ( NANO201 AND NANO202 )

Corequisites: None

#### NANO204 Patterning for Nanotechnology (Min SH: 3, Max SH: 3)

Hands-on treatment of all aspects of advanced pattern transfer and pattern transfer equipment including probe techniques; stamping and embossing; e-beam; and optical contact and stepper systems.

Prerequisites: ( NANO201 AND NANO202 )

Corequisites: None

#### NANO205 Materials Modification for Nanotechnology Applications (Min SH: 3, Max SH: 3)

An in-depth exploration of the processing techniques and specialty hardware used in modifying material properties in nanofabrication and used in forming nano-scale devices and systems. Application and design project such as DNA lab on a chip, prosthetic devices, and photovoltaic cells will be done as group projects.

Prerequisites: ( NANO203 AND NANO204 )

Corequisites: None

#### NANO206 Characterization and Testing of Nanotechnology Structures and Materials (Min SH: 3, Max SH: 3)

Examines a variety of techniques and measurements essential for testing and for controlling material fabrication and final device performance. Characterization includes electrical, optical, physical, and chemical approaches.

Prerequisites: ( NANO203 AND NANO204 )

Corequisites: None

#### NANO210 Nanotechnology Tools and Techniques (Min SH: 3, Max SH: 3)

An introduction to a core set of nanotechnology-related advanced instrumentation and techniques. Both theoretical and operational aspects of these will be covered at a basic level. The course will also be a basic introduction to nanostructure and thin film synthesis, in-situ and ex-situ characterization of nanostructures and nanoscale systems including systems in biotechnology, material science and other disciplines.

Prerequisites: ( NANO105 )

Corequisites: None

#### NANO300 Thin Film Science and Technology (Min SH: 4, Max SH: 4)

Introduces the fundamentals of thin-film science and technology including fabrication, characterization of the thin-films structures and their optical, mechanical, electromagnetic properties. It will also address some aspects of low dimensional structures, including both the conceptual principles and experimental techniques of nanoscale science.

Prerequisites: ( PHYS170 ) OR ( PHYS171 ) OR ( PHAP205 ) OR ( NANO205 )

Corequisites: None

#### NANO304 Generation and Modification of Nanostructures (Min SH: 3, Max SH: 3)

An intermediate course addressing the fundamental processes for deposition and growth of materials with emphasis on nanostructures, the principles of operation of common class of deposition and patterning techniques, and creation of special experimental environments such as vacuum and gas management.

Prerequisites: ( MATH141 AND NANO210 AND PHYS131 ) OR ( MATH141 AND NANO210 AND PHYS171 )

Corequisites: None

#### NANO306 Characterization of Nanostructures (Min SH: 3, Max SH: 3)

An introduction to in-situ, ex-situ destructive, and non-destructive characterization of nano/micro scale systems at an intermediate level. Systems under discussion will be taken from physics, engineering, material science, chemistry, and biotechnology, emphasizing current technological and investigative applications. Students develop competency in the use of a broad, versatile set of characterization techniques.

Prerequisites: ( MATH141 AND NANO210 AND PHYS131 ) OR ( MATH141 AND NANO210 AND PHYS171 )

Corequisites: (PHYS170 )

NANO458 Advanced Applied Nanotechnology Laboratory (Min SH: 3, Max SH: 3)

Laboratory experience drawn from an undergraduate foundation in sciences including areas of current research in nanotechnology. Experimental methods and analysis are used, with emphasis on group and individual work in the planning, execution, and presentation of research. Students may repeat for credit.

Prerequisites: ( NANO206 ) OR ( PHAP206 )

Corequisites: None

NURS100 Making the LPN to RN Connection (Min SH: 1, Max SH: 1)

Designed to facilitate successful transition of the licensed practical nurse (LPN) into the pre-licensure program. The content is intended to update and enhance students' knowledge and begin the process of role transition. Students will obtain the necessary knowledge on professional practice, nursing process, teaching and learning modalities, and utilization of critical thinking skills.

Prerequisites: None

Corequisites: None

NURS101 Nursing 1 (Min SH: 8, Max SH: 8)

Introduces the student to nursing, person and health, which are basic concepts to the practice of nursing. Emphasis is placed on communicative and observational skills that permit the assessment of the basic needs of individuals and their families. The study of the human needs of individuals provides a foundation for inquiry into the nurse's role in providing nursing care based on the nursing process.

Prerequisites: None

Corequisites: None

NURS102 Nursing 2 (Min SH: 8, Max SH: 8)

A continuation of Nursing 101, Nursing I, focuses on human needs according to Maslow. The course addresses the individual's needs related to activity/rest, safety/security, oxygen/carbon dioxide exchange, love/belonging, and psychosocial well being. Emphasis is placed on communication, and teaching/learning skills as an essential part of the nursing process in the care of individuals and families. The family during the childbearing years and during the first year of life is studied in order for the student to develop beginning competencies in those technical skills necessary to carry out the nursing care plan for individuals of all ages and in selected health care settings.

Prerequisites: ( NURS101 )

Corequisites: None

NURS201 Nursing 3 (Min SH: 8, Max SH: 8)

An extension of NURS102: Nursing 2 and continues to increase the knowledge base of human needs with application of the nursing process to individuals and families with alterations in their level of health. Communication and health teaching are integrated as major strategies for assisting individuals and families to care for themselves in health and illness. This course focuses on levels of wellness and alterations in human needs relating to psychosocial, sexuality, oxygen/carbon dioxide exchange, love/belonging safety/security, and activity/rest. In addition, students will be spending 12 clinical hours each week outside of the structured course setting.

Prerequisites: ( NURS101 AND NURS102 )

Corequisites: None

NURS202 Nursing 4 (Min SH: 8, Max SH: 8)

An extension of NURS201 - Nursing 3 and continues to increase the knowledge base of human needs with application of the nursing process to individuals and families with alterations in their level of health. Communication and health teaching are integrated as major strategies for assisting individuals and families to care for themselves in health and illness. Levels of wellness and alterations in human needs are studied as the course focuses on individual needs relating to sexuality, oxygen/carbon dioxide exchange, safety/security, and activity/rest. Students will be spending 12 clinical hours each week outside the structured course setting.

Prerequisites: ( NURS102 AND NURS201 )

Corequisites: None

NURS205 Nursing Field Experience (Min SH: 1, Max SH: 3)

A field experience course that will allow the student to pursue a personal interest in an area of nursing, while focusing on patient-centered care, communication, safety, collaboration, teamwork, and professionalism.

Prerequisites: ( NURS101 AND NURS102 )

Corequisites: None

NURS212 Nursing Transition (Min SH: 2, Max SH: 2)

An overview of the knowledge, skills, abilities, and attitudes/values associated with role transition from student to professional. Students will utilize integrated thinking to fully embrace the role of the contemporary professional nurse.

Prerequisites: None

Corequisites: None

NURS305 Nursing Informatics (Min SH: 3, Max SH: 3)

Examines the history of healthcare informatics, current issues, basic informatics concepts and health information management systems. The use of technology to help make decisions and to improve the health status of the individual, family, and community is emphasized. Students will apply informatics concepts to a current clinical practice setting suggesting methods to use technology to improve patient safety and work effectiveness. The student will also learn to identify, gather, process, and manage information/data.

Prerequisites: None

Corequisites: None

NURS310 Foundations for Professional Practice (Min SH: 3, Max SH: 3)

Examines the conceptual models and theoretical frameworks of nursing to encourage the student to critique, compare, and evaluate nursing theory in current nursing practice.

Prerequisites: None

Corequisites: None



### NURS315 Pathophysiology (Min SH: 3, Max SH: 3)

Studies the physiologic mechanisms altered by illness, injury, or disease processes in humans throughout the lifespan. Fundamental disease processes, specific illnesses, and their effects on homeostasis, as well as the links between pathophysiology, diagnosis, and therapeutic interventions are emphasized.

Prerequisites: None

Corequisites: None

### NURS320 Health Assessment (Min SH: 3, Max SH: 3)

Focused on identification and demonstration of assessment techniques with emphasis on normal and abnormal findings throughout the life span. Learning experiences provide for development of a systematic approach to physical assessment of patients to facilitate integration of assessment findings and major health deviations. Principles of therapeutic communication will be emphasized as an adjunct to performing a health assessment.

Prerequisites: None

Corequisites: None

### NURS325 Pharmacology for Nursing (Min SH: 3, Max SH: 3)

Focuses on examining pharmacotherapeutic agents used in the treatment of illness, health promotion, maintenance and restoration of wellness. Emphasis is placed on drug therapy integrating the use of the nursing process in pharmacokinetics, safe medication administration, and monitoring.

Prerequisites: None

Corequisites: None

### NURS330 Global Perspectives in Nursing (Min SH: 3, Max SH: 3)

Focuses on global issues affecting personal, community, and international health and development using approaches from health promotion, population health, and primary health care to help frame analyses. Students are exposed to basic perspectives on health policy issues throughout various geographical regions and the impact of significant world events.

Prerequisites: None

Corequisites: None

NURS410 Nursing: Home, Community and Public Health (Min SH: 3, Max SH: 3)

Designed to review current and evolving roles of home health, community and public health nurses. Health promotion, health teaching, economic, political, legal and ethical influences, environmental issues, epidemiology, communicable diseases and vulnerable populations are addressed. Focus is on the application and integration of health and wellness concepts.

Prerequisites: None

Corequisites: None

NURS420 Nursing Leadership and Management in Practice (Min SH: 3, Max SH: 3)

A capstone nursing course with focus on leadership and management issues in health care. Seminars provide opportunities for students to share commonalities and unique aspects of their practical experiences in nursing. Concepts of nursing leadership and management will be examined through didactic course work, and a 45-hour practicum experience in a selected healthcare setting.

Prerequisites: None

Corequisites: None

NURS430 Contemporary Issues, Policy, and Politics (Min SH: 3, Max SH: 3)

Examines professionalism in nursing to foster understanding of the dynamic nature of the profession and role development within the discipline. This course provides an understanding of evidence-based practice, political, and legislative processes related to healthcare policy development, interprofessional collaboration, and the importance of providing a culture of safety. Quality improvement, patient safety, and other topics relevant to contemporary nursing will be explored.

Prerequisites: None

Corequisites: None

NURS435 Origin of Nursing-London England (Min SH: 1, Max SH: 1)

A week-long expedition to London, England. Emphasis is placed on evaluating the historical origins of nursing and the impact on healthcare today. Students will visit Florence Nightingale's first school of nursing and participate in on-site lecture, tour, and personal interaction with current healthcare personnel. Critical thinking in relation to historical impacts on present day nursing will be highlighted.

Prerequisites: None

Corequisites: None

#### NURS490 Nursing Research (Min SH: 3, Max SH: 3)

Focuses on the theoretical basis of research methodology with emphasis on analyzing, critiquing, and interpreting nursing research. Development of a research proposal, based on an identified nursing problem, will aid in understanding use of research findings in evidence-based nursing practice.

Prerequisites: ( MATH107 )

Corequisites: None

#### NURS498 Health Science Seminar (Min SH: 1, Max SH: 3)

An analysis and/or comparison of topics related to health science within a framework provided by the instructor. Examples include but are not limited to contemporary issues in healthcare, a comparative analysis of healthcare systems in different countries, health issues related to population, economics, social and other factors, healthcare issues of special populations, the healthcare crisis in the United States, and emerging healthcare technologies and fields.

Prerequisites: None

Corequisites: None

#### PHAP400 Modern Optoelectronics (Min SH: 3, Max SH: 3)

Introduces the fundamentals of the physical phenomena related to generation, propagation, manipulation and detection of light, and the application of these phenomena in solid state devices. Special topics will include interactions of light with materials systems of current importance (e.g. semiconductors, nanosized metal particles, biological macromolecules). Pre- or Co-requisite: PHYS315 and PHYS370

Prerequisites: ( PHYS315 AND PHYS370 )

Corequisites: None

#### PHAP410 Material Science (Min SH: 3, Max SH: 3)

Introduces fundamental physical phenomena related to solid state materials. Covers the mechanical, electrical, magnetic, optical and thermal properties of solid state materials, as well

as defects in solids and how they influence the materials' properties. The applications emphasized in this course concern the developments of nanomaterials and nanostructures.  
Pre- or co-requisite: PHYS315 and PHYS370

Prerequisites: None

Corequisites: (PHYS315 ANDPHYS370 )

#### PHIL101 Problems in Philosophy (Min SH: 3, Max SH: 3)

An introduction to a number of fundamental philosophical problems which are traditional to the discipline. Primary emphasis will be placed on theories of knowledge, metaphysics, human nature and ethical and political philosophy, introduced through logical and cultural analyses of the works of several major philosophers.

Prerequisites: None

Corequisites: None

#### PHIL102 Ethics (Min SH: 3, Max SH: 3)

Examines a variety of approaches to moral philosophy. Analyzes the problems of values, ideals, and standards of human action, from both an individual and a social perspective. Discusses contemporary issues from contrasting ethical points of view, and evaluates the logic of their cases.

Prerequisites: None

Corequisites: None

#### PHIL105 Philosophy of Religion (Min SH: 3, Max SH: 3)

Designed to provide an introduction to the basic problems in the philosophy of religion, such as the nature of religion, religious language, the relationship between faith and reason, varieties of theism and atheism, proofs for and against the existence of God, religious pluralism, immortality, miracles, mysticism, and the problem of evil. Students will examine a wide variety of religious beliefs, theories, and practices with the aim of clarifying and evaluating both Western and Eastern religious traditions.

Prerequisites: None

Corequisites: None

#### PHIL106 Social and Political Philosophy (Min SH: 3, Max SH: 3)

A study of the traditional and contemporary philosophical issues of man in society, especially those problems concerning justice which exist as a result of human government. Examines and critiques the philosophical foundations and historical roots of Authoritarianism, Democratic theory, Monarchy, Communism, Fascism and Democratic Socialism.

Prerequisites: None

Corequisites: None

#### PHIL110 Critical Thinking (Min SH: 3, Max SH: 3)

Teaches students how to evaluate arguments in terms of both formal and informal logic. The emphasis is divided between the theoretical, logical issues and the practical application of good reasoning in a wide variety of contexts, both personal and public.

Prerequisites: None

Corequisites: None

#### PHIL201 Classical Philosophy (Min SH: 3, Max SH: 3)

The development of philosophy from Thales to Plotinus, covering the Greek and Roman periods. Major emphasis on Plato and Aristotle.

Prerequisites: None

Corequisites: None

#### PHIL202 Medieval Philosophy (Min SH: 3, Max SH: 3)

A study of the development of philosophy from Augustine in the fourth century A.D. to William of Ockham in the 14th century. Special emphasis is placed on Augustine and Aquinas.

Prerequisites: None

Corequisites: None

#### PHIL204 Modern Philosophy (Min SH: 3, Max SH: 3)

An historical study of the major figures and movements in philosophy from the 17th to the 19th century. The accent is upon the problems and methods of philosophy.

Prerequisites: None

Corequisites: None

PHIL205 Contemporary Philosophy (Min SH: 3, Max SH: 3)

The major movements in the philosophy of the 20th century. Considers idealism, Neo-Thomism, Marxism, Phenomenology and Existentialism, Logical Positivism, Linguistic Analysis, and Naturalism.

Prerequisites: None

Corequisites: None

PHIL206 American Philosophy (Min SH: 3, Max SH: 3)

A general study of philosophy in the U.S. since the middle of the 19th century. The emphasis is upon the works of those philosophers of this country who have developed themes peculiarly American.

Prerequisites: None

Corequisites: None

PHIL207 Asian Philosophies (Min SH: 3, Max SH: 3)

A study of the major schools of Indian and Chinese philosophy which developed out of Hinduism, Buddhism, Taoism, and Confucianism. The emphasis will be on the metaphysical, epistemological, and ethical insights of the various systems.

Prerequisites: None

Corequisites: None

PHIL210 19th Century Philosophy (Min SH: 3, Max SH: 3)

A survey of the major European and American philosophers of the 1800's, including Hegel, Marx, Mill, Schopenhauer, Nietzsche, Kierkegaard, and James. Emphasis will be placed on the influence of these thinkers on contemporary thought.

Prerequisites: None

Corequisites: None

PHIL215 Canadian Philosophy (Min SH: 3, Max SH: 3)

Introduces Canadian Philosophy and sets forth Canadian Philosophy as a distinct system of inquiry. In particular, close attention will be paid to the relationship between Canadian philosophy and Canadian intellectual history. Particular focus will be placed on the philosophical notion of community and its impact on Canadian society.

Prerequisites: None

Corequisites: None

#### PHIL220 Existentialism (Min SH: 3, Max SH: 3)

An introduction to the 19th and 20th century philosophical movement called Existentialism. The course examines the historical roots of the movement in pessimism and egoism, explores selections from the major writings of its central figures, and traces its continuing influence on 21st century thought.

Prerequisites: None

Corequisites: None

#### PHIL301 Philosophy of Science (Min SH: 3, Max SH: 3)

An investigation of the nature and techniques of scientific explanation. Study of such questions as the nature of scientific method, the logic of scientific explanation, theory construction, causality, and the nature of the laws of science. Primary emphasis on the philosophical questions involved in the work of science and the link between science and philosophy.

Prerequisites: None

Corequisites: None

#### PHIL305 Metaphysics (Min SH: 3, Max SH: 3)

A study of the most general questions concerning the nature of reality including such problems as the reality of an external world, the significance of human existence, the nature of time, space, substance, cause, and the status of natural laws.

Prerequisites: ( PHIL\*\*\* ) OR ( HONR101 )

Corequisites: None

#### PHIL306 Theory of Knowledge (Min SH: 3, Max SH: 3)

Examines the basic problems of epistemology, such as the nature, the reliability, and the proper objects of knowledge. Considers questions pertaining to the nature of truth, theories of perception, the problems of universals, concepts, and categories.

Prerequisites: None

Corequisites: None

#### PHIL307 Philosophy of Art (Min SH: 3, Max SH: 3)

An analysis of various concepts of aesthetics. Investigation into some of the fundamental questions involved in the philosophy of art. Aestheticians, both historical and contemporary. The application of aesthetic theory to art forms both past and present. Aesthetics approached from a worldwide outlook. Probes deeply into the arts for broader aesthetic understanding.

Prerequisites: None

Corequisites: None

#### PHIL308 Logic (Min SH: 3, Max SH: 3)

Standard logical notions and techniques. Chief emphasis on forms of argument, modes of valid inference, traditional and modern approaches to deductive argument, and inductive theory. Syllogistic and mathematical logic. The course does not meet the philosophy general education requirement.

Prerequisites: None

Corequisites: None

#### PHIL312 Ethical Theory (Min SH: 3, Max SH: 3)

A historical survey of ethical theorizing from the Ancient Greeks to the 21st Century. It will focus on the various justifications offered for competing ethical theories, and the problems that their critics raised about each of them. Comparisons and contrasts between Western and Eastern approaches to ethical decision making and the inculcation of moral virtue, and with feminist approaches to ethical theorizing, will also be drawn.

Prerequisites: ( PHIL102 )

Corequisites: None

#### PHIL315 Philosophy of Law (Min SH: 3, Max SH: 3)



The exploration of such broad questions as What is law?, How are law and morality related?, and How should we best conceptualize legal reasoning? Specific topics might include, among others, legal theories, equality, rights and freedoms (speech, religion, etc), civil disobedience and violence, and gender and race in the American legal and social context.

Prerequisites: ( ENGL100 ) OR ( HONR111 ) OR ( PHIL\*\*\* ) OR ( HONR101 )

Corequisites: None

#### PHIL328 Seminar-Humanities (Min SH: 3, Max SH: 3)

This seminar is intended to familiarize students with the questions that philosophers and individuals have always asked and to help them realize that, although the answers change, the questions remain the same. Different aspects and questions may be dealt with in several philosophy seminars.

Prerequisites: ( ENGL100 ) OR ( HONR111 )

Corequisites: None

#### PHIL400 Ethics and the Environment (Min SH: 3, Max SH: 3)

A skills and knowledge-based introduction to ethical theories and principles, including diverse cultural and multicultural theories concerning the nature and status of the environment and its moral significance; an inquiry into the ethical issues that emerge with respect to the environment across the globe. Topics include philosophical ethics; foundations of ethical theories; diverse philosophical conceptions of nature; anthropocentrism; gaiacentrism; biophilia; moral standing; shallow and deep ecology; cross-cultural environmental issues resulting from business and other professional practices; and moral decision making.

Prerequisites: None

Corequisites: None

#### PHIL415 Ethical Issues in the Health Care Professions (Min SH: 3, Max SH: 3)

A skills and knowledge-based introduction to ethical theories and principles, including diverse cultural and multicultural theories, as they emerge in the principles and practice of health care for health care professionals and patients/clients; an inquiry into the ethical issues that emerge in the various health care professions in a global world and in multicultural societies. Topics include: philosophical ethics; the moral dimension of being a professional; cross-cultural conceptions of self and aging; cross-cultural conceptions of health and illness; cross-cultural conceptions of death and dying; diverse perspectives on autonomy, truth telling and

confidentiality; diverse perspectives on death and dying; the allocation of medical resources; reproductive technologies; gender, age, race, ethnicity and social class; moral decision making.

Prerequisites: None

Corequisites: None

#### PHIL425 Ethics in Business and Industry (Min SH: 3, Max SH: 3)

A skills and knowledge-based introduction to ethical theories and principles, including diverse cultural and multicultural theories, as they emerge in the principles and practice of business; an inquiry into the ethical issues that emerge in the various business professions in a global world and in multicultural societies. Topics include philosophical ethics; foundations of ethical theories; philosophical conceptions of networking; the moral dimension of being a professional; cross-cultural issues in business, including the nature of the corporation, employment at will, whistle blowing, gender, age, race, ethnicity, and social class; and moral decision making.

Prerequisites: None

Corequisites: None

#### PHYS101 Matter and Energy (Min SH: 3, Max SH: 3)

An introduction to the underlying physical principles of energy generation and consumption and their implications nationally and globally. Topics include the atomic and subatomic structure of matter, forms of energy, energy conservation, thermodynamics, heat engines, electromagnetic induction, radioactivity, nuclear reactors, nuclear fusion, solar radiation, solar collectors, gravitational force, and tidal power. Students will develop through using scientific inquiry methods including conceptual understanding, laboratory exercises, and activities developing the skills for quantitative evaluation of processes.

Prerequisites: None

Corequisites: None

#### PHYS102 The Mechanical Universe (Min SH: 3, Max SH: 3)

Introduces what is traditionally called Newtonian Mechanics including one- and two-dimensional motion, Newton's Laws, momentum, energy, and circular and simple harmonic motion. The course employs a laboratory-first, inquiry-oriented format that places emphasis on the investigation of problems in the physical world with the results of investigations being used to drive further instruction.

Prerequisites: None

Corequisites: None

PHYS105 Engineering Graphics (Min SH: 3, Max SH: 3)

Use and care of drawing instruments; proper weights and types of lines for clear-cut, and complete graphics representation; useful geometrical construction; lettering; freehand sketching, orthographic projection; auxiliary and sectional views; pictorial representation with emphasis on isometric drawing; dimensioning; true lengths and shapes. Emphasis on practical application and development of the ability to think in three dimensions. (Prior to fall 2005, course was 2.0 sh)

Prerequisites: None

Corequisites: None

PHYS108 Galileo: The Father of Experimental Science (Min SH: 3, Max SH: 3)

An introduction to physical science concepts, their applications, and the nature of science through an examination of the life and work of Galileo to be taught in Italy, during the summer.

Prerequisites: None

Corequisites: None

PHYS110 How Things Work (Min SH: 3, Max SH: 3)

An introduction to a current understanding of the physical universe in terms of fundamental principles of physics. Basic concepts are studied and related to common phenomena and applications found in everyday life as well as more exotic phenomena one may come across in the news or popular-science media. The lecture will make frequent use of experimental equipment and commercial devices in demonstrations of physical principles.

Prerequisites: None

Corequisites: None

PHYS122 Applied Physics for Health Professions (Min SH: 4, Max SH: 4)

Introduces basic physics concepts in a semi-quantitative way and their relation to applications in health professions. Students will analyze mechanical motion and mechanical equilibrium; waves, energy transfer and energy conservation applied to treatment of injuries; sources of electric and magnetic field illustrated with applications in health professions; atomic and

nuclear structure and associated phenomena as applied in radiation treatment and contemporary imaging techniques.

Prerequisites: ( MATH112 ) OR ( MATH113 ) OR ( MATH141 )

Corequisites: None

PHYS125 Physics of Sports (Min SH: 3, Max SH: 3)

An introduction to Physics from the perspective of sports. Basic concepts in classical mechanics and fluid dynamics are used to analyze motion and interactions in baseball, basketball, football, soccer, track and field, and other sports. The lecture will make frequent use of demonstrations of physical principles and hands-on and kinesthetic activities.

Prerequisites: None

Corequisites: None

PHYS130 Physics 1 (Min SH: 4, Max SH: 4)

An algebra-based introduction to mechanics, thermodynamics, vibrations and waves.

Prerequisites: ( MATH113 ) OR ( MATH141 ) OR ( MATH142 ) OR ( MATH243 ) OR ( MATH244 )  
OR ( MATH135 )

Corequisites: None

PHYS131 Physics 2 (Min SH: 4, Max SH: 4)

An algebra-based introduction to electricity, magnetism, optics and modern physics.

Prerequisites: ( PHYS130 )

Corequisites: None

PHYS133 Physics of Sports Analysis (Min SH: 3, Max SH: 3)

An introduction to physics from the perspective of examining sports using video analysis and image processing. Basic concepts in classical mechanics and fluid dynamics are used to analyze motion and interactions in various sports. The lecture will make frequent use of videos of physical principles, and the laboratory component will combine video analysis of motion and image processing.

Prerequisites: None

Corequisites: None

PHYS135 Meteorology (Min SH: 3, Max SH: 3)

An introduction to meteorology through the systematic study of the atmosphere including composition and structure. It will analyze the laws and underlying principles of the atmospheric change and motion. The course will focus on the origin and development of weather features and their significance in weather forecasting. It includes a study of global weather patterns, climate systems and climate change.

Prerequisites: None

Corequisites: None

PHYS140 Astronomy of the Solar System (Min SH: 3, Max SH: 3)

An introduction to the methods and discoveries of astronomy focusing on the solar system.

Prerequisites: None

Corequisites: None

PHYS145 Stars, Galaxies, and Cosmology (Min SH: 3, Max SH: 3)

An introduction to the methods and discoveries of astronomy focusing on stars, galaxies and cosmology.

Prerequisites: None

Corequisites: None

PHYS170 Intermediate General Physics 1 (Min SH: 4, Max SH: 4)

An introduction to motion, sound, and heat employing the methods of calculus and vector analysis. Co-requisite: MATH141.

Prerequisites: None

Corequisites: (MATH141)

PHYS171 Intermediate General Physics 2 (Min SH: 4, Max SH: 4)

An introduction to Electricity, Magnetism and Optics employing the methods of calculus and vector analysis.

Prerequisites: ( PHYS170 )

Corequisites: (MATH142 )

PHYS250 Heat (Min SH: 3, Max SH: 3)

An intermediate course in heat. More intensive development of basic concepts and principles in the study of the properties of gases and in thermodynamics. Temperature measurements, expansivity, specific heats, thermal conductivity of solids and liquids, thermal properties of gases, changes of phase, and heat engines.

Prerequisites: ( PHYS130 ) OR ( PHYS170 )

Corequisites: None

PHYS290 Electronics (Min SH: 4, Max SH: 4)

Introduces the analysis of linear electric circuits including nodal and mesh analysis, network theorems and their applications for direct-current circuits, transient circuits, and AC steady state analysis. Uses linear algebra, differential equations, and complex variables for circuit analysis. Incorporates the concept of building linear models for electronic components for the case of operational amplifiers and diodes. Develops practical skills for circuit simulation using computer software, assembling electronic circuits, and performing basic electrical measurements.

Prerequisites: ( PHYS171 )

Corequisites: None

PHYS310 Physics Lab Development and Supervision (Min SH: 1, Max SH: 2)

Supervised experience in development and supervision of physics laboratory activities. Will include opportunity to design, develop, and construct laboratory and demonstration apparatus in physics, and to conduct laboratory classes under direct supervision of a physics faculty member. Offered by individualized instruction.

Prerequisites: ( PHYS171 )

Corequisites: None

PHYS314 Atomic and Nuclear Physics w/o Lab (Min SH: 3, Max SH: 3)

An introduction to modern physics: atomic structure and spectra, radiation, wave and particle aspects of matter, quantum theory, radioactive decay, nuclear reactions, nuclear structure, elementary particles. Does not include a laboratory.

Prerequisites: None

Corequisites: None

PHYS315 Modern Physics (Min SH: 4, Max SH: 4)

An introduction to modern physics: atomic structure and spectra, radiation, wave and particle aspects of matter, quantum theory, radioactive decay, nuclear reactions, nuclear structure, elementary particles.

Prerequisites: ( MATH243 AND PHYS171 )

Corequisites: None

PHYS325 Optics (Min SH: 4, Max SH: 4)

An intermediate course in optics. Geometrical and physical optics, reflection and refraction at surfaces, lenses, interference and diffraction, elementary spectroscopy and polarization of light. Applications to the study of optical instruments.

Prerequisites: ( MATH243 AND PHYS131 ) OR ( MATH243 AND PHYS171 )

Corequisites: None

PHYS328 Seminar-Science (Min SH: 3, Max SH: 3)

An examination of how scientists search for knowledge and try to gain an understanding of natural phenomena. This course also explores the interplay between science, technology, and other human activities locally and globally. Topics will be chosen based on the interest and expertise of the instructor.

Prerequisites: None

Corequisites: None

PHYS330 Mechanics 1 (Min SH: 3, Max SH: 3)

An intermediate course in Newtonian mechanics with emphasis on mathematical principles and methods. Topics include vector calculus, statics, dynamics, momentum and energy conservation, oscillations, central force motion, and two dimensional rigid body dynamics.

Prerequisites: ( PHYS171 )

Corequisites: None

PHYS331 Mechanics 2 (Min SH: 3, Max SH: 3)

Continuation of Mechanics with an emphasis on the variational methods of Lagrangian and Hamiltonian formalisms. Topics include generalized coordinates, symmetries, central forces, Euler's equations, normalized coordinates, strings and vibrations, and mechanics of rigid bodies in three dimensions.

Prerequisites: ( PHYS330 )

Corequisites: None

PHYS345 Mathematical Methods of Physics (Min SH: 2, Max SH: 2)

An introduction to the mathematical techniques of theoretical physics. Topics will include the partial differential equations and boundary value problems associated with wave motion, the diffusion of heat and quantum mechanical probability, and electromagnetic potentials and fields.

Prerequisites: ( MATH211 AND MATH301 AND PHYS171 )

Corequisites: None

PHYS350 Quantum Mechanics (Min SH: 3, Max SH: 3)

An advanced undergraduate level introduction into the principles, formalism and results of quantum mechanics including historical background, Schroedinger equations, particle in box, harmonic oscillator, one dimensional crystals, hydrogen atom, angular momentum, light and introduction to perturbation theory.

Prerequisites: ( MATH244 AND PHYS315 )

Corequisites: None

PHYS370 Electricity and Magnetism (Min SH: 3, Max SH: 3)



An intermediate course in electricity and magnetism focusing on Maxwell's equations and their properties. The course will concentrate on the concepts associated with electromagnetic fields and will introduce the mathematics used for their description.

Prerequisites: ( MATH142 AND PHYS171 )

Corequisites: None

PHYS371 Electrodynamics (Min SH: 3, Max SH: 3)

An exploration of electricity and magnetism that emphasizes fields within materials, electromagnetic radiation, and methods of solving static and dynamical problems.

Prerequisites: None

Corequisites: None

PHYS391 Problems in Physics (Min SH: 1, Max SH: 4)

Independent study and research under the direction of the Physics staff. For advanced students, who may register for the course more than once. Each semester.

Prerequisites: None

Corequisites: None

PHYS431 Advanced Physics Laboratory (Min SH: 3, Max SH: 3)

A project-based investigation of experimental physics drawn from an undergraduate foundation in physics including areas of current research. Sophisticated experimental methods and analysis will be used, with emphasis on independence and individual initiative in the planning, execution, and presentation of research.

Prerequisites: ( PHYS315 )

Corequisites: None

PHYS458 Advanced Applied Nanotechnology Laboratory (Min SH: 3, Max SH: 3)

Laboratory experience drawn from an undergraduate foundation in sciences including areas of current research in nanotechnology. Experimental methods and analysis are used, with emphasis on group and individual work in the planning, execution, and presentation of research. Students may repeat for credit.

Prerequisites: ( PHAP206 )

Corequisites: None

#### PLSH101 Polish 1 (Min SH: 3, Max SH: 3)

An introduction to the basics of the foreign language in question; the course is especially designed for students who wish to spend a semester at a university in a country where the language is spoken. The primary emphasis of the course will be on developing basic listening, reading and speaking skills in the language and increasing the students' awareness of the foreign culture.

Prerequisites: None

Corequisites: None

#### PLSH102 Polish 2 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building on the material learned in the level I course. Especially designed for students who wish to improve their basic knowledge of the language in order to be able to study at the foreign university that supplied the instructor (completion of this course followed by a semester of study abroad at the university will satisfy the foreign language requirement).

Prerequisites: None

Corequisites: None

#### PLSH201 Polish 3 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 2 course and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

#### PLSH202 Polish 4 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 1, 2 and 3 courses and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None  
Corequisites: None

PLSH328 Seminar-Humanities (Min SH: 3, Max SH: 3)

Prerequisites: None  
Corequisites: None

POLI101 Political Science (Min SH: 3, Max SH: 3)

A comprehensive approach to political fundamentals: theory and organization of the modern state; the theory, processes, and ideologies of all types of governments. Basic to further study of the structure and function of government.

Prerequisites: None  
Corequisites: None

POLI105 American National Government (Min SH: 3, Max SH: 3)

An introduction to the study of American politics. Topics include the foundations of American political thought, governing principles under the U.S. Constitution, major governmental institutions (Congress, the presidency, the court system, bureaucracy), elections, political parties, public opinion, and outstanding public policy issues in the United States.

Prerequisites: None  
Corequisites: None

POLI107 World Politics (Min SH: 3, Max SH: 3)

An introduction to the fields of international relations. The course reviews the evolution of the modern international system and introduces basic theories and models used by political scientists and others in analyzing world politics. Primary emphasis on the post-Cold War "world order" and major issues confronting the international state system.

Prerequisites: None  
Corequisites: None

POLI119 First Year Student Seminar (Min SH: 1, Max SH: 1)

Introduces students to the culture and mission of the University and its programs of study, with a particular emphasis on the social sciences. Explores the purpose of a liberal arts education as a foundation for professional development and life-long learning. Through class discussion of readings and activities, students are engaged in active learning and the development of effective college study skills.

Prerequisites: None

Corequisites: None

POLI200 Introduction to Political Inquiry and Analysis (Min SH: 3, Max SH: 3)

An introduction to how political scientists build knowledge of the political world, with a primary focus on gaining competence in the scientific method. The course includes practice creating hypotheses about politics and using evidence to test hypotheses. It places scientific knowledge in the context of interpretive and philosophical modes of social inquiry.

Prerequisites: ( POLI105 ) OR ( POLI107 )

Corequisites: None

POLI205 Comparative Politics (Min SH: 3, Max SH: 3)

An analysis of the method and scope of the comparative study of government, and an examination of selected countries representing advanced industrial and developing democracies as well as authoritarian systems.

Prerequisites: None

Corequisites: None

POLI210 State and Local Government (Min SH: 3, Max SH: 3)

Examines the political process, governmental institutions, and the politics of governing at the state and local levels. Special effort will be made to examine Pennsylvania examples.

Prerequisites: None

Corequisites: None

POLI230 Political Parties and Elections (Min SH: 3, Max SH: 3)

A study of elections in the United States. Classes describe state and national electoral systems (e.g. types of primaries, the electoral college), campaign laws, party structures, and voting patterns. The course addresses how these features affect the conduct of election campaigns. Students also learn theoretical and comparative concepts for analysis, placing the U.S. in the context of other countries and considering the implications of political parties and electoral politics for the development and maintenance of democracy.

Prerequisites: None

Corequisites: None

#### POLI250 US Foreign Policy (Min SH: 3, Max SH: 3)

An examination of the nature of foreign policy, the manner in which foreign policy is formulated and executed in a democracy, and the objectives and limits of U.S. Foreign Policy. Emphasis is placed on U.S. Foreign Policy since 1945.

Prerequisites: None

Corequisites: None

#### POLI260 Intro Public Administration (Min SH: 3, Max SH: 3)

Survey of governmental administration in the U.S. with particular emphasis on the national government. Organization and management, budgeting, personnel, planning and public relations.

Prerequisites: None

Corequisites: None

#### POLI301 Comparative Government (Min SH: 3, Max SH: 3)

An analysis of the methods and scope of the comparative study of government, and an examination of political systems in selected countries with a focus on well established industrialized systems.

Prerequisites: None

Corequisites: None

#### POLI305 Congress and the Presidency (Min SH: 3, Max SH: 3)

Examines the nature of the relationship and interdependencies between the Congress and the Presidency of the United States. Focuses on the constitutional powers of these respective institutions of American national government. Substantive areas that will be examined include, but are not limited to: the historic origins of federalism and the separation of powers model of American Constitutionalism; the changing role(s) and functions of the respective institutions regarding domestic and foreign policy; the electoral processes that shape and influence Congressional and Presidential decision-making; the impact and consequences of the rise of the federal bureaucracy in the U.S.; and the social, political, and economic forces that have shaped contemporary Congressional and Presidential relations.

Prerequisites: None

Corequisites: None

#### POLI308 African Politics (Min SH: 3, Max SH: 3)

A survey and analysis of African politics. Provides a grounded understanding of the various contextual stages (pre-colonial, colonial, post-colonial, and post-post-colonial) that have shaped and continue to influence African politics and policy.

Prerequisites: None

Corequisites: None

#### POLI310 Criminal Justice (Min SH: 3, Max SH: 3)

Study of the institutions and processes by which criminal justice decisions are made, with emphasis on their legal and political aspects. The roles and interactions of law and rights, prosecution and defense, courts, police, and correctional institutions. Focus on the conflicting values and principles underlying criminal justice.

Prerequisites: None

Corequisites: None

#### POLI312 Media and Politics (Min SH: 3, Max SH: 3)

An exploration of the effects of the media (print, broadcast, electronic, and film) on political behavior in the American political system.

Prerequisites: None

Corequisites: None

POLI315 Politics in Developing Nations (Min SH: 3, Max SH: 3)

Students will be introduced to the most prominent theories of political development and the major political, economic, and social issues common to developing nations.

Prerequisites: None

Corequisites: None

POLI320 Latin American Politics (Min SH: 3, Max SH: 3)

Study of selected Latin American political systems in the 20th century, analyzing the impact of cultural and socio-political forces on modernization and political development. Through the study of several cases, students will develop an understanding of the historical roots of issues facing Latin America today.

Prerequisites: None

Corequisites: None

POLI322 International Political Economy (Min SH: 3, Max SH: 3)

An introduction to international political economy, the study of the interaction of politics and economics in the international system. Includes discussion of how politically motivated policies and dynamics influence economic activity and how economic interests and calculations influence political events. Highlights the impact of international economic dynamics and institutions on domestic political, economic, and social conditions as well as the influence of domestic political structures and economic interests on the international system.

Prerequisites: None

Corequisites: None

POLI325 Labor-Management Relations (Min SH: 3, Max SH: 3)

An introduction to labor-management relations and collective bargaining in the United States. This course examines the history and changing legal, social, and global environment of unionism. Classes devote substantial attention to the collective bargaining process and the administration of labor agreements. Students will consider the outcomes and implications of collective bargaining in the areas of wages and benefits, employee discipline, and equal rights. The course also includes attention to public sector and international collective bargaining.

Prerequisites: None

Corequisites: None

POLI328 Seminar-Social Science (Min SH: 3, Max SH: 3)

A thematic or topical approach, with emphasis on historical/political/economic analysis. Treatment of historical, contemporary and/or comparative topics (for example, the historical roots and contemporary practice of terrorism and its political and economic impact; the impact of imperialism --political, economic, and historical-- in different global areas; the frontier experience of Russian Siberia and the American West) within a framework provided by the instructor.

Prerequisites: None

Corequisites: None

POLI330 Public Policy (Min SH: 3, Max SH: 3)

An overview of the study of public policy, with emphasis on public policy in the U.S. but including some comparative perspectives. Introduces theories of the policy making process and methods of policy analysis. Explores the political environment and policy issues in several substantive policy areas, such as economic policy, social welfare, health, education, environment, and energy.

Prerequisites: ( POLI105 ) OR ( POLI210 ) OR ( POLI260 ) OR ( ECON101 ) OR ( ECON102 ) OR ( ECON103 )

Corequisites: None

POLI335 Politics of Global Health (Min SH: 3, Max SH: 3)

Explores the relationship between global health and social and economic development. Students will learn about key players in international health-UN agencies, Ministries of Health, and Non-governmental Organizations. Students will consider the impact that political action has on the health and well being of individuals. The course will be global in scope but with a special emphasis on health problems affecting people in the developing world.

Prerequisites: None

Corequisites: None

POLI350 International Relations (Min SH: 3, Max SH: 3)



The study of current diplomatic, economic, and political problems as they affect the balance of power, disarmament, the East-West struggle, the United Nations and the emerging states of Africa and Asia.

Prerequisites: None

Corequisites: None

#### POLI370 United Nations and International Organizations (Min SH: 3, Max SH: 3)

A rapid survey of the history of international organizations prior to the United Nations and an intensive study of the United Nations. Emphasis upon the purposes, principles, membership, structure, and functions of the U.N. Attention to other international organizations for such purposes as mutual security, disarmament, and the pacific settlement of international disputes.

Prerequisites: None

Corequisites: None

#### POLI380 Constitutional Law (Min SH: 3, Max SH: 3)

Analysis of the American constitutional system and its principles, with emphasis upon the Constitution, the Supreme Court, and judicial review. Constitutional principles, as applied by the Courts, to Congress, the President, federalism, state powers, and civil liberties.

Prerequisites: None

Corequisites: None

#### POLI381 Law and Society (Min SH: 3, Max SH: 3)

A study of American legal institutions and process. Common law, statutory law, administrative law, and constitutional law. The majority of the substantive materials in the course will be drawn from issues involving freedom of expression.

Prerequisites: None

Corequisites: None

#### POLI385 Constitutional Law II: Civil Liberties and Civil Rights (Min SH: 3, Max SH: 3)

One of two courses in the analysis of the American constitutional system and its principles, this course presents fundamental principles of civil liberties and civil rights, including the First Amendment, the rights of the accused, anti-discrimination, and voting rights.

Prerequisites: None

Corequisites: None

#### POLI390 Political Theory 1 (Min SH: 3, Max SH: 3)

The history of Western political thought from the Greeks through the 18th century. Theories pertaining to the nature of the state and the legitimate objectives of governments: authority, sovereignty, law, liberty, etc.

Prerequisites: None

Corequisites: None

#### POLI391 Political Theory 2 (Min SH: 3, Max SH: 3)

This is an advanced elective course in political theory focusing on major issues in 20th century political philosophy. An understanding of the Western tradition of political theory developed in POLI390 will be used as the background for a survey of major ideologies and for an in-depth exploration of three philosophic issues: freedom, equality, and democracy.

Prerequisites: None

Corequisites: None

#### POLI400 Research Seminar in Political Science (Min SH: 3, Max SH: 3)

An advanced treatment of the role of research in the development of political and social understanding. The course extends and builds upon concepts and modes of inquiry introduced in POLI200 and other political science courses. Each student will design, execute, and present an individual research project in close collaboration with the instructor and student colleagues. Instructor may specify one or more common themes or substantive areas for the research projects.

Prerequisites: ( POLI200 )

Corequisites: None

#### POLI405 Senior Capstone Management Seminar (Min SH: 3, Max SH: 3)

The seminar is intended to be an educational experience in which specialized skills and concepts introduced in individual courses in the major are integrated through investigation and discussion of broader issues in management.

Prerequisites: None

Corequisites: None

### PORT201 Portuguese 3 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 2 course and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

### PSYC100 Intro to Psychological Science (Min SH: 3, Max SH: 3)

Introduces students to the field of psychology, the scientific study of behavior, including actions, thoughts, and feelings.

Prerequisites: None

Corequisites: None

### PSYC102 Child Development (Min SH: 3, Max SH: 3)

An introduction to the major developmental processes that occur in childhood between conception and the onset of adolescence, including both normal and problematic aspects of development.

Prerequisites: None

Corequisites: None

### PSYC103 Adolescent Development (Min SH: 3, Max SH: 3)

An introduction to the major developmental processes that occur during the period of adolescence and early adulthood (from the onset of puberty to the mid-20s), including both normal and problematic aspects of development.

Prerequisites: None

Corequisites: None

PSYC119 First Year Student Seminar (Min SH: 1, Max SH: 1)

An introduction to the culture and mission of the university within the context of an academic discipline. The class will explore the purpose of college education, and students will be provided an opportunity to engage within the discipline of psychology. Students are introduced to basic learning and study skills within a content area. Through class readings, students engage in active learning. Co-curricular activities and the incorporation of a mentoring component facilitate connections with fellow students and faculty.

Prerequisites: None

Corequisites: None

PSYC201 Educational Psychology (Min SH: 3, Max SH: 3)

An introduction to the aspects of psychology related to the learning process and to the school as a social system. Among the topics considered are learning theories and their applications, the identification and evaluation of abilities and achievements, the effects of social deprivation on intellectual development, characteristics of students and teachers, styles of teacher leadership, and instructional technology.

Prerequisites: ( PSYC102 ) OR ( PSYC103 )

Corequisites: None

PSYC202 Research Methods in Psychology (Min SH: 3, Max SH: 3)

An exploration of psychological research methodology and theory through readings, lectures, discussions, and exercises. Students acquire knowledge and skills in the use of science to answer questions related to psychology. Experimental, quasi-experimental, and non-experimental methodologies are explored. A central focus is to guide and assist students to become effective consumers of psychological information contained within both professional journals and the popular media.

Prerequisites: ( PSYC100 ) OR ( HONR180 )

Corequisites: None

PSYC204 Writing for Psychology (Min SH: 3, Max SH: 3)

Focused on writing papers for Psychology courses or professional journals. Students will develop information-seeking strategies, identify types of sources needed, and develop search strategies for locating psychology articles and related reference materials. Students will learn to summarize material and incorporate it into well-written experimental and non-experimental

papers that conform to APA style. Emphasis will also be given to basic writing elements, such as grammar, organization, and logical writing.

Prerequisites: ( ENGL100 AND PSYC202 ) OR ( HONR111 AND PSYC202 )

Corequisites: None

#### PSYC205 Applied Psychological Statistics (Min SH: 3, Max SH: 3)

Designed to enable students to understand and apply descriptive and inferential statistics used in psychological research. Students will learn basic statistical concepts and computational methods used to test psychological hypotheses. Students will become proficient in basic data analysis using a computer statistical analysis package (e.g., SPSS). Emphasis will be placed on how to select appropriate statistics, interpret statistical results, draw appropriate conclusions from results, and communicate results using APA style.

Prerequisites: ( MATH107 AND PSYC202 )

Corequisites: None

#### PSYC207 Careers in Psychology (Min SH: 2, Max SH: 2)

Introduces to psychology majors the wide variety of career options available and the skills and knowledge necessary to achieve them.

Prerequisites: ( PSYC100 ) OR ( HONR180 )

Corequisites: None

#### PSYC212 Forensic Psychology (Min SH: 3, Max SH: 3)

An introduction to the growing field of psychology and the law or forensic psychology. Students will learn how psychological principles can be applied to the criminal justice system, including profiling, custody evaluations, competency evaluations, jury decision-making, and eyewitness testimony. Students will also learn about various careers in which forensic psychology can play a role, such as interrogating, trial consulting, and child custody evaluation.

Prerequisites: ( PSYC100 ) OR ( HONR180 )

Corequisites: None

#### PSYC215 Foundations of Biopsychology (Min SH: 3, Max SH: 3)

An introduction to the interactive role of our evolutionary past, our current genome, and immediate brain structure and activity on our thoughts, feelings, and actions. Students will learn the necessary background in evolutionary biology, behavioral genetics, neuroanatomy, and neurophysiology. Subsequently, students will apply those biological principles toward a fuller understanding of mental illness, sexual behavior, cerebral lateralization, neurological disorders, and emotion. Students will finish being able to understand and reflectively evaluate related science news and research.

Prerequisites: ( PSYC100 ) OR ( HONR180 )

Corequisites: None

#### PSYC235 Psychology of Leadership (Min SH: 3, Max SH: 3)

An exploration of the approaches to leadership that focus on the traits, skills, and behaviors of, and interactions between, effective leaders and followers. Numerous models of leadership will be examined to determine advantages, limitations, and applications of each. Ethical issues and the importance of gender and cultural differences will be considered.

Prerequisites: ( PSYC\*\*\* ) OR ( HONR180 )

Corequisites: None

#### PSYC240 Lifespan Development (Min SH: 3, Max SH: 3)

An introduction to the major theories of physical, cognitive, and socioemotional development from conception through death. Emphasis is placed on the role of people, contexts, and experiences in human development. Students will also learn about the research methods implemented to obtain information about human development.

Prerequisites: ( PSYC100 ) OR ( HONR180 )

Corequisites: None

#### PSYC250 Social Psychology (Min SH: 3, Max SH: 3)

A study of individual behavior in social situations. The course focuses on how people think about, influence, and interact with others. Topics such as social cognition, social influence and social relations are explored and discussed. Students will learn about social psychological concepts, theories and research. Students will also apply social psychological concepts to everyday life.

Prerequisites: ( PSYC100 ) OR ( HONR180 )

Corequisites: None

### PSYC305 Theories of Learning (Min SH: 3, Max SH: 3)

Investigates the major behavioral, social, cognitive, and physiological theories of human and animal learning. Emphasis is placed on the practical application of theories to both education and psychotherapy and student application of theories to both animal and human learning. Finally, there is an emphasis upon the use of learning theory in the design of psycho-educational techniques and technology.

Prerequisites: ( PSYC100 AND PSYC202 ) OR ( HONR180 AND PSYC202 )

Corequisites: None

### PSYC306 History and Systems of Psychology (Min SH: 3, Max SH: 3)

An introduction to the historical antecedents of contemporary psychology from its foundation in philosophy and physiology through the major changes in the field over the last 200 years. Students will examine the current state of the field in the context of the historical influences of philosophy and physiology, with emphasis on comprehension of original source material in psychology. Students will also examine how psychology has developed as a result of specific sociohistorical contexts.

Prerequisites: None

Corequisites: None

### PSYC307 Abnormal Psychology (Min SH: 3, Max SH: 3)

A review of the scientific study of psychological disorders. Assessment, diagnosis, and treatment are all discussed, with attention paid to the theoretical models that underlie current approaches as well as the research evidence that supports them. Students will study many of the most commonly diagnosed psychological disorders, as described in the Diagnostic and Statistical Manual of Mental Disorders, along with the possible causes and available treatments for these disorders.

Prerequisites: None

Corequisites: None

### PSYC308 Psychology of Personality (Min SH: 3, Max SH: 3)

An introduction to the field of personality psychology, specifically focusing on theories of personality. The course emphasizes various ways that personality has been explained as well as

techniques used to research and assess personality. Students will study classic and current theories of personality development as well as empirical research support for the validity of each.

Prerequisites: ( PSYC\*\*\* AND PSYC100 ) OR ( HONR180 AND PSYC\*\*\* )

Corequisites: None

#### PSYC310 Cognitive Psychology (Min SH: 3, Max SH: 3)

Addresses data and theories in perception and human information processing. An emphasis is placed on attention, memory, and visual as well as auditory processing.

Prerequisites: ( BIOL101 AND PSYC100 AND PSYC202 ) OR ( BIOL106 AND PSYC100 AND PSYC202 ) OR ( BIOL101 AND HONR180 AND PSYC202 ) OR ( BIOL106 AND HONR180 AND PSYC202 )

Corequisites: None

#### PSYC313 Industrial and Organizational Psychology (Min SH: 3, Max SH: 3)

An introduction to the science of human behavior applied to industrial and organizational settings. Students learn the fundamentals of quality of work life, job analysis, research methods, testing and assessment, training, ergonomics, performance evaluation, work motivation, stress management, leadership, ethics, and group dynamics. Case studies or field experiences may be incorporated into this course.

Prerequisites: ( HONR180 ) OR ( PSYC100 )

Corequisites: None

#### PSYC315 Health Psychology (Min SH: 3, Max SH: 3)

A survey of the psychology of health and wellness. Findings using the biopsychosocial model of health are discussed. Topics include preventive health; health promotion; stress, coping, illness, and responses to treatment; pain management; behavioral aspects of chronic illnesses such as heart disease and cancer; psychoneuroimmunology; patient-provider communication; and positive psychology in health.

Prerequisites: ( BIOL101 AND HPED140 AND PSYC100 ) OR ( BIOL101 AND PSYC100 AND RECR105 ) OR ( BIOL101 AND PSYC100 AND RECR205 ) OR ( BIOL101 AND HLTH105 AND PSYC100 ) OR ( BIOL106 AND HPED140 AND PSYC100 ) OR ( BIOL106 AND PSYC100 AND RECR105 ) OR ( BIOL106 AND PSYC100

Corequisites: None



PSYC317 Sec Educ 2 Block: Educ Psycholog (Min SH: 3, Max SH: 3)

A study of knowledge about the learner, the learning process, and instructional planning, execution and assessment methodologies.

Prerequisites: None

Corequisites: None

PSYC320 Evolutionary Psychology (Min SH: 3, Max SH: 3)

An advanced exploration of the study of psychological phenomena from an evolutionary perspective. We will apply to humans the same critical adaptationist lens that evolutionary biologists apply to other species. The course will begin with an in-depth introduction to evolution by natural selection, followed by a survey of more specific psychological phenomena studied from an evolutionary perspective. Topics include food and landscape preferences, human mating, sexual conflict, parenting, cooperation, and warfare.

Prerequisites: ( PSYC100 )

Corequisites: None

PSYC322 Drugs and Human Behavior (Min SH: 3, Max SH: 3)

Introduction to information about the physiological, psychological, and social effects of prescription, over the counter, and illegal drugs. Theories of addiction and methods of rehabilitation will be covered and the government agencies and laws which regulate the manufacture and distribution of drugs will also be considered. An emphasis will be placed on the narcotics, stimulants, depressants, hallucinogens, and marijuana.

Prerequisites: ( BIOL101 AND PSYC100 ) OR ( BIOL106 AND PSYC100 ) OR ( BIOL101 AND HONR180 ) OR ( BIOL106 AND HONR180 ) OR ( HLTH115 AND PSYC100 ) OR ( HLTH115 AND HONR180 ) OR ( HONR180 AND PSYC215 ) OR ( PSYC100 AND PSYC215 )

Corequisites: None

PSYC328 Seminar-Social Science (Min SH: 3, Max SH: 3)

A thematic approach to a psychological topic, with emphasis on relevance to current research and trends as well as areas of expertise of and interest to the faculty member teaching the seminar. The course is designed for discussion and exploration among upper-level students.

Prerequisites: None

Corequisites: None

#### PSYC330 Adult Development and Aging (Min SH: 3, Max SH: 3)

Examination of stability and change in the physical, intellectual, emotional, and social dimensions of adult life (beginning roughly at age 18). The major challenges, tasks, hazards, crises, achievements, and satisfactions typically experienced at each stage or era will be explored and discussed.

Prerequisites: ( PSYC100 AND PSYC102 ) OR ( PSYC100 AND PSYC103 ) OR ( PSYC100 AND PSYC240 ) OR ( HONR180 AND PSYC102 ) OR ( HONR180 AND PSYC103 ) OR ( HONR180 AND PSYC240 )

Corequisites: None

#### PSYC400 Advanced Topics Seminar (Min SH: 3, Max SH: 3)

An in-depth exploration of important contemporary topics in psychology in a seminar environment. Active student involvement includes scientific writing, presentation, and critical thinking about theory, research design, and results. The instructor teaching the course determines the topic area(s) to be covered.

Prerequisites: ( PSYC100 AND PSYC202 ) OR ( HONR180 AND PSYC202 )

Corequisites: None

#### PSYC402 Sensation and Perception (Min SH: 3, Max SH: 3)

An exploration of sensation and perception as interactive processes that form our understanding of the physical world. The course will build upon prior knowledge of the biological basis of behavior and psychological research skills. How information is gathered from the physical senses, converted into neural activity, and processed by the brain to create unique perceptions will be discussed. Students will critically evaluate relevant theories, developing an advanced understanding of the role of sensation in perception.

Prerequisites: ( BIOL101 AND PSYC215 ) OR ( BIOL106 AND PSYC215 )

Corequisites: None

#### PSYC409 Applying Research Methods in Psychology (Min SH: 3, Max SH: 3)

Provides students with practical experience in conducting psychological research. Students engage in the following activities: literature search, hypothesis construction, research design, data collection and analysis, and manuscript preparation. Students complete at least one class research project and one small group or individually designed research project. Students write research reports in APA format, as well as create and present a poster of their final project.

Prerequisites: ( MATH107 AND PSYC202 AND PSYC205 )

Corequisites: None

#### PSYC410 Physiological Psychology (Min SH: 3, Max SH: 3)

Provide students with an advanced understanding of the physiological mechanisms that govern human behavior. Neuroanatomical, neurochemical, and neurophysiological principles as related to psychopharmacology, sleep, neurological disorders, affective disorders, and schizophrenia will be thoroughly examined. An emphasis on knowledge obtained from experimental research, often involving animals, will allow for the advanced exploration of the biological basis of behavior.

Prerequisites: ( BIOL101 AND PSYC100 AND PSYC215 ) OR ( BIOL106 AND PSYC100 AND PSYC215 ) OR ( BIOL101 AND HONR180 AND PSYC215 ) OR ( BIOL106 AND HONR180 AND PSYC215 )

Corequisites: None

#### PSYC412 Human Neuropsychology (Min SH: 3, Max SH: 3)

An advanced exploration of the neuropsychological basis of human thought, feeling, and action that expands on the understanding of related neuroanatomical and neurophysiological principles. Students will apply those biological principles towards a fuller understanding of recovery of function, human social behavior and personality, dementias, and disorders of perceptions, and memory. Throughout the course an emphasis will be placed on knowledge obtained from studies of persons with and without brain damage.

Prerequisites: ( BIOL101 AND PSYC215 ) OR ( BIOL106 AND PSYC215 )

Corequisites: None

#### PSYC421 Psychological Assessment (Min SH: 3, Max SH: 3)

Introduces theory and application of psychological assessments most commonly used for clinical and research purposes. Assessments of intellectual functioning, normal and abnormal personality, and career interest inventories are explored. This course does not prepare students to administer or interpret psychological assessments in professional settings.

Prerequisites: ( PSYC202 AND PSYC307 AND PSYC308 )

Corequisites: None

PSYC425 Psychology of Women (Min SH: 3, Max SH: 3)

An examination of the psychology of women including topics such as theoretical perspectives, research methods, development of gender roles, gender stereotypes, gender comparisons, women and work, love relationships, reproduction, sexuality, mental and physical health, and victimization of women.

Prerequisites:

Corequisites:

PSYC450 Psychotherapies (Min SH: 3, Max SH: 3)

An introduction to the major approaches to psychotherapy. Students will examine the common elements of effective therapy and the characteristics shared by effective therapists. Specific approaches to psychotherapy will be reviewed and students will consider how those approaches differ in terms of techniques and theoretical basis. Students will examine the elements of empirically supported treatment as well as the ethical code that guides the practice of psychology.

Prerequisites: ( PSYC307 AND PSYC308 )

Corequisites: None

PSYC470 Counseling Skills (Min SH: 3, Max SH: 3)

An introduction to the basic skills used in counseling. A variety of skills will be examined, including listening skills, empathic responding, use of questions and probes, challenging skills, goal development, and strategy selection. The course will have an experiential component, through class demonstrations and simulated counseling sessions.

Prerequisites: ( PSYC450 )

Corequisites: None

PSYC496 Accelerated Prog: Psych-CMHC \*\*used internally to post cred\*\* (Min SH: 0.5, Max SH: 18)

Prerequisites: None

Corequisites: None

#### PYAS300 Introduction to Physician Assistant Studies (Min SH: 3, Max SH: 3)

This course is designed as an introductory course for students contemplating a career as a physician assistant. The course will expose students to the history and development of the physician assistant profession, the role of the profession in American medicine, and skills required as a pre-requisite to entering the field. Particular emphasis will be placed on the role of physician assistants in caring for the needs of underserved populations. This course may be offered either face-to-face or via distance education.

Prerequisites: None

Corequisites: None

#### READ204 Primary Reading (Min SH: 3, Max SH: 3)

Emphasis will be placed upon the psychological, linguistic, and physical development of children and their language, and the relationship of reading to that development. Topics such as phonics, linguistics, basic sight and personal sight vocabularies, readability, and informal assessment of reading performance will be studied in detail through the use of appropriate modules.

Prerequisites: ( PSYC102 ) OR ( PSYC103 ) OR ( PSYC111 )

Corequisites: None

#### READ300 Intermediate Level Reading (Min SH: 3, Max SH: 3)

Emphasis will be placed on how to meet the needs of intermediate level readers, grades 3 through 6. A distinction is made between learning to read, which typically occurs in the primary grades, and reading to learn and enjoy, which occurs thereafter. Building upon competencies developed in READ204, the prerequisite course in which learning to read is explored, students in the Intermediate Reading course will examine methods used to support reading to learn and enjoy by developing a comprehensive understanding of methods for scaffolding the development of metacognitive strategies that support reading comprehension across the curriculum. Students will examine the research that underlies a strategic reading program; discover how to organize the classroom for effective scheduling, student grouping, behavior management, and optimal reading structure; learn effective assessment techniques; discover methods and resources for matching readers and books; and develop an understanding of methods used to address the specific needs of struggling intermediate level readers.

Prerequisites: EDUC202 AND EDUC204 AND READ204

Corequisites: None

RECR105 Leisure, Wellness, and Personal Lifestyle (Min SH: 3, Max SH: 3)

An introduction to the philosophy and techniques of leisure education as a process towards achieving high levels of wellness. It addresses leisure in its historical and modern contexts as well as the relationships between leisure, work, health, and wellness in both individual and societal contexts. The course introduces students to approaches for developing a proactive lifestyle to greater wellness and meets COAPRT (Council on Accreditation of Parks, Recreation, Tourism and Related Fields) accreditation competencies.

Prerequisites: None

Corequisites: None

RECR110 Intro to Recreation and Leisure (Min SH: 3, Max SH: 3)

Provides the student with an overview of parks, recreation, tourism, and related fields. The students will have an opportunity to examine and evaluate the traits, competencies, and preparations needed by recreational professionals. The course includes an overview on the importance of play, history of recreation and leisure, as well as the vital role parks and recreation agencies play in community development.

Prerequisites: None

Corequisites: None

RECR119 First Year Seminar for Recreation Management Students (Min SH: 1, Max SH: 1)

An introduction to the culture and mission of the university within the context of an academic discipline. The class will explore the purpose of college education and provide an opportunity to engage within an academic discipline. Students are introduced to basic learning and study skills within a content area. Through class readings, students engage in active learning. Co-curricular activities and the incorporation of a peer mentor component facilitate connections with fellow students and faculty.

Prerequisites: None

Corequisites: None

RECR200 Principles of Personal Training and Aerobic Leadership (Min SH: 3, Max SH: 3)

Teach students the principles of physical conditioning in aerobic and anaerobic exercise programs. The students will learn personal training techniques, develop aerobic exercise leadership skills, and become aware of certification opportunities. The course emphasizes the application of exercise principles.

Prerequisites: ( RECR244 )

Corequisites: None

#### RECR202 Outdoor Pursuits (Min SH: 3, Max SH: 3)

Focuses on the skills and principles of outdoor pursuits. Students build competencies in multiple outdoor pursuits, which may include, but are not limited to, backpacking, orienteering, snow sports, canoeing, kayaking, fishing, challenge course activities, mountain biking, and rock climbing. Emphasis is placed on learning skills and techniques for safe participation in backcountry environments, proper use of equipment, and causing minimal impacts by practicing "Leave No Trace" principles.

Prerequisites: None

Corequisites: None

#### RECR203 Adventure Education and Programming (Min SH: 3, Max SH: 3)

Facilitates the development of outdoor leadership competencies including foundational knowledge, professional conduct, judgment and decision making, group processing, facilitation, environmental stewardship, program management, safety and risk management, and technical skills. Emphasizes teambuilding through the use of adventure games, initiative problems and the LHU challenge course. Students will learn the theoretical foundations and technical skills that are necessary to provide high-quality adventure programs to a variety of audiences.

Prerequisites: None

Corequisites: None

#### RECR204 Foundations of Therapeutic Recreation (Min SH: 3, Max SH: 3)

Designed to focus on a historical perspective of Therapeutic Recreation (TR) as well as critical philosophical and professional issues within the field. Additionally, the course includes a review of the current allied health fields, their role within the treatment approach and their philosophies. It is designed to meet the National Recreation and Park Association's (NRPA) competencies for accreditation. Restricted to Recreation Management/Therapeutic Recreation majors or with permission of instructor.

Prerequisites: None

Corequisites: None

#### RECR205 Nutrition for Wellness (Min SH: 3, Max SH: 3)

Designed to explore basic knowledge of contemporary nutrition practices. The course emphasizes the multi-directional relationships between nutrition and the social, emotional, environmental, and intellectual dimensions of wellness. The course specifically targets students' personal eating habits, an understanding of societal and cultural influences on those habits as well as the health consequences of those habits.

Prerequisites: None

Corequisites: None

#### RECR207 Informational Media in Recreation (Min SH: 2, Max SH: 2)

This course is an introduction to the use of informational technology in the planning, productions, and presentation of a variety of media materials necessary to promote recreation management. It is primarily hands-on, based on microcomputer technology, with added emphasis on traditional audio-visual presentation and equipment operations.

Prerequisites: None

Corequisites: None

#### RECR210 Field Participation in Recreation Management (Min SH: 3, Max SH: 3)

Designed to explore career interests and develop professional skills. Students are placed in an approved agency under the combined supervision of an agency professional and a university faculty member. The field experience provides an opportunity for students to apply their academic instruction in a professional setting within their career track.

Prerequisites: ( RECR105 AND RECR110 AND RECR244 )

Corequisites: None

#### RECR215 Travel and Tourism (Min SH: 3, Max SH: 3)

An examination of the role of tourism as an important factor in local, state, and national prosperity. It investigates the key components that are applicable to successful tourism management. Professional opportunities and the travel industry will be examined. This course



also entails the study of tourism impacts, specifically analyzing social, environmental, and economic variables.

Prerequisites: ( RECR110 )

Corequisites: None

#### RECR244 Leadership in Recreation, Leisure and Human Services (Min SH: 3, Max SH: 3)

Designed to provide students with fundamental knowledge and experiences essential to the development of leadership competencies. Content includes an overview of leadership styles, communication skills, leadership in multi-cultural contexts, behavior management and conflict resolution. Additionally safety and ethical principles in leadership are addressed. These skills are essential for recreation and leisure professionals but are valuable for anyone in a human service profession.

Prerequisites: None

Corequisites: None

#### RECR275 Therapeutic Recreation and Inclusive Recreation Services for People with Disabilities (Min SH: 3, Max SH: 3)

Introduction to recreation services for people with disabilities. The course provides an overview of disabilities and diseases, attitudes toward people with disabilities, appropriate terminology, legislation that impacts disability services, and accessibility issues. Techniques for working with people with disabilities that include adaptation, evaluation procedures, needs assessment and modification will be addressed. It is designed to meet the National Recreation and Park Association (NRPA) competencies for accreditation.

Prerequisites: None

Corequisites: None

#### RECR290 Special Topics in Recreation Management (Min SH: 1, Max SH: 3)

A thematic topical approach to Recreation Management with an emphasis on experiential education, "learning by doing through direct experiences." Topics might include but are not limited to the following: international investigations of recreation management, external certifications related to the provision of recreation services, one-time offerings of specific recreation management courses, and field-based coursework. Restricted to recreation management major or permission of the instructor.

Prerequisites: None

Corequisites: None

### RECR300 Special Event and Convention Center Management (Min SH: 3, Max SH: 3)

Explore special event and convention center management. Students will analyze the various components needed to manage special events with emphasis on conference planning. Topics will include stakeholder involvement, seasonality, theme-orientation, volunteerism, sponsorships, finance and budgeting as they relate to special events and convention center management.

Prerequisites: None

Corequisites: None

### RECR301 Exercise Prescription (Min SH: 3, Max SH: 3)

The purpose of this course is to enable students to prescribe appropriate exercises based upon the client's tolerance for exercise. Special emphasis will be placed on risk factors, techniques for evaluation, physical conditions and their role in physical activity assessment and prescription.

Prerequisites: None

Corequisites: None

### RECR302 Supervision of Strength Training Programs (Min SH: 3, Max SH: 3)

Introduction and application of strength training principles in the formulation of individual and team sports programs. Students will assist and supervise athletes during all training phases of a sport year (off-season, pre-season, in-season, and post-season).

Prerequisites: ( HLTH115 ) OR ( HLTH120 ) OR ( HLTH122 )

Corequisites: None

### RECR303 Sports Nutrition (Min SH: 3, Max SH: 3)

The relationship between exercise, athletic performance, and nutritional status will be examined in this course. Emphasis will be placed on dietary requirements necessary for successful sport performance.

Prerequisites: ( RECR205 ) OR ( CHEM111 ) OR ( HPED325 ) OR ( HONR200 )

Corequisites: None

### RECR304 Finance and Acquisition of Recreation Resources (Min SH: 3, Max SH: 3)

This course is designed to introduce students to the various methods employed to acquire funds/resources for recreation agencies. The focus of the course content will analyze taxing positioning strategies, complimentary assets of private and public recreation agencies, intergovernmental cooperation, sponsorship proposals, and capital funding mechanisms. Also communicates effective grant writing techniques.

Prerequisites: ( RECR110 )

Corequisites: None

### RECR305 Adv Activities and Outdoor Pursuit (Min SH: 0.5, Max SH: 0.5)

Active participation in adventure-based activities provides the foundation for students to explore the application and benefits of such programs in recreation and school settings.

Prerequisites: None

Corequisites: None

### RECR311 Adventure Tourism (Min SH: 3, Max SH: 3)

Designed to examine the adventure tourism industry. Students will learn about the evolution of adventure-based tourism and its growing popularity for domestic and international travelers. This course addresses the importance of meeting tourist demands while also preserving natural resources, local culture and supporting community development. This course examines the impact of commercial enterprises associated with adventure tourism on cultural, natural, and economic resources.

Prerequisites: None

Corequisites: None

### RECR312 Teaching Conditioning Principles for Certification Testing (Min SH: 3, Max SH: 3)

Designed to teach students how to work with predominantly performance based populations and to give students supervised practical application of previously studied theory along with the opportunity to take accredited and nationally recognized certification exams. The certification exams consist of the following: (1) NSCA-CSCS, NSCA-CPT, (2) ACSM-Group Exercise Leader, Health/Fitness Instructor, Health/Fitness Director, Exercise Specialist, (3) AFAA-Step

Certification, Personal Training/Fitness Counselor Certification, Advanced Personal Training Certification.

Prerequisites: ( RECR200 )

Corequisites: None

RECR315 Program Planning and Design in Recreation (Min SH: 3, Max SH: 3)

Examines the process of event planning and program design in recreation related agencies. Students will learn about venue selection, staffing requirements, needs assessments, and event pricing. Students will design, implement, and evaluate a recreation service related program.

Prerequisites: None

Corequisites: None

RECR320 Interpreting Cultural and Natural Heritage (Min SH: 3, Max SH: 3)

Surveys the philosophies, guiding principles and professional practices of cultural and natural interpretation. The primary focus is on the design and delivery of interpretive experiences, programs, and materials that inspire a deep connection to history and nature. Using a variety of interpretive techniques, students learn how to translate the complexities of the natural world to diverse populations in a variety of settings and formats.

Prerequisites: None

Corequisites: None

RECR325 Camp Counseling and Administration (Min SH: 3, Max SH: 3)

For those students especially interested in becoming competent camp counselors. Stress on understanding children in the camp environment, camp programs, activities, campcraft, and woodcraft. Fundamentals of camp administration will provide foundation for those seeking carrier preparation in camping.

Prerequisites: ( RECR244 )

Corequisites: None

RECR327 Diversity and Equity in Leisure, Recreation, and Community Services (Min SH: 3, Max SH: 3)

Addresses diversity and equity in the provision of recreation, leisure, and community-based services. The class explores recreation practice in multiple settings from historical, contemporary, and cultural contexts. The course is designed to engage students in critical thought and discussion on disparity in services based on dimensions of diversity including race/ethnicity, gender/sexuality, socioeconomic status, religion, and others. Course content includes a focus on explicit and implicit biases, the development of cultural humility, and influences on opportunities for safe and equitable leisure, recreation, and play. Content also addresses measures to eliminate barriers to diverse, safe, and inclusive services.

Prerequisites: None

Corequisites: None

#### RECR328 Seminar in Recreation Management (Min SH: 3, Max SH: 3)

An in-depth exploration of a socially, culturally, politically, or environmentally relevant issue/topic as it pertains to the leisure, recreation, and related fields (e.g. tourism, preservation, inclusion). Topics will be determined prior to the semester in which the course is offered.

Prerequisites: None

Corequisites: None

#### RECR330 Marketing Recreation Services (Min SH: 3, Max SH: 3)

Designed to explore experience marketing with the focus on the recreation, leisure, and related fields. The course will compare the similarities and differences in marketing products, services, and experiences. The Product Life Cycle, impacts of social media, advertising, and publicity in the promotion of recreation, leisure, and related fields will be examined.

Prerequisites: None

Corequisites: None

#### RECR340 Commercial Recreation (Min SH: 3, Max SH: 3)

An examination of the role of commercial recreation as an important factor in the local, state, and national economy. It investigates the key components that are applicable to running a successful commercial recreation business. Operations management and entrepreneurial strategies will be addressed along with identifying key industries that make up the commercial recreation sector.

Prerequisites: None

Corequisites: None

RECR355 Foundations of Outdoor Recreation (Min SH: 3, Max SH: 3)

Introduction to the philosophy, principles, and practices that are fundamental to working in the outdoor recreation field. Topics include the roles of agencies and organizations as outdoor recreation providers, outdoor recreation resources, managing outdoor recreation opportunities and activities, and professionalism in the outdoor recreation field.

Prerequisites: None

Corequisites: None

RECR356 Outdoor Education (Min SH: 3, Max SH: 3)

Outdoor Education is designed to provide students with the opportunity to develop skills to facilitate the environment as an extension of the classroom. The course will focus on the development and implementation of outdoor education programs for the public schools, parks, and other supporting agencies. A special emphasis will be placed on developing an awareness of the need to continue to acquire general knowledge of the environment while planning and conducting educational experiences in the outdoors.

Prerequisites: None

Corequisites: None

RECR357 Intramural Supervision (Min SH: 3, Max SH: 3)

The student will explore the function of intramural programs within the larger recreational sports programming field. Specifics will be presented on the administration and supervision of sports programs. Students will have the opportunity for hands-on experience with the intramural program of the University.

Prerequisites: None

Corequisites: None

RECR364 Therapeutic Recreation Assessment and Documentation (Min SH: 3, Max SH: 3)

Explores the current assessment tools, treatment approaches and documentation utilized within clinical therapeutic recreation services.

Prerequisites: None

Corequisites: None

RECR365 Therapeutic Recreation Methods and Techniques (Min SH: 3, Max SH: 3)

An in-depth study of the facilitation techniques, modalities, and activities that a Therapeutic Recreation Specialist (TRS) will utilize when working with clients. A variety of settings and client groups will be discussed along with characteristics, contraindications, and protocols for utilizing Therapeutic Recreation (TR) services.

Prerequisites: None

Corequisites: None

RECR402 Leisure Education and Innovative Programming in Therapeutic Recreation (Min SH: 3, Max SH: 3)

Designed to cover current and innovative programming in Therapeutic Recreation (TR) with an emphasis on leisure education. Leisure education concepts and programs will be covered in depth. Students will create and implement a theoretically based leisure education program for a potential client group. Additional types of programs covered may include community-based TR programming, school-based TR programming, as well as a variety of unique and creative TR programs.

Prerequisites: ( RECR204 )

Corequisites: None

RECR405 Health Promotion at Worksite (Min SH: 3, Max SH: 3)

Designed to address basic issues and problems in planning, implementing, and evaluating health promotion/wellness programs in a variety of work site settings. Emphasis will be placed on providing students with the knowledge and practical skills needed to perform the responsibilities of a work site health promotion professional.

Prerequisites: ( RECR210 AND RECR301 )

Corequisites: None

RECR410 Seminar in Current Issues in Recreation (Min SH: 3, Max SH: 3)

An examination of a variety of current issues in the areas of therapeutic recreation, outdoor recreation, fitness management, and community/commercial management. Students use a variety of texts, journals, interviews, electronic media, and newspapers to explore the selected

topics. It is designed to meet the National Recreation and Park Association (NRPA) competencies for accreditation.

Prerequisites: None

Corequisites: None

#### RECR415 Organization and Management of Recreation Agencies (Min SH: 3, Max SH: 3)

Designed for students to investigate and analyze anagement information from a variety of sources. The ultimate goal of this course is to have the student understand the complicated role of the manager in leisure service organizations with regard to three major categories: General Management, Human Resource Management, and Executive Development. It is designed to meet the National Recreation and Park Association's (NRPA) competencies for accreditation.

Prerequisites: None

Corequisites: None

#### RECR420 Recreational Resource Management (Min SH: 3, Max SH: 3)

An investigation of the multiple elements of recreation resource management. Topics will include indoor and outdoor management theories, principles of planning and design, maintenance and risk management, environmental awareness integration, and site protection and renovation. Additional areas may include landscape design and architectural components. It is designed to meet the National Recreation and Park Association (NRPA) competencies for accreditation.

Prerequisites: None

Corequisites: None

#### RECR425 Professional Field Experience in Recreation (Min SH: 10, Max SH: 14)

Facilitates the transition from the academic environment to the professional world. During the internship the student will interact with professionals in a variety of programs and settings within their respective areas of specialization.

Prerequisites: None

Corequisites: None



RECR430 Assessment, Evaluation and Research for Recreation Services Method and Design (Min SH: 3, Max SH: 3)

An explanation of the processes and methods of research and evaluation in recreation services. The course explores evaluation and research foundations, methods, design, and application. It is intended to serve as a foundation for students who need skills for program evaluation and to conduct research in the field.

Prerequisites: None

Corequisites: None

RUSS101 Russian 1 (Min SH: 3, Max SH: 3)

An introduction to the basics of the foreign language in question; the course is especially designed for students who wish to spend a semester at a university in a country where the language is spoken. The primary emphasis of the course will be on developing basic listening, reading and speaking skills in the language and increasing the students' awareness of the foreign culture.

Prerequisites: None

Corequisites: None

RUSS102 Russian 2 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building on the material learned in the level I course. Especially designed for students who wish to improve their basic knowledge of the language in order to be able to study at the foreign university that supplied the instructor (completion of this course followed by a semester of study abroad at the university will satisfy the foreign language requirement).

Prerequisites: None

Corequisites: None

RUSS201 Russian 3 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 2 course and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

RUSS202 Russian 4 (Min SH: 3, Max SH: 3)

The study of the foreign language in question, building upon the material learned in the Level 1, 2 and 3 courses and especially designed for students who wish to enhance their knowledge of that language.

Prerequisites: None

Corequisites: None

SCI110 Science, Technology, and Society (Min SH: 3, Max SH: 3)

An introduction to physical science concepts such as harmonic motion, thermal expansion, electrical generation, energy, radiation, and basic nanotechnology in the context of important historical, scientific and technological advances as well as their impact on society.

Prerequisites: None

Corequisites: None

SCI119 First Year Seminar (Min SH: 1, Max SH: 1)

Introduces students to the culture and mission of the university within the context of an academic discipline. Students are encouraged to explore the purpose of a college education and are provided an opportunity to become engaged with an academic discipline. Students are introduced to learning strategies and study skills. Common activities and the incorporation of a peer mentor component facilitate connection with fellow students, faculty, the university and the community.

Prerequisites: None

Corequisites: None

SCI201 Inquiry into Physical Science (Min SH: 3, Max SH: 3)

Provides a more adequate content background for teaching science in the elementary school. Emphasis is on individual student activity involving the handling of everyday equipment and supplies. Units cut across various fields of science including physics, chemistry, meteorology, and life science including fieldwork.

Prerequisites: None

Corequisites: None

SCI209 Secondary Science Methods 1 (Min SH: 3, Max SH: 3)

The first course in a two-course science teaching and learning methods sequence for prospective teachers in all science disciplines. Includes field experiences and practice teaching and is organized around the following topics: nature of science, science learning, scientific inquiry, history of science education, national and state science standards, diverse learners, direct instruction, demonstrations, constructivism, classroom safety and the ethical treatment of animals, and professionalism.

Prerequisites: ( PSYC103 AND SPEC204 )

Corequisites: None

SCI315 Secondary Science Methods 2 (Min SH: 4, Max SH: 4)

The second course in a two-course science teaching and learning methods sequence for prospective teachers in all science disciplines. Includes numerous field experience and practice teaching and is organized around the problems of practice, with an emphasis on teaching science as inquiry, instructional strategies, curriculum planning, assessment, inquiry-empowering technologies, reading and writing across the curriculum, teaching students with special needs, and professionalism. Experiences with various methods and tools as learners will include content from physics including Electricity and Magnetism.

Prerequisites: None

Corequisites: None

SCI415 Student Teaching and Practicum Secondary 1: Science (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

SCI416 Student Teaching and Practicum Secondary 2: Science (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

SCI493 Student Teaching and Practicum 1: Secondary Education Science (Min SH: 6, Max SH: 6)

The first of two capstone experiences (one at each level appropriate to certification areas and grade level ranges) for preservice teachers through a student teaching experience required for certification in Secondary Education in Biology, Chemistry, Earth & Space Science, General Science, or Physics. Supervised practice in classrooms with certified teachers and regular practicum sessions, according to prescribed guidelines, introduce the student to the range and scope of a professional educator's responsibilities.

Prerequisites: None

Corequisites: None

SCI494 Student Teaching and Practicum 2: Secondary Education Science (Min SH: 6, Max SH: 6)

The second of two capstone experiences (one at each level appropriate to certification areas and grade level ranges) for preservice teachers through a student teaching experience required for certification in Secondary Education in Biology, Chemistry, Earth & Space Science, General Science, or Physics. Supervised practice in classrooms with certified teachers and regular practicum sessions, according to prescribed guidelines, introduce the student to the range and scope of a professional educator's responsibilities.

Prerequisites: None

Corequisites: None

SOCI101 Introduction to Sociology (Min SH: 3, Max SH: 3)

Emphasizes the concepts and methodology by which the sociologist investigates the relationship between groups, institutions, cultures and the individual. Race, gender, class, religion and other forms of difference receive special treatment as mediating variables in this relationship.

Prerequisites: None

Corequisites: None

### SOCI203 Social Problems (Min SH: 3, Max SH: 3)

A study of social and individual problems related to evolutions of social structure. This course investigates topics such as alcoholism, drug abuse, mental illness, violence and crime as they relate to social class, race and gender.

Prerequisites: ( SOCI101 )

Corequisites: None

### SOCI205 Racial and Ethnic Relations (Min SH: 3, Max SH: 3)

An analysis is made of the processes involved when people of different racial, ethnic, and sociocultural origins meet and co-exist. While primary emphasis is given to racial and ethnic relations in the United States, the worldwide phenomena of prejudice and discrimination are also considered.

Prerequisites: ( SOCI101 )

Corequisites: None

### SOCI206 Marriage and Family (Min SH: 3, Max SH: 3)

Examines the role of marriage and family in human societies and how the purposes and functions of each have changed over time. An explicitly cross-cultural/national approach is employed to introduce students to the diversity and similarities across the human experience around the world.

Prerequisites: None

Corequisites: None

### SOCI223 Indigenous Cultures of North and South America (Min SH: 3, Max SH: 3)

A study of the indigenous cultures of North and South America using archeological, historical, and ethnographic data. Special focus is on cultures found within North America, Mesoamerica, and Amazonia. Particular attention is given to intercultural contact and its outcomes up to the present.

Prerequisites: None  
Corequisites: None

SOCI300 Sociology of Deviance (Min SH: 3, Max SH: 3)

A study of behavior that is not normal. Part of the course focuses on the forces from a mainstream society itself that compel deviant behavior. Other parts are on interaction processes between deviant actors and mainstream society, the formation of subcultures and countercultures, and the evolution of social rules and crime. The course emphasizes attention to gender and racial social structures.

Prerequisites: ( SOCI101 )  
Corequisites: None

SOCI301 Juvenile Delinquency (Min SH: 3, Max SH: 3)

An analysis of the nature of juvenile delinquency, theories of causation, methods of treatment, and suggested methods of prevention.

Prerequisites: ( SOCI101 )  
Corequisites: None

SOCI328 Seminar-Social Science (Min SH: 3, Max SH: 3)

Social science seminar.

Prerequisites: ( SOCI101 )  
Corequisites: None

SOCI330 Japanese Culture and Society (Min SH: 3, Max SH: 3)

The course will use sociological and anthropological perspectives to understand Japanese culture and society. The course will highlight various social institutions and cultural elements of the Japanese society, namely education, religion, popular culture, group dynamics, marriage and the family, and economy. Through the multidisciplinary approach, the course will investigate both historical as well as contemporary issues concerning Japan.

Prerequisites: ( SOCI101 ) OR ( ANTH101 ) OR ( ANTH102 )  
Corequisites: None

SOCI351 Urban-Rural Sociology (Min SH: 3, Max SH: 3)

An inquiry into the geographic concentration of population. The course describes and explains the evolution of agricultural technology and its impact on the character and culture of rural populations. The course also describes and explains the evolution of cities, communities and neighborhoods especially in regards to race and socioeconomic class.

Prerequisites: ( SOCI101 )

Corequisites: None

SOCI352 Sociological Theory (Min SH: 3, Max SH: 3)

An exploration of the evolution of social thought leading to the systematic and scientific basis of modern sociology and systematic analysis of major schools of modern sociological theory.

Prerequisites: ( SOCI101 )

Corequisites: None

SOCI354 Social Change (Min SH: 3, Max SH: 3)

An inquiry into the nature of social change--its causes, processes, and consequences--and a critical examination of theories of social change and their applications to the comparative analysis of Western and Asian societies.

Prerequisites: ( SOCI101 )

Corequisites: None

SOCI360 Death and Dying (Min SH: 3, Max SH: 3)

An exploration of the various ways societies have sought to understand and cope with death. Consideration is given to the way individuals, families, and societies have formulated policy and administrative procedures to make institutions more humane in their response to the terminally ill and the bereaved.

Prerequisites: ( SOCI101 ) OR ( PSYC100 ) OR ( HONR180 )

Corequisites: None

SOCI402 Industrial Sociology (Min SH: 3, Max SH: 3)

An inquiry into the cultural and economic forces that both create and result from a society's productive capacity. This course concentrates on the American situation including its history, its position in the global division of labor and its experiences with race and gender.

Prerequisites: ( SOCI101 )

Corequisites: None

SOCI403 Social Gerontology: Sociology of Aging (Min SH: 3, Max SH: 3)

A sociological analysis of the problems confronting the aged in modern bureaucratic society. Emphasis is placed on the influence that various structures--groups, associations, and institutions have on the changing statuses and roles of individuals in society.

Prerequisites: ( SOCI101 )

Corequisites: None

SOCI404 Sociological Research (Min SH: 3, Max SH: 3)

Preparation for critical consumption of research in the behavioral sciences and for graduate-level education in research methodology. This course covers quantitative methodologies: Sampling, measurement, survey design and analysis. This course also covers qualitative methodologies including participant observation and semi-structured interviewing. Students experience intensive writing processes by articulating results to lay audiences.

Prerequisites: ( MATH107 AND SOCI101 AND SOCI352 )

Corequisites: None

SOCI410 Sociology of Organizations (Min SH: 3, Max SH: 3)

A study of informal and formal organizations in the contexts of work, voluntary agencies, and/or the military. This course investigates the creation, evolving structures, and evolving functions of such organizations and their consequences on social class, race and gender.

Prerequisites: ( SOCI101 )

Corequisites: None

SOCI420 Corrections (Min SH: 3, Max SH: 3)

This course will explore the relationship of criminology to criminal justice from systems and interdisciplinary approaches. Major emphases are placed on investigating philosophies and



issues in corrections such as retribution, restitution, general and specific deterrence, incapacitation, rehabilitation, or treatment. Correctional strategies are also examined by evaluating traditional and nontraditional adult and juvenile corrections.

Prerequisites: ( SOCI101 )

Corequisites: None

#### SOCI425 Economic Sociology (Min SH: 3, Max SH: 3)

An inquiry into value, symbols of value and the motives for production and consumption. The course includes topics such as the construction of currency, the comparison between free markets and central planning, the evolution and function of inequality, an analysis of stratification and an examination of cultures associated with social classes. The course integrates race and gender as important independent and dependent variables.

Prerequisites: ( SOCI101 )

Corequisites: None

#### SOCW102 Introduction to Social Work (Min SH: 3, Max SH: 3)

Introduction to social work values, ethics, knowledge, functions, and roles necessary for practice by generalist practitioners. Provides a foundation in the historical roots and theoretical underpinnings of the social work profession. The social welfare system and social environment in which individuals, families, groups, organizations, neighborhoods, and communities participate are studied from a systems perspective. Special emphasis on empowering marginalized and oppressed populations.

Prerequisites: None

Corequisites: None

#### SOCW110 Diverse Populations and Groups (Min SH: 3, Max SH: 3)

An introduction to diverse populations and groups and provides information about differences based on age, class, color, culture, disability, ethnicity, gender identity and expression, immigration status, political ideology, race, religion, sex, and sexual orientation based on a global perspective. This course helps students develop tools for increased understanding of and sensitivity to human diversity and cultures different from their own from all parts of the globe. Students will gain knowledge, disciplinary skills, ethical reasoning, and appreciation of international and multicultural perspectives needed to conduct themselves as responsible social workers in the world.

Prerequisites: None  
Corequisites: None

#### SOCW119 First Year Seminar for Social Work Students (Min SH: 1, Max SH: 1)

An introduction for social work majors to the university learning environment. Students are introduced to the competencies and practice behaviors they will learn through the social work program. The course also covers specific learning strategies, classroom technologies and institutional resources that might help them achieve their goals.

Prerequisites: None  
Corequisites: None

#### SOCW201 Human Behavior in the Social Environment 1 (Min SH: 3, Max SH: 3)

An introduction to the normal processes of sequential physical, emotional, socio-cultural and spiritual development from conception through adolescence. It emphasizes common stresses and crises effecting normal development and relates these to social work practice. The course utilizes a social systems framework to focus on why humans behave the way they do in the context of living in our society.

Prerequisites: ( SOCW102 )  
Corequisites: None

#### SOCW203 Human Behavior and Social Environment 2 (Min SH: 3, Max SH: 3)

An introduction to the normal processes of sequential physical, emotional, socio-cultural and spiritual development from young adulthood to late adulthood. It emphasizes common stresses and crises effecting normal development and relates these to social work practice. The course utilizes a social systems framework to focus on why humans behave the way they do in the context of living in our society.

Prerequisites: ( SOCW102 )  
Corequisites: None

#### SOCW210 Case Management (Min SH: 3, Max SH: 3)

An introduction to the processes of case management and professional writing. The course emphasizes common engagement of clients and case managers and how clients and case managers make meaning together. The course utilizes the following: 1) a solution focused

conceptual framework to focus on collaborative partnerships and goal formation; and 2) a generalist social work perspective for writing in a professional setting.

Prerequisites: ( SOCW102 )

Corequisites: None

#### SOCW215 Mental Health (Min SH: 3, Max SH: 3)

A basic overview of mental disorders and DSM 5 diagnoses. It covers mental status exams and social histories of individuals. It details pharmacological interventions, family interventions, and group interventions.

Prerequisites: ( SOCW102 )

Corequisites: None

#### SOCW301 Social Work Practice 1 (Min SH: 3, Max SH: 3)

An introduction to knowledge, values and skills for generalist micro practices. Class emphasizes self-knowledge, use of self as a change agent, and understanding social work values. It integrates oppression and strategies for combating it, and developing skills interpersonal interviewing and problem-solving.

Prerequisites: ( SOCW201 )

Corequisites: None

#### SOCW302 Social Work Practice 2 (Min SH: 3, Max SH: 3)

An introduction to the dynamic and interactive processes of engagement, assessment, intervention, and evaluation of families and groups. Theoretical knowledge and practical skills used in working with groups and families will be explored and developed. This course addresses Educational Policy and Assessment Standards (EPAS) which are the accreditation standards for undergraduate social work programs.

Prerequisites: ( SOCW203 AND SOCW301 )

Corequisites: None

#### SOCW310 Social Policy and Practice (Min SH: 3, Max SH: 3)

This course involves an exploration of the development of social welfare programs. It includes content about the history of social work, the history and current structure of social welfare

services and the role of policy in service delivery, social work practice, and the attainment of individual and social well being. Students will understand and demonstrate social policy skills in regard to economic, political, and organizational system.

Prerequisites: ( SOCW204 AND SOCW404 )

Corequisites: None

SOCW335 Social Work Practice with Groups (Min SH: 3, Max SH: 3)

Introduction to the dynamic and interactive processes of engagement, assessment, intervention, and evaluation of groups. Theoretical knowledge and practical skills used in working with groups will be explored and developed.

Prerequisites: ( SOCW301 )

Corequisites: None

SOCW360 Death and Dying (Min SH: 3, Max SH: 3)

Explores the various ways societies have sought to understand and cope with death. Consideration is given to the way individuals, families, and societies have formulated policy and administrative procedures to make institutions more humane in their response to the terminally ill and bereaved.

Prerequisites: ( PSYC100 AND SOCI101 ) OR ( HONR180 AND SOCI101 )

Corequisites: None

SOCW401 Field Instruction and Professional Seminar 1 (Min SH: 6, Max SH: 6)

Students are placed in a community agency under the supervision of an experienced social worker and a social work faculty member. Students are expected to develop an in-depth understanding of agency activities, programs, and services, and will assume increasing levels of responsibility as beginning level generalist social workers. Attendance at weekly seminars is required. The integration/generalization of conceptual content and problem specific knowledge in the field practice experience is a cycle of inquiry from specific practice experiences to concept/theory and back again in a series of cycles.

Prerequisites: ( SOCW102 AND SOCW201 AND SOCW203 AND SOCW204 AND SOCW301 AND SOCW302 AND SOCW404 AND SOCW412 )

Corequisites: None

SOCW402 Field Instruction and Professional Seminar 2 (Min SH: 6, Max SH: 6)

Students are placed in a community agency under the supervision of an experienced social worker and a social work faculty member. Students are expected to develop an in-depth understanding of agency activities, programs, and services, and will assume increasing levels of responsibility as beginning level generalist social workers. Attendance at weekly seminars is required. The integration/generalization of conceptual content and problem specific knowledge in the field practice experience is a cycle of inquiry from specific practice experiences to concept/theory and back again in a series of cycles.

Prerequisites: ( SOCW102 AND SOCW201 AND SOCW203 AND SOCW204 AND SOCW301 AND SOCW302 AND SOCW404 AND SOCW412 )

Corequisites: None

SOCW403 Social Gerontology: Sociology of Aging (Min SH: 3, Max SH: 3)

Provides a knowledge base for understanding the problems the aged face when growing old in a modern bureaucratic society. Emphasis is placed on the influence various structures--groups, associations, and institutions--have on the changing status's and roles of individuals in society.

Prerequisites: None

Corequisites: None

SOCW404 Rural Social Work (Min SH: 3, Max SH: 3)

This course is designed to further develop and fine tune generalist social work skills at all levels of intervention (including individuals, families, organizations and communities). Course content will focus on rural practice and the types of situations that students will encounter in micro practice, understanding and working with families, and working in and with organizations and communities. Advocacy, striving for social and economic justice, and macro level change will be stressed.

Prerequisites: ( SOCW102 AND SOCW201 AND SOCW203 AND SOCW301 AND SOCW302 AND SOCW412 )

Corequisites: None

SOCW411 Social Work with Diverse Populations & Groups (Min SH: 3, Max SH: 3)

Utilizing a problem-solving approach within an ecological systems framework, this course examines social service delivery with selected client populations and focuses on some of the

newer intervention strategies that are available through a variety of agency settings and social service programs. Case Management in social work practice will be a focal concern.

Prerequisites: ( SOCW102 AND SOCW201 AND SOCW203 AND SOCW301 )

Corequisites: None

#### SOCW412 Applied Social Research (Min SH: 3, Max SH: 3)

Provides a basic overview of practice experience to inform research, evidence based interventions, evaluation of practice, and use of research findings to improve practice, policy, and social service delivery. Covers quantitative and qualitative research and scientific and ethical approaches to knowledge building.

Prerequisites: ( SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* AND SOCW\*\*\* )

Corequisites: None

#### SOCW415 Child Welfare Services (Min SH: 3, Max SH: 3)

Designed to explore contemporary child welfare issues utilizing the systems and ecological perspectives, integrated with a problem-solving approach. Allows students to understand major concepts and issues related to children and their families at the micro, mezzo, and macro levels of service delivery and establishes a skill-base for promoting change and addressing oppression of children and families.

Prerequisites: ( SOCW102 AND SOCW201 AND SOCW301 )

Corequisites: None

#### SOCW420 Field Placement Seminar (Min SH: 3, Max SH: 3)

The senior seminar, which accompanies field instruction, is designed to serve as a capstone course, and an integrating methods seminar.

Prerequisites: ( SOCW102 AND SOCW201 AND SOCW203 AND SOCW204 AND SOCW301 AND SOCW302 AND SOCW404 AND SOCW412 )

Corequisites: None

#### SOCW425 Social Policy and Services (Min SH: 3, Max SH: 3)

An examination of social welfare policies, programs, and social, political and economic issues in their historical, societal and organizational context. This class covers the scientific method applied to analyzing the political and organizational process in policy, process of policy formulation, social justice and advocacy, and the relationship between social policy and social work goals and objectives.

Prerequisites: ( SOCW301 )

Corequisites: None

#### SOCW426 Advanced Social Welfare Policy (Min SH: 3, Max SH: 3)

An examination of several social welfare policy areas, including social inequality, poverty, health care, and housing are examined as they relate to the students' field placements. Students utilize the policy analysis process, including the analysis of ideologies and values as they shape policy formulation, the process by which legislation is proposed and enacted, the role of advocacy, and the challenges of policy implementation and evaluation.

Prerequisites: None

Corequisites: None

#### SOCW450 Topics in Social Work (Min SH: 3, Max SH: 3)

Addresses contemporary issues of social work practice in depth. Examines the impact of policy, research, and practice as well as the roles and responsibilities of social workers in this area.

Prerequisites: ( SOCW\*\*\* AND SOCW102 ) OR ( SOCW\*\*\* AND SOCW110 )

Corequisites: None

#### SPAN101 Spanish 1 (Min SH: 3, Max SH: 3)

An introduction to Spanish speech sounds, their discrimination, production and transcription, the vocabulary in context and basic speech patterns, and development of essential grammatical concepts. Conversation and readings.

Prerequisites: None

Corequisites: None

#### SPAN102 Spanish 2 (Min SH: 3, Max SH: 3)

An introduction to Spanish speech sounds, their discrimination, production and transcription, the vocabulary in context and basic speech patterns, and development of essential grammatical concepts. Conversation and readings.

Prerequisites: None

Corequisites: None

#### SPAN105 Basic Spanish for Criminal Justice (Min SH: 3, Max SH: 3)

Develops Spanish language skills necessary for various criminal justice professions. Includes emphasis on Latino culture and may include visits to the local prison to interact with Hispanic inmates. Not a comprehensive introduction to the Spanish language. No previous knowledge of Spanish language required. Not a substitute for SPAN101.

Prerequisites: None

Corequisites: None

#### SPAN110 Basic Spanish for Medical Personnel (Min SH: 3, Max SH: 3)

A basic Spanish language skills course for various medical professions and medical service personnel. It includes emphasis on Latino culture and may include visits to hospitals to interact with medical workers/Hispanic patients. This course is not a comprehensive introduction to the Spanish language and thus not a substitute for SPAN101. No previous knowledge of Spanish language is required. No restrictions on enrollment.

Prerequisites: None

Corequisites: None

#### SPAN201 Spanish 3 (Min SH: 3, Max SH: 3)

A review of fundamental facts and skills, followed by progressively more extensive and complex exercises in listening, speaking, and reading. Emphasis the second semester is on the retention and application of Spanish idiom in written composition from paragraph to theme. Prepares the student for mature reading and discussion in Spanish and for the pursuit of advanced courses.

Prerequisites: None

Corequisites: None

#### SPAN202 Spanish 4 (Min SH: 3, Max SH: 3)



A review of fundamental facts and skills, followed by progressively more extensive and complex exercises in listening, speaking, and reading. Emphasis the second semester is on the retention and application of Spanish idiom in written composition from paragraph to theme. Prepares the student for mature reading and discussion in Spanish and for the pursuit of advanced courses.

Prerequisites: None

Corequisites: None

#### SPAN203 Culture of Spain (Min SH: 3, Max SH: 3)

Covers the evolution of Spanish culture in all of its diverse facets. Readings, recordings, videos and material from the internet are used to analyze Spain and her people in the past and present. Written and oral reports, lectures and discussions in Spanish.

Prerequisites: None

Corequisites: None

#### SPAN204 Latin American Culture (Min SH: 3, Max SH: 3)

The course is designed to give the student an introduction to Latin America. The material treated includes Latin American politics, history, race, languages, customs, geography, great men and women, economy, arts, music, and psychology. Of necessity, depth is sacrificed for breadth.

Prerequisites: None

Corequisites: None

#### SPAN205 Beginning Spanish Composition and Conversation (Min SH: 3, Max SH: 3)

Designed to improve and develop written and oral expression in Spanish. Some attention will be paid to correctional phonetics. This course is conducted in Spanish.

Prerequisites: None

Corequisites: None

#### SPAN215 Presentations from Hispanic Theatre (Min SH: 3, Max SH: 3)

The presentation of one-act contemporary Hispanic plays or of scenes from longer works of dramatic literature. Pronunciation exercises, play analysis, written exercises, and an introduction to basic techniques for the presentation of dramatic material will all serve to enable the student to deliver assigned lines in a natural and convincing manner.

Prerequisites: None

Corequisites: None

#### SPAN300 Advanced Conversation through Hispanic Film (Min SH: 3, Max SH: 3)

Written and oral analyses of a number of outstanding Hispanic films serve to develop further students' ability to communicate in Spanish.

Prerequisites: None

Corequisites: None

#### SPAN307 Intro Spanish Literature (Min SH: 3, Max SH: 3)

An examination of the different literary genres as represented by selected works of outstanding Spanish authors. Introduces the student to the basic techniques of literary analysis and to the principal themes and unique characteristics of the literature produced in Spain. Motivates and prepares students for more specialized independent reading and investigation.

Prerequisites: None

Corequisites: None

#### SPAN308 Intro Spanish American Literature (Min SH: 3, Max SH: 3)

Selected readings in prose fiction, drama, and poetry from all periods. Emphasis is placed on the fundamentals of literary theory as reflected in the works read. This course is conducted in Spanish.

Prerequisites: None

Corequisites: None

#### SPAN312 Advanced Spanish (Min SH: 3, Max SH: 3)

An intensive study of Spanish, providing review of basic grammar as well as examining more advanced topics not treated in Spanish I-IV. Emphasis on problem areas of the language through a variety of exercises and applications of grammar principles.

Prerequisites: None

Corequisites: None

### SPAN313 Intermediate Spanish Composition and Conversation (Min SH: 3, Max SH: 3)

Designed to develop in the student a facility in the use and comprehension of oral Spanish, as well as in reading and written expression. This course is conducted in Spanish.

Prerequisites: None

Corequisites: None

### SPAN314 Spanish Phonetics and Linguistics (Min SH: 3, Max SH: 3)

Introduction to general linguistic concepts. Comparison of Spanish and English speech production and language patterns. Application of linguistics to the teaching of Spanish.

Prerequisites: None

Corequisites: None

### SPAN318 Spanish Drama 2 (Min SH: 3, Max SH: 3)

A study of the major works of the Spanish theater from the second half of the 19th century until the present time. Trends in the evolution of modern drama will be identified and analyzed and the nature of a dramatic work in performance will be considered.

Prerequisites: None

Corequisites: None

### SPAN320 Contemporary Spanish Women's Fiction (Min SH: 3, Max SH: 3)

Focuses on the Spanish narrative written by outstanding female authors from the Spanish Civil War to the present. The novels and short stories to be studied in class are examples of a new female identity and subjectivity and of women's struggle for individuality.

Prerequisites: None

Corequisites: None

### SPAN322 Spanish American Regionalist Novel & the Short Story (Min SH: 3, Max SH: 3)

Application of literary concepts to selected readings in the novel and short story "of the land" from the 19th and early 20th centuries. Typical works treat the native and the common man. This course is conducted in Spanish.

Prerequisites: None

Corequisites: None

SPAN323 Spanish American Contemporary Novel and the Short Story (Min SH: 3, Max SH: 3)

Application of literary concepts to selected readings of the Spanish American novel and short story of the contemporary period including such authors as Borges, Carpentier, Fuentes, Garcia Marquez. This course is conducted in Spanish.

Prerequisites: None

Corequisites: None

SPAN328 Seminar-Humanities (Min SH: 3, Max SH: 3)

A study of major films produced in Spain, with emphasis on the three leading directors: Luis Buñuel, Carlos Saura and Pedro Almodóvar. (All films are subtitled; no knowledge of Spanish is necessary for the seminar.) Basic concepts of film criticism will be applied to analyses of films and social history and aesthetic movements will be considered where necessary to an understanding of specific films.

Prerequisites: None

Corequisites: None

SPEC101 Multicultural Education (Min SH: 3, Max SH: 3)

This course will examine diversity among people. By exploring contributors of diversity such as religion, gender, sexual preferences, socioeconomic class, race, ethnicity, and disabilities, students will gain an understanding of the need for a multicultural approach to education. Several different multicultural education approaches will be explored with emphasis on implications to special education programs. This course sets the tone of the "people first" philosophy as used in SPEC 105.

Prerequisites: None

Corequisites: None

SPEC105 Foundations of Special Education (Min SH: 3, Max SH: 3)

Designed to address the definitions, characteristics, etiologies, educational and transitional needs of, and interventions and strategies for, diverse learners and individuals with exceptional learning needs (ELN) through a life span approach. The content of this course meets the standards of the Council for Exceptional Children (CEC) as set forth in the Common Core (CC), the General Curriculum (GC), and the Independence Curriculum (IC), as well as guidelines set forth by the Pennsylvania Department of Education.

Prerequisites: None

Corequisites: None

SPEC119 First Year Seminar for Special Education Students (Min SH: 1, Max SH: 1)

An introduction to the culture and mission of the university and an overview of the field of Special Education. This course reviews campus services and provides students with an overview of teacher education at Lock Haven University while helping to develop effective learning skills for college. Students will engage in active learning and discussions of requirements leading to certification in Special Education.

Prerequisites: None

Corequisites: None

SPEC202 Cultural and Linguistic Diversity in Education (Min SH: 3, Max SH: 3)

Designed to provide an introduction to multicultural and global education. Students will examine personal awareness and attitudes, cultural knowledge, instructional strategies, and curricular resources impacting PreK-12. Consideration will be given to the instructional needs of English Language Learners (ELL) and effective teaching/learning theories, approaches, research results, and public policies that pertain to diverse learners. This course meets the standards of the Council of Exceptional Children (CEC) and the guidelines for the Pennsylvania Department of Education (PDE).

Prerequisites: None

Corequisites: None

SPEC204 Cognitive Development of Diverse Learners (Min SH: 3, Max SH: 3)

Addresses the definitions, characteristics, and educational, social, and emotional needs of diverse learners. Emphasis will be given to the legal rights and responsibilities inherent in the

field of special education. Assessment procedures for eligibility, program design and performance monitoring will also be addressed.

Prerequisites: ( PSYC102 ) OR ( PSYC103 ) OR ( PSYC111 )

Corequisites: None

SPEC212 Low Incidence Disabilities Support (Min SH: 3, Max SH: 3)

Designed to examine the conceptual base, educational programming and curricular options for persons with moderate to severe disabilities. Attention will be given to assessment, determination of goals, person-centered planning and the family-system approach.

Prerequisites: ( SPEC105 ) OR ( SPEC204 )

Corequisites: None

SPEC215 High Incidence Disabilities Support (Min SH: 3, Max SH: 3)

Provides a comprehensive examination of individuals with mild disabilities (high incidence) and the accommodations/adaptations necessary for their success throughout the life span. This course specifically addresses parameters of mild disabilities, theories of learning, learning styles, educational accommodations, instructional strategies, and organizations that serve this population. This course also meets the standards of the Council for Exceptional Children (CEC) and the Pennsylvania Department of Education (PDE) requirements.

Prerequisites: ( SPEC105 ) OR ( SPEC204 )

Corequisites: None

SPEC300 Communication Disorders and Assistive Technology (Min SH: 3, Max SH: 3)

Designed to provide an overview of communication needs for individuals with disabilities. Language development, assistive technology and alternative communication systems will be explored. The scope of this course is to familiarize with assessment and intervention strategies for students with communication disorders. This course meets the standards of the Council for Exceptional Children (CEC) and the guidelines for the Pennsylvania Department of Education (PDE).

Prerequisites: SPEC105 SPEC204

Corequisites: None

SPEC309 Effective Instructional Strategies for Students with Disabilities Inclusive Settings (Min SH: 3, Max SH: 3)

Designed to address the needs of pre-service teachers who provide effective instruction to students with disabilities in inclusive settings. Emphasis will be given to utilizing evidence-based instructional practices for students with varying disabilities, creating a positive inclusive learning environment, collaborating with special education teachers, and implementing positive behavioral interventions. This course meets the standards of the Council for Exceptional Children (CEC) and the guidelines for the Pennsylvania Department of Education (PDE).

Prerequisites: SPEC204 SPEC105

Corequisites: None

SPEC310 Manual Communication and Signing (Min SH: 3, Max SH: 3)

Designed as an introduction to American Sign Language (ASL). Basic ASL vocabulary is taught with attention to sentence structure, expressive skills, receptive skills, and fingerspelling. This course will provide practical experiences in dialogue with individuals using manual communication.

Prerequisites: ( SPEC105 ) OR ( SPEC204 )

Corequisites: None

SPEC325 Infant/Preschool Special Needs (Min SH: 3, Max SH: 3)

Focusing on the foundation of early childhood special education and early intervention. The course examines best practices related to child and family centered inclusionary, collaborative models of services. Students will explore identification, assessment and instructional planning for children birth to age 8 years, who have, or are at risk for, developmental delays and disabilities. The significance of professional and ethical practice will be emphasized.

Prerequisites: ( PSYC102 ) OR ( PSYC111 )

Corequisites: None

SPEC330 Physical Education and Recreation for the Disabled (Min SH: 3, Max SH: 3)

Designed to explore an inclusive physical activity approach for persons with disabilities. Students will gain an understanding of various activities and specific modifications that will enhance the participation in inclusionary recreational activities. Emphasis will be placed on designing, implementing, and evaluating recreational opportunities that involve person-centered, capacity-building, choice and ecological inventories. All content evolves around the

goal of including persons with disabilities in regular physical education, recreation, and leisure settings.

Prerequisites: None

Corequisites: None

#### SPEC335 Comparative Special Education (Min SH: 3, Max SH: 3)

Provides students with an observation and field experience by traveling to another country to tour, observe, and participate in area schools. A comparison will be made between U.S. special education laws and regulations, and the implementation of special education services in pre-k through secondary education classrooms in another country. These field experiences will provide students with the opportunity to compare the delivery of special education services.

Prerequisites: ( SPEC105 ) OR ( SPEC204 )

Corequisites: None

#### SPEC338 Positive Behavior Supports (Min SH: 3, Max SH: 3)

Designed to examine the etiology, assessment practices, and intervention strategies influenced by various theoretical perspectives for individuals with mild, moderate, and severe emotional behavior disorders. Emphasis will be on the use of functional behavior assessment and various positive behavior support strategies that can be used in classrooms or related educational facilities. This course meets the standards of the Council for Exceptional Children (CEC) and the guidelines for the Pennsylvania Department of Education (PDE).

Prerequisites: SPEC105 SPEC204

Corequisites: None

#### SPEC345 Literacy Instruction for Students with Disabilities (Min SH: 3, Max SH: 3)

Designed to address the needs of pre-service teachers who have the responsibility for literacy development and instruction for students with disabilities. Emphasis will be given to literacy components, evidence-based practices, and varying challenges students with disabilities have in learning to read and write.

Prerequisites: SPEC204 SPEC105

Corequisites: None

#### SPEC400 Professional Skills and Technology (Min SH: 3, Max SH: 3)



Designed to provide students with necessary skills to effectively and efficiently perform job duties in the field of disability and community services. Significant emphasis will be on students investigating job responsibilities within disability service agencies. The laws related to serving individuals with disabilities and their families will be examined. The course will focus on the use of desktop and social media software. Using these technologies, the students will create an electronic portfolio to exhibit his/her skills and knowledge to prospective internship agencies/employers.

Prerequisites: None

Corequisites: None

SPEC421 Curriculum Methods for Secondary through Transition: Special Education Professional Semester (Min SH: 3, Max SH: 3)

This course offers a broad spectrum of instructional methodologies that are appropriate across various academic and life skills curriculum. Emphasis will be placed on preparing adolescents for transition from school to society. Students will write and implement lesson plans, teach units of study, develop and apply adaptations and accommodations, and demonstrate instructional practices that can be used in various content areas.

Prerequisites: None

Corequisites: None

SPEC423 Curriculum Methods for Preschool through Elementary: Special Education Professional Semester (Min SH: 3, Max SH: 3)

This course offers a broad spectrum of instructional methodologies that are appropriate across various academic and life skill curriculums for preschool and elementary exceptional learners. Students will write and implement lesson plans, teach units of study, develop and apply adaptations and accommodations, and demonstrate instructional practices that can be used in various content areas.

Prerequisites: None

Corequisites: None

SPEC425 Law and Collaborative Practices (Min SH: 3, Max SH: 3)

Designed to elaborate on the major laws and the changing roles of special educators and support staff to serve all students, including those with exceptional learning needs (ELN). Topics addressed include: laws, ethics, working with families, paraprofessionals, inclusive

settings, co-teaching, collaboration/consultation models, team planning, and conferencing skills.

Prerequisites: None

Corequisites: None

#### SPEC430 Assessing Educational Needs and Planning for Instruction (Min SH: 3, Max SH: 3)

Introduces educational assessment and instructional planning. This course emphasizes the administration and interpretation of formal and informal individual assessments used in identifying needs of individuals with exceptionalities. Students will gain experience in administering assessment instruments and writing evaluation reports and individualized educational programs. This course meets the standards of the Council for Exceptional Children (CEC) and the guidelines for the Pennsylvania Department of Education (PDE).

Prerequisites: None

Corequisites: None

#### SPEC432 Assessing Needs and Transition Planning for Individuals with Disabilities (Min SH: 3, Max SH: 3)

Designed to provide students with the knowledge and skills to effectively assess the developmental, functional, social, and vocational needs of individuals with disabilities. Students will gain an understanding of the legal provisions for current assessment practices and transition planning. Significant emphasis will be placed on selecting and administering appropriate assessment instruments, as well as interpreting results to create individualized goals and design appropriate service, transition, behavior, and action plans.

Prerequisites: None

Corequisites: None

#### SPEC440 Strategies for Teaching Students with Low Incidence Disabilities (Min SH: 3, Max SH: 3)

Designed to offer a broad spectrum of instructional methodologies appropriate across all levels of academic and life skill individualized independence curriculums for individuals with exceptional learning needs (ELN). Students will develop and implement lesson plans across content areas, strategies that promote positive behavior and social skills, and appropriate adaptations and accommodations.

Prerequisites: None

Corequisites: None

SPEC441 Strategies for Teaching Students with High Incidence Disabilities (Min SH: 3, Max SH: 3)

Designed to offer a broad spectrum of instructional methodologies appropriate across all levels of general and special curricula for individuals with exceptional learning needs (ELN). Students will develop and implement lesson plans across content areas, appropriate strategies that promote positive behavior and social skills, and implement appropriate adaptations and accommodations. The content of this course relates to standards of the Council for Exceptional Children (CEC) and the Pennsylvania Department of Education (PDE) requirements.

Prerequisites: None

Corequisites: None

SPEC450 Community Service Field Experience (Min SH: 12, Max SH: 12)

Designed as an internship where students are placed in a community organization/agency that serves individuals with disabilities and will be under the supervision of an experienced professional who is employed by the agency and a special education faculty member. Students are expected to develop an in-depth understanding of the agency activities, programs, and services, and will assume increasing levels of responsibility as beginning level professionals.

Prerequisites: ( SPEC300 AND SPEC338 ) OR ( SPEC300 AND SPEC338 )

Corequisites: None

SPEC493 Student Teaching and Professional Practicum-Special Education PreK-8 (Min SH: 6, Max SH: 6)

Designed to provide the capstone experience for pre-service teachers. Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day.

Prerequisites: None

Corequisites: None

SPEC494 Student Teaching and Professional Practicum - Special Education 7-12 (Min SH: 6, Max SH: 6)

Designed to provide the capstone experience for pre-service teachers. Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day.

Prerequisites: None

Corequisites: None

#### SPRT106 Introduction to Sport Management (Min SH: 3, Max SH: 3)

An introduction to the culture and mission of the university and overview of the field of sport administration. Students will be introduced to basic college learning and study skills in the context of sport administration. Students will engage in active learning through discussion of class readings and activities regarding the work of sport administrators in professional, collegiate, scholastic and community settings. Students will participate in co-curricular activities and peer mentoring.

Prerequisites: None

Corequisites: None

#### SPRT208 Introduction to Sport and Exercise Psychology (Min SH: 3, Max SH: 3)

An introductory overview of the psychological aspects of sport and exercise. This course provides a broad overview for understanding the behavior of individuals in sport and exercise settings. The course will integrate theories, principles and models with an emphasis on current research findings from sport and exercise settings. Content areas include personality and motivation factors, performance in groups, and the psychological effects of participation in sport and exercise.

Prerequisites: None

Corequisites: None

#### SPRT223 Contemporary Issues and Problems in Sport Management (Min SH: 3, Max SH: 3)

An overview of contemporary issues and problems in the field of sport administration. Students will research, discuss and debate current issues. Emphasis will be placed on connecting contemporary issues to the research and theories that underlie them, as well as to practical problem-solving strategies used by sport administrators.

Prerequisites: None

Corequisites: None

#### SPRT233 Sport Sales, Sponsorship, and Fundraising (Min SH: 3, Max SH: 3)

Designed to provide the student with knowledge pertaining to sport sales, sponsorship, and fundraising and their various aspects including: planned presentations, cold calling, the sales pitch, sales reports, sales letters, donor recruitment and development, community fundraising, and legal and ethical issues in sales and fundraising.

Prerequisites: None

Corequisites: None

#### SPRT305 Psychology of Coaching (Min SH: 3, Max SH: 3)

A comprehensive overview of the coaching profession and the coach-athlete relationship. Emphasis is placed on high school and intercollegiate level sport with consideration given to coaching youth and recreational sport programs. The course will be an application of current research findings and principles as they relate to coaching.

Prerequisites: None

Corequisites: None

#### SPRT317 Evaluation in Sport Management (Min SH: 3, Max SH: 3)

Intended for future professionals in the field of Sport Administration, the course utilizes evaluation theories, models, methods and competencies. Emphasis is placed on the practical application of the evaluation process which will focus upon sport organization (public and private) programs and personnel within a sports organization.

Prerequisites: ( SPRT106 AND SPRT223 )

Corequisites: None

#### SPRT318 Advanced Theory and Application of Sport and Exercise Psychology (Min SH: 3, Max SH: 3)

An advanced study and application of the psychological aspects of sport and exercise. this course will integrate theories, principles and models of sport and exercise psychology with an emphasis on current research findings. Analysis and discussion of recent research will include the effects of psychological variables on performance in sport and exercise settings, as well as consideration of application in other domains.

Prerequisites: None

Corequisites: None

SPRT321 Management and Leadership of Sport (Min SH: 3, Max SH: 3)

An in-depth analysis of the sport industry with special emphasis given to the sport manager's roles and functions. Students will also conduct an in-depth analysis of planning, organizing, leading, and controlling as they apply to the sport managers and leaders in a sport organization.

Prerequisites: None

Corequisites: None

SPRT323 Sport and Society (Min SH: 3, Max SH: 3)

An examination of the role of sport in North American culture and in a global context. The pervasiveness of sport in all areas of society will be investigated from a sociological perspective. Analysis of issues impacting informal, organized and professional sports will be considered. Attention will be given to the common characteristics within sport and society, including societal values, social problems, politics, education, social class, gender, disabilities, mass media, and race.

Prerequisites: None

Corequisites: None

SPRT324 Sport Law and Ethics (Min SH: 3, Max SH: 3)

An examination of legal and ethical issues related to sport. This course will analyze relevant laws, policies, and court cases and the rights of those involved in sport including participants, spectators, and managers.

Prerequisites: None

Corequisites: None

SPRT332 Sport Marketing Management (Min SH: 3, Max SH: 3)

Designed to provide the student with knowledge pertaining to sports marketing and its various aspects including: pricing, promotion, sponsorships, endorsements, research, and licensing.

Prerequisites: None

Corequisites: None

SPRT335 Sport Management and Community Relations (Min SH: 3, Max SH: 3)

An analysis of the various relationships between a sport administration department (public or private, high school or college) and the community in which it is located. Emphasis will be placed on the practical application of concepts, principles and practices between an educational institution and community associations and the role of the sport administrator.

Prerequisites: None

Corequisites: None

#### SPRT337 Governance of Sport (Min SH: 3, Max SH: 3)

An examination the structure and procedure of international, professional, amateur, collegiate, interscholastic, and other sport governing agencies. Students will develop a critical perspective of various sport governing agencies' authority and functions; requirements necessary to become a member of the sport league/organization; rules and regulations of each sport governing body; and current issues and future trends for each governing agency.

Prerequisites: None

Corequisites: None

#### SPRT340 Sport Media Communication Relations (Min SH: 3, Max SH: 3)

An examination of the interrelationship between sports and media in today's society. This course draws on theories of rhetoric and social criticism by examining media's role in telling the story of sports and, in telling that story, shaping and reinforcing cultural values. The course will utilize various broadcasts, print, and electronic media to examine how they are vital to the success of the sport organization.

Prerequisites: None

Corequisites: None

#### SPRT350 Sport Management Field Participation (Min SH: 3, Max SH: 3)

Designed to explore career interests and develop professional skills. The course provides first-hand exposure to a sport administration setting. The student will be exposed to a variety of sport administration tasks which may includes sales, sponsorship, fundraising, event planning, marketing, community and public relations, and sports media and information. Experiences may take place in public and private organizations, schools and athletic settings.

Prerequisites: ( SPRT106 AND SPRT223 ) OR ( SPRT106 AND SPRT223 )

Corequisites: None

SPRT401 Sport Facility Management and Operation (Min SH: 3, Max SH: 3)

An examination of the role of sport that will allow students to learn the factors involved in obtaining, running, building, and managing sporting events. Students will also learn the guidelines for designing, constructing, maintaining, scheduling, and managing a sport facility.

Prerequisites: ( SPRT321 AND SPRT323 AND SPRT324 )

Corequisites: None

SPRT402 Sport Business Finance (Min SH: 3, Max SH: 3)

Designed to provide a detailed examination of the relationship between sport and corporate sponsorship. Topics covered will include the theoretical premise of sponsorship, alignment marketing, strategic communication through sponsorship, determining value of a sponsorship, and evaluation of sponsorship activities. Perspectives from the event holder (i.e., property) offering a sponsorship and from the organization functioning as the sponsor will be considered.

Prerequisites: ( SPRT106 AND SPRT208 AND SPRT223 AND SPRT233 AND SPRT321 AND SPRT323 AND SPRT324 AND SPRT332 AND SPRT335 AND SPRT337 AND SPRT340 AND SPRT350 ) OR ( SPRT106 AND SPRT223 AND SPRT233 AND SPRT305 AND SPRT321 AND SPRT323 AND SPRT324 AND SPRT332 AND SPRT335 AN

Corequisites: None

SPRT450 Sport Management Professional Field Experience (Min SH: 12, Max SH: 12)

Provides students with the opportunity for on-the-job experience in a sport administration setting. Students will work under the supervision of a professional in the field and be exposed to a variety of sport administration tasks which may include sales, sponsorship, fundraising, event planning, marketing, community and public relations, and sports media and information. Experiences may take place in public or private organizations, schools and athletic settings.

Prerequisites: None

Corequisites: None

SPRT465 Organization and Administration of Sport and Athletic Programs (Min SH: 3, Max SH: 3)

An examination of the organizational philosophy and management requirements of sport and athletic programs. Students will be guided in the preparation of position papers, research



reports, and presentations with the intent of providing realistic pre-professional experiences in the field. Amateur, professional, public, private and voluntary sport settings will be discussed.

Prerequisites: ( SPRT106 AND SPRT223 )

Corequisites: None

#### SPRT498 Sport Studies Seminar (Min SH: 3, Max SH: 3)

An analysis and/or comparison of topics related to sport studies within a framework provided by the instructor. Examples include, but are not limited to, contemporary issues in sport studies, a comparative global analysis of sport governance systems, sport studies issues related to economic, social and other factors, sport studies issues of special interest, and emerging technologies in the area of sport.

Prerequisites: None

Corequisites: None

#### SSED119 First Year Seminar for Social Studies Education Students (Min SH: 1, Max SH: 1)

An introduction to the underpinnings of social studies education at the secondary level for future social studies teachers. The course guides students through their Stage I Teacher Education requirements and early field experience tasks and addresses topics taught in generic freshman seminars. Must be taken by all Citizenship Education majors

Prerequisites: None

Corequisites: None

#### SSED210 Secondary Education: Methods of Teaching Social Studies I (Min SH: 3, Max SH: 3)

An integrated approach to teacher preparation in the secondary school setting designed to help teacher candidates learn to construct developmentally appropriate, challenging learning experiences in the social studies. This course is the first of a two-course sequence, focused on understanding the learning environment and the social studies discipline, fostering professionalism, and developing the necessary teaching and assessment methodologies. Structured field experiences are a key component of the course.

Prerequisites: ( PSYC103 )

Corequisites: None

#### SSED316 Secondary Education: Methods of Teaching Social Studies II (Min SH: 4, Max SH: 4)

An integrated approach to teacher preparation in the secondary school setting designed to help teacher candidates learn to construct developmentally appropriate, challenging learning experiences in the social studies. This course is the second of a two-course sequence, focused more closely on the application of teaching and assessment methodologies in the classroom environment. Structured field experiences are a key component of the course.

Prerequisites: SSED210

Corequisites: None

#### SSED415 Student Teaching and Practicum Secondary 1: Social Studies (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### SSED416 Student Teaching and Practicum Secondary 2: Social Studies (Min SH: 7, Max SH: 7)

Student teaching provides the capstone experience for preservice teachers. Two student teaching experiences are provided at two levels (appropriate to certification areas and grade level ranges). Supervised practice in classrooms with certified teachers introduces the student to all aspects of the teaching day. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: None

Corequisites: None

#### SSED493 Student Teaching and Professional Practicum I: Secondary Ed Social Studies (Min SH: 6, Max SH: 6)

A capstone experience for pre-service teachers through student teaching experiences in social studies classrooms in grades 7-12. Supervised practice in classrooms with certified teachers and regular practicum sessions introduce the student to the range and scope of a professional educator's responsibilities. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: ( SSED316 )

Corequisites: None

SSED494 Student Teaching and Professional Practicum II: Secondary Ed Social Studies (Min SH: 6, Max SH: 6)

A capstone experience for pre-service teachers through student teaching experiences in social studies classrooms in grades 7-12. Supervised practice in classrooms with certified teachers and regular practicum sessions introduce the student to the breadth and depth of a professional educator's responsibilities. University professors supervise the student teachers and conduct weekly practicum sessions.

Prerequisites: ( SSED316 )

Corequisites: None

THEA110 Theatre: An Orientation (Min SH: 3, Max SH: 3)

Provides an introduction to theatre. It includes definitions and analysis of theatrical art and plays. Students will explore the relationship between theatre, the culture from which it came and the roles of theatre practitioners.

Prerequisites: None

Corequisites: None

THEA134 Acting 1 (Min SH: 3, Max SH: 3)

The study and practice of the fundamental principles of acting. Stress is placed on the use of the body and voice as the basis of effective acting. This course is for those interested in acting as an art form and as a means of creative expression. At mid-term students will have gained the necessary skill to perform scenes for their classmates. Attendance is key to the successful completion of this course.

Prerequisites: None

Corequisites: None

THEA137 Creative Dramatics (Min SH: 3, Max SH: 3)

Sequenced experiences and exercises in creative drama and improvisation for developing and refining bodily movement, characterizations, and organic reaction. Through structured theatre games and problem solving situations, participants acquire theatrical skills and disciplines

without conscious attention. Students will participate in as well as direct creative and dramatic exploration and play making.

Prerequisites: None

Corequisites: None

#### THEA188 Stage Make-Up (Min SH: 3, Max SH: 3)

Fundamental training in the principles of stage make-up design and application for the actor as well as the make-up artist. Students will focus on the analysis of dramatic characterization of a role in a play. Students will engage in the design and application of stage make-up to achieve the physical fulfillment of that analysis. Special attention is paid to modern make-up media and methods employed in today's stage, screen and television productions.

Prerequisites: None

Corequisites: None

#### THEA328 Seminar-Humanities (Min SH: 3, Max SH: 3)

Humanities seminar.

Prerequisites: None

Corequisites: None

#### THEA335 Directing (Min SH: 3, Max SH: 3)

The preparation of the theatrical director; the fundamental elements of play direction; the media of the director; composition, picturization, movement, rhythm, pantomime, rehearsal and production procedures. Students will be responsible for directing scenes from dramatic literature. These presentations are a laboratory experience and are designed to measure students' understanding of the basic principles of stage direction.

Prerequisites: ( THEA117 ) OR ( THEA121 ) OR ( THEA134 ) OR ( THEA137 ) OR ( THEA150 ) OR ( THEA188 ) OR ( THEA222 ) OR ( THEA236 ) OR ( THEA110 )

Corequisites: None

#### THEA366 Stage Costume Design (Min SH: 3, Max SH: 3)

A course designed to give the student fundamental training in the theory and practice of theatrical costume design and construction.

Prerequisites: ( THEA150 ) OR ( THEA110 )

Corequisites: None

VAPA119 First Year Student Seminar (Min SH: 1, Max SH: 1)

Designed to introduce students to the culture and mission of the university within the context of Visual and Performing Arts. Students are encouraged to explore the purpose of a college education and provided an opportunity to engage with an academic discipline. Students are introduced to learning strategies and study skills. Class discussion, students engage in active learning, common co-curricular activities, service and/or civic opportunities are incorporated to promote connection with fellow students, faculty, university and the community.

Prerequisites: None

Corequisites: None

WMST101 Introduction to Women's Studies (Min SH: 3, Max SH: 3)

An interdisciplinary introduction to the social construction of gender and the interconnections between gender, race, and power in the lives of women of all races, classes, sexual orientations, ages, and abilities. Using diverse cultural, transnational, and feminist perspectives, students will examine such issues as class, race, sexuality, identity, the media, and violence to seek strategies that will help create more egalitarian societies.

Prerequisites: None

Corequisites: None

WMST110 Introduction to LGBTQ Studies (Min SH: 3, Max SH: 3)

Introduces the topics of sexual orientation and gender identity, focusing primarily on the lives of people who are lesbian, gay, bisexual, transgender, queer, or questioning and how their lived experiences differ across the world.

Prerequisites: None

Corequisites: None

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