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USING THIS GUIDEBOOK

There are several uses for the 2024-2025 Guidebook for Undergraduate Students. Exploratory students use this text along with guidance from their faculty advisor to understand their abilities, values, and interests and select the major and career path that's right for them. Currently declared students searching for a minor or considering a major change use the Guidebook to explore their major and minor options. Faculty advisors use the Guidebook as an advising reference when meeting or preparing to meet with students.

Regardless of how you use this Guidebook, you’ll find answers to many of your questions in these pages, such as:

- Important university policy information
- General Education requirements
- Explanations of Placement Testing and Foreign Language requirements
- Information about Study Abroad
- A listing of all majors and minors offered here at Shippensburg University
- Details of all programs of study, including registration tips, prerequisites, and declaration requirements

While this Guidebook contains a profusion of academic policies, listings and requirements, the University’s official record of academic programs and requirements is provided in the 2021-2023 Undergraduate Catalog which can be found at: https://www.ship.edu/academics/academics-resources/catalog/undergraduate_catalog/

We wish you a very happy and successful year, and we know you will find the 2024-2025 Guidebook for Undergraduate Students informative and helpful.

Sincerely,
The Department of Academic Engagement & Exploratory Studies (AEES)

Disclaimer: This guidebook may be subject to change. For the most recent version, please visit ship.edu/exploratory/.
ACADEMIC CALENDAR 2024-2025

Fall Term 2024

Fall Welcome Week Kick off Thursday August 22
Classes Begin Monday August 26
Add/Drop Period Ends Tuesday September 3
Fall Break, No Classes Monday-Tuesday October 11-15
Withdrawal Period Ends Monday November 4
Thanksgiving Break Wednesday-Friday November 27-December 1
Last Day of Classes Friday December 6
Final Exam Week Monday - Friday December 9-13

Winter Term 2024

Session Opens Monday December 16
Session Ends Friday January 17

Spring Term 2025

Classes Begin Tuesday January 21
Add/Drop Period Ends Tuesday January 28
Spring Break Monday - Friday March 10-14
Withdrawal Period Ends Tuesday March 25
Last Day of Classes Friday May 2
Final Exam Week Monday - Friday May 5-9
POLICIES, PROCEDURES AND GENERAL INFORMATION
ACADEMIC POLICIES AND PROCEDURES

First Day Attendance
If you are unable to attend the first class session of a course in which you plan to remain enrolled, you must give notice of your intended absence to the instructor, academic department secretary, or academic dean’s office of that course. Failure to provide such notification may result in your name being removed from the roster by the instructor and your place in that class being given to another student. If you do not attend the first day of class, you cannot assume, however, that you have been dropped from this class. It is your responsibility to verify your enrollment status by checking your schedule on your myShip portal.

Credits in the First Year
The normal semester hour workload varies between 15 and 18 credit hours. Students with less than 12 credit hours are classified as part-time. To take more than 17 credit hours in a semester, you must have the approval of your academic dean. If you schedule 19 or more credits, you must pay an additional per-credit fee (see Student Accounts for more information). Freshmen may not take more than 17 credit hours during their first semester.

Transfer Courses
If a transfer student is admitted, the Dean of the appropriate college will evaluate the student’s transcript to determine the amount of transferable credits. In general, a grade of C or better is required for transfer credit to be accepted. The transfer credit will appear on the student’s transcript with a grade of TR and will not be used in calculating QPA.

For admitted students who wish to take courses at another college or university for transfer back to Shippensburg University, it is advised they refer to the course equivalency page. Transfer credit will not be awarded to replace a D or F grade earned at Shippensburg University. For additional information, please contact your advisor.

Withdrawal from a Class
Courses may be added or dropped without penalty or record notation during the official schedule adjustment period. The drop/add period extends to the eighth calendar day in a typical semester, excluding holidays, to adjust schedules. Dates for this schedule adjustment period will be announced by the Registrar’s Office.

You may withdraw from a class through the tenth week of the semester subject to the restrictions listed here. Requests for withdrawals may be initiated through myShip during the spring and fall semesters by full-time undergraduate students who have attended the university at least one spring or fall semester previously and who have not applied for graduation. All other requests for withdrawals must be initiated through your advisor. Following the initial schedule adjustment period, any courses from which you withdraw will remain on your academic record and will be assigned a grade of W. Please note that once a student withdraws from a class, the class cannot be re-added to the student’s schedule.

You should carefully consider the ramifications before you withdraw from a course. If withdrawing from a course causes you to drop below 12 credit hours for the semester, you will be considered a part-time student, which may jeopardize financial aid, athletic eligibility, health insurance, and residence hall status. You should consult with your academic advisor, athletic coach and/or the Financial Aid Office before you withdraw from any course.

Should you withdraw from any course, it is your responsibility to do so officially, whether or not you have ever attended that class. If you do not attend and do not withdraw, your name will remain on the class roll until the final grading period and you will receive a grade of F for the course.

Registering for Classes
Current students may register for classes at the university during the registration period held each semester for the next semester or during official schedule adjustment periods. You must meet with your advisor to obtain your registrationPIN. New students (freshmen and transfers) are assigned a schedule prior to the beginning of their first term.
Minimum Academic Standards
Students admitted to the university are expected to maintain satisfactory academic standing, which requires a cumulative quality point average (QPA) of 2.0 (C) or better in their total program of courses and minimum 2.0 in the course work of their major areas of specialization.

Students who do not meet the required quality point average may be granted one probationary semester in which to raise their average. Students who show academic progress, i.e., greater than a 2.0 semester QPA, may be continued on academic probation.

Repeating Classes
Students may avail themselves of the repeat/grade replacement option a total of six times. Grade replacement of a repeated course is not limited to courses in which D and F grades were originally earned. However, the most recent grade of the course will be used in the QPA calculation, regardless of whether that grade is higher or lower. If you repeat a passed course and fail, you will lose both the quality points and the credits you had previously earned. A single course repeat for grade improvement will be limited to two times. The six repeats may include repeating six courses one time each, repeating three single courses two times each, or any combination which adds up to six instances where a single course is not repeated more than two times. After the sixth repeat instance, any additional course repeats will include both the previous and new grade in the QPA calculation.

Prior to any student athlete and/or any student with financial aid utilizing the repeat option, the student should ensure it will not jeopardize their status as a student athlete or their ability to receive financial aid.

A previously failed course may not be repeated through an online course.

A D or F grade earned at Shippensburg University may not be made up or replaced by credits earned at another institution of higher learning for the same course.
ADVISING FOR FINANCIAL AID SUCCESS

Free Application for Federal Student Aid (FAFSA)
The FAFSA opens each year on October 1st and is free to file each year. The Financial Aid office offers workshops each semester for students who need training and/or assistance with the process. All students who file the FAFSA, and are enrolled in 6 or more credits a semester, are eligible for loan interest loans (Stafford Loans). Depending on the student’s calculated financial need, some students, may also be eligible for federal grants (Pell Grants). For more information about the FAFSA visit http://www.fafsa.gov.

Pennsylvania residents who file the FAFSA prior to May 1st are also eligible for the Pennsylvania State Grant. Visit http://www.pheaa.org for more information.

Satisfactory Academic Progress (SAP)
SAP is defined as sufficiently moving towards successful completion of degree requirements. At the end of the fall, spring and summer sessions, the Financial Aid office reviews each student’s progress in the following ways:

Cumulative Grade Point Average
By the end of each term, the student must maintain the following minimum, cumulative GPA
• Terms 1 through 3: 1.7
• Term 4 until graduation: 2.0

Percentage of Credits Earned (PACE)
Students must successfully complete (earning a final grade of D or higher) 67% of the classes that they attempt. Dropped courses do not count in this calculation, however withdrawn courses count as courses attempted but not completed.

Maximum Time Frame
Students may not attempt more than 150% of the number of credits needed to graduate. Most Shippensburg undergraduate degrees are 120 credits. Students must complete their degrees before earning a total of 180 credits.

Pennsylvania State Grant Recipient SAP Requirements
Students receiving the PA State Grant must earn 24 NEW credits for full-time students (12 NEW credits for part-time students) each academic year to remain eligible for the Grant. While their is no specific GPA or PACE requirement, students who successfully complete less than 24 credits per year are at risk of losing this Grant.

Repeats of courses in which the student earned a final grade of D do not count as new credits. For example: a repeated math course in which student earned a D in order to meet the minimum pre-requisite grade of C does not count as new credits and in some cases the student will need to complete additional new courses in order to meet the SAP requirements.

The Summer term may be used to earn deficient credits after the Fall/Sprint review for the next academic year.

For more information about the University’s SAP policy visit: https://www.ship.edu/paying/financial-aid/sap/

Satisfactory Academic Progress (SAP) Non-Compliance
All students in non-compliance are emailed following SAP review and are given one warning term to get back into SAP compliance. If they are still not meeting SAP, they are emailed a notification that they are not eligible for aid.

Students may continue taking classes but they must secure a private loan or pay out of pocket until they meet SAP requirements. Students with unforeseen circumstances may submit an appeal which comprises the Appeal Form, a written statement explaining their situation and plan to meet SAP in the future and 3rd party documentation substantiating their appeal.

If the student’s appeal is granted, students are required to meet with their faculty advisor to complete an academic plan in which the two calculate and document a plan semester-by-semester for the student to meet SAP requirements. Adhering to the terms of this plan allows the student to continue receiving aid each semester.

For more information on these topics and specific answers to individual situations, visit https://www.ship.edu/paying/financial-aid/
call: 717-477-1131
or email: finaid@ship.edu
QUICK ANSWERS TO COMMON QUESTIONS

What if I take fewer than 12 credits?
The normal semester hour workload varies between 15 and 18 credit hours. Students with less than 12 credit hours are classified as part-time. It is extremely important when earning less than 12 credits you consult with the Financial Aid Office and Athletic Department regarding your eligibility.

What if I become ill and cannot complete the semester’s coursework?
You may be allowed to withdraw from all your classes with grades of W if you provide your academic dean with clear medical evidence you are unable to continue your coursework. It will be the determination of the dean whether this evidence is substantial enough to merit a medical withdrawal. Notification of a medical withdrawal must be received by the academic dean prior to the end of the current semester. Medical withdrawals are not permitted after the semester ends. If you receive a medical withdrawal, you will be eligible for a refund only if your withdrawal occurs within the time period normally allowed for refunds. Students may also request the grade of an I (incomplete) if they have successfully completed a majority of the work for the course. Being awarded an I is a privilege not a right of the student and the decision to grant an incomplete grade rests solely with the course instructor.

Is class attendance mandatory?
At Shippensburg University, your participation in class is viewed as essential to the teaching/learning process. Therefore, it is expected you will miss classes infrequently and only for good reason. Each instructor will state the course requirements including attendance expectations as part of the clearly written course information distributed at the beginning of each semester. An instructor must make provision for excused absences. However, if you elect to be absent from a class without being excused, you may not be provided a makeup opportunity for any graded activity that takes place at that session.

What if I am late for class?
Sometimes circumstances will prevent a student from attending class on time, but being habitually late to class is both rude and inconsiderate. Some professors deduct points for lateness or lock the classroom door to prevent you from interrupting.

What grade point average will place me on academic probation?
To remain in good academic standing, a student must maintain a minimum cumulative grade point average of 2.0 ("C"). Anything less will result in probation.

Can I take courses at another university to improve my grade point average?
Transfer credits will appear on the student’s transcript with a grade of TR and will not be used to calculate QPA.

If I earn a “D” or an “F” grade in a course at Shippensburg University, can I repeat it at another university?
If a student has earned a D or F grade in a course at Shippensburg University and wishes to earn a higher grade, the course must be repeated at Shippensburg University.

Should I always repeat courses when I have earned “D” or “F” grades?
Students may be required to repeat a course in which they’ve earned a D or F grade if the course is developmental or if it counts toward the student’s major requirements. Otherwise, it is recommended that students who want to improve their grade point average repeat a course in which they’ve earned a D or F as soon as possible. Shippensburg University’s policy allows a student to repeat (and replace) six grades with the newer grade; however, after this option is used six times, any subsequent repeats will include both grades in the grade point average. Check with Financial Aid and/or your advisor before repeating courses.

Will I receive any recognition for outstanding academic performance?
A dean’s list is published at the end of each semester to recognize students who earn at least a 3.5 or better. In addition, students who consistently perform at the highest levels are given special recognition at the end of each academic year.

How much time should I devote to studying?
It is important for first-year students to learn early in their collegiate career that efficient time budgeting requires
painsstaking systematic planning. The resulting time schedule must be both realistic and practical; that is, it must be sufficiently flexible to handle changing requirements and be adequately balanced between academic work and recreation. Studies show that college students who are taking five (5) courses should study at least 30 hours a week outside of the classroom in order to be academically successful.

Where should I go for academic advice?
Every Exploratory Studies student will be assigned an advisor from the Department of Academic Engagement and Exploratory Studies. Students who do not know their assigned advisor should access their myShip portal or contact their department.

When are Exploratory Studies students required to declare a major?
Exploratory Studies students are advised to declare no later than their third semester.

What steps must I follow to declare a major?
Declaring a major is a simple process. You should follow these steps:
1. Make sure you are in good academic standing. In all cases, students need a minimum cumulative GPA of at least a 2.0. Competitive majors require a higher GPA.
2. Talk to your advisor about your plans.
3. Verify requirements for the major with your advisor.
4. Certain majors have course requirements in addition to GPA standards. Some departments conduct pre-screenings. They may also require student submit additional forms and complete certain courses before they are considered and accepted as majors.

Please note certain majors only accept students by certain deadlines in the semester.

What is a minor?
An academic minor is a structured group of courses that can enhance your educational experience. It usually consists of 18-26 credits from one or more disciplines outside the student’s major. It is possible to have more than one minor, but only six credits from one minor may count toward the fulfillment of another. Shippensburg University offers over 30 different minors. Students should consult the catalog for details and consult with their advisor about declaring a minor.

Am I eligible for the Satisfactory/Unsatisfactory option?
If you have completed at least one academic year (30 semester hours) at Shippensburg University and are maintaining a cumulative QPA of 2.5 or better, you may schedule up to a maximum of three credits (or one four credit course) per semester under the satisfactory-unsatisfactory option. Transfer students with more than 30 semester hours accepted in transfer may adopt the satisfactory-unsatisfactory option for their first semester at Shippensburg.

You may adopt or rescind the satisfactory-unsatisfactory option during the first two weeks of the regular fall or spring semester. No changes may be made after the deadline. Only full-time students are eligible.

The maximum number of credits you may schedule under the satisfactory-unsatisfactory option while attending Shippensburg University will not exceed ten. Only courses taken outside your major and/or minor field may be scheduled on the satisfactory-unsatisfactory basis.

Grades received from courses taken on the satisfactory-unsatisfactory basis will not be used in determining the cumulative quality point average. If you receive a grade of S, the credits earned will be recorded toward graduation requirements; however, no credit will be earned if a grade of U is assigned.

You may not schedule more than one course on a satisfactory-unsatisfactory basis in a given department or in a required sequence of course offerings within a major. The five required courses for the General Education Program, Foundations Courses may not be taken on a satisfactory-unsatisfactory basis.

Are foreign language courses required?
Students enrolling in BA degree programs at Shippensburg University must meet a language requirement for graduation. Students who have successfully completed three years or more of any one foreign language in high school have met the language requirement. The requirement can also be met through AP testing, CLEP or the university placement test combined with the department oral test. Students with no previous knowledge of a foreign language must begin with the introductory level and complete three courses in that language. All others will take the university placement test. For more information, see page 15.
Shippensburg University's General Education Program requires students to take various courses to develop certain skills and competencies. The mission of the Shippensburg University Testing Center is to determine whether or not students are adequately prepared to succeed in their General Education courses. The Testing Center determines the level of proficiency by testing Math and Writing (English). Also provided is an optional Reading test for students who are required to take Literacy for the 21st Century and wish to challenge their placement in that course.

Registering for Placement Tests
To register for placement testing, new students should check their myShip portal and/or visit apply.ship.edu/portal/placement. Transfer students will receive an email if testing is required.

Reading Placement Process
Students will be placed into ACEX 120 if they meet both of the following criteria: a high school GPA of 2.5 or less and a score of 37 or below on the adapted MARS! SU College Reading Survey. This survey is administered through Slate Platform and the results are updated in Banner and SSC.

ACEX 120 Academic Literacies for the 21st Century is in response to several under-preparedness and equity concerns in meeting the educational and reading needs of students. This course has been approved as a general education course. 60% of the course enrollment will be reserved for students gaining entry through the aforementioned screening process. The remainder of course enrollment will be open to the regular student body.

Additionally, a student can take ACEX 120 to replace a RDG 050 D, F, or W grade. A student with a Reading Placement Score of “1” will be required to complete ACEX 120.

Math Placement Process
Some students are required to complete Math Placement Testing before they can schedule a Math course. If you have no SAT-Math or ACT-Math score, or if your score is too low, you may have to complete testing. If you have no prior high-level Mathematics coursework, or if your performance in prior courses was insufficient, you may have to complete testing. Testing is conducted using the ALEKS PPL system and you may be able to complete testing using your home computer.

Your Math Placement Level and your major (or intended major) determines which Math course(s) you can take (see next page for details). Students at lower levels majoring in STEM, Business, or middle-level education are encouraged to complete testing to improve their level, saving money and staying on track for graduation.

Writing (English) Placement Testing
All new students without college level English/Writing courses are required to take the English Writing Self-Assessment survey. The English Placement Survey will help determine the best writing class for you, based on your own background and abilities as a reader and writer. As you complete the survey, you'll reflect on your own experiences and level of comfort with the kinds of writing you will do in college classes.

After you complete all three parts of the survey, you'll see your survey score, along with descriptions of the courses you can choose from, ENG 113 or ENG 114. You must complete all questions in all three parts to see your score and submit the survey.

You should carefully consider which course you will be most successful in, based on your score. If you decide on an English course that is different from the one your score suggests, you'll be contacted by the Director of Composition to discuss your decision and confirm your course, the choice is ultimately up to you.

For more information about placement testing, visit ship.edu/testing/.
# MATH PLACEMENT LEVELS

<table>
<thead>
<tr>
<th>Placement Level</th>
<th>ALEKS Score</th>
<th>STEM Majors</th>
<th>Business Majors</th>
<th>Students Needing Statistics</th>
<th>Elementary Education Majors</th>
<th>Students Needing a “Q” Tag</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>0-25</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 105 Math for Liberal Studies</td>
</tr>
<tr>
<td>2</td>
<td>26-30</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 100 Introductory Algebra</td>
<td>MATH 105 Math for Liberal Studies -or- MATH 107 Math Models Applied to Money</td>
</tr>
<tr>
<td>3</td>
<td>31-40</td>
<td>MATH 140 College Algebra</td>
<td>MATH 140 College Algebra</td>
<td>MATH 117 Fundamentals I</td>
<td>MATH 110 Math for Liberal Studies -or- MATH 107 Math Models Applied to Money</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>41-57</td>
<td>MATH 175 Precalculus</td>
<td>MATH 181 Applied Calculus</td>
<td>MATH 117 Applied Stats</td>
<td>MATH 105 Math for Liberal Studies -or- MATH 107 Math Models Applied to Money</td>
<td></td>
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<tr>
<td>5</td>
<td>58-75</td>
<td>MATH 211 Calculus I</td>
<td>MATH 181 Applied Calculus</td>
<td>MATH 117 Applied Stats</td>
<td>MATH 105 Math for Liberal Studies -or- MATH 107 Math Models Applied to Money -or- MATH 117 Applied Stats</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>76-100</td>
<td>MATH 211 Calculus I</td>
<td>MATH 181 Applied Calculus</td>
<td>MATH 117 Applied Stats</td>
<td>MATH 105 Math for Liberal Studies -or- MATH 107 Math Models Applied to Money -or- MATH 117 Applied Stats</td>
<td></td>
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</tbody>
</table>

**Advising Notes:**
1. A “STEM major” is any SU major requiring MATH 211 Calculus I.
2. MATH 110 Fundamentals of Mathematics I is only available to Education majors.
3. Quantitively-minded students in majors that require Applied Statistics and who place at level 5 or higher may be encouraged to consider MATH 217 Statistics I instead of MATH117.

**Additional Notes:**
- Math requirements for Middle-Level Education majors vary according to their concentration. Contact the Teacher Education department for more information.
- Math Placement Level 6 is required to declare Computer, Electrical, Mechanical, or Civil Engineering.
FOREIGN LANGUAGE REQUIREMENTS FOR B.A. DEGREE PROGRAMS

Students enrolling in BA degree programs at Shippensburg University must meet competency requirements in one foreign language before graduation.

Students who have successfully completed three years or more of any one foreign language in high school have met the language requirement. The requirement can also be met through AP testing, CLEP, or the university placement test combined with the department oral test.

Students with no previous knowledge of a foreign language must begin with the introductory level (101) and complete three courses in that language. All others will take the university placement test. French, German, and Spanish 101/102/103 will complete the requirement sequence based on placement.

Students with three or more years of a language who want to take the same language as a General Education course or free elective will be placed at the 103 or 200 level, according to their test results and the number of years they've studied the language in high school.

If you have questions, please contact the Department of Global Languages & Cultures at dwwildermuth@ship.edu.

<table>
<thead>
<tr>
<th>Years of Same Language Taken in High School</th>
<th>Appropriate College Level (All Languages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td>1</td>
<td>102</td>
</tr>
<tr>
<td>2</td>
<td>103</td>
</tr>
<tr>
<td>3 or more</td>
<td>BA Requirement satisfied or 200/204 as Category B or Interconnections Course.</td>
</tr>
</tbody>
</table>
STUDY ABROAD AT SHIPPENSBURG UNIVERSITY

Plan now to study abroad
One of the advantages of attending Shippensburg University is the ease with which you can study abroad. New friends and experiences await you in Australia, England, France, Ireland, South Korea, Spain, New Zealand, and elsewhere across the world.

Why plan now to study abroad?
Some advance planning is necessary in terms of courses you take here and courses you reserve for studying abroad. General Education courses work really well abroad. A very good reason to study in countries such as Italy, Sweden, or Korea is so that you can take courses unique to that region. Many courses in your major may be taken abroad as well. Language students find it essential for them to study their language in their native region.

What are the requirements?
You need a minimum 2.5 GPA, although many institutions have requirements beyond this. SU also requires students to earn 30 SU credits before going abroad and to be in good standing at the university. All schools and programs require that you complete one year of college before going abroad. You can apply after your first semester, but you must finish one year here before you can travel abroad. Transfer students are advised on an individual basis.

When do students study abroad?
Study abroad used to mean one semester during your junior year of college. Today, students can choose a time frame that works with their college career. Semester-long programs are most popular, but some students select an academic year (actually 8 months or so) because they find one semester is not enough. Spending two semesters abroad enables you to reap all the benefits of the program. It also gives you more time to travel and to make friends. For those unable to spend a semester or a year abroad, summer and winter break programs are also available. These programs can last for 3, 6 or even 9 weeks.

Where will I live?
Housing options vary by location but will be worked out prior to your departure. In some locations, students reside in university apartments or guesthouses. These accommodations typically provide single bedrooms within a shared apartment that includes a kitchen, bathroom, and living room. In other locations, students reside with host families that are pre-screened by the program overseas. In most locations, meal plans are not purchased but students will rather purchase groceries and cook for themselves or if residing with a family, the family provides 2-3 meals daily.

How much will it cost?
The cost of studying abroad varies depending on location. There are also exchange programs for particular majors, where you pay tuition here and study elsewhere. Special scholarships are available for those who qualify, and nearly all financial aid can be applied to studying abroad. It is open to all majors, credit transfer is guaranteed in advance, and it will not delay your graduation if you plan accordingly.

What are the benefits of study abroad?
Studying abroad allows you to do many things. You are able to take classes towards your degree while experiencing a new culture and in some cases, exposure to a new language. While overseas, you can travel during your free time and take advantage of local cuisine, festivals, and highlights in the city in which you reside. Employers are also impressed with students who study abroad because it shows they are adaptable, globally minded, and not afraid to step outside of their comfort zone.

How do I get started?
Please call 717-477-1279 or stop by the International Programs Office in the Student Success Center, Mowery Hall Rooms 212-210 and schedule an appointment. Information is also online at ship.edu/international.
TURNING ACADEMIC PROBATION INTO SUCCESS

Students who earn less than a 2.0 (“C”) cumulative GPA are placed on academic probation. Being on probation risks continued Federal Financial Aid funding and continued enrollment at Shippensburg University.

If you find yourself on academic probation, please use all available resources on campus, including your faculty advisor, to turn academic probation into success. You will be less likely to face dismissal and more likely to increase your GPA by engaging in the following proactive behaviors:

**Repeat courses in which you earn “F” grades.**

Students try to put off repeating “F” grade courses until the summer session. Unfortunately, if your grades are poor in the second semester, the opportunity to register for summer classes may not be available.

Your best course of action is to repeat “F” grade courses as soon as possible. Remember you may only repeat these at Ship.

**Follow the advice of your advisor - not a friend.**

Friends may have good intentions, but they sometimes mis-advice their peers about courses that are easy and appropriate for some, but difficult and inappropriate for others. Thus, you should place only limited faith in course selections suggested by friends.

*Your academic advisor or a departmental faculty member is a far better resource.*

**Seek academic or personal help early in the semester.**

Some students try to succeed on their own and seek help only when the situation becomes particularly grim. This is not the time to be self-reliant; instead, please know there is help available on campus. Using supportive services is expected and encouraged as part of the total academic experience.

**Consider your course load.**

Students on academic probation sometimes benefit from taking fewer credits. After discussing with your advisor, consider taking just 12 credits in your first semester on academic probation. So you stay on track for graduation within four years, remember you can make up the missed credits during winter or summer terms.

**Withdraw from courses within the appropriate time frame.**

Students cannot withdraw from courses past the established deadline. Except for medical emergencies, the last day to drop a course with a “W” occurs during the tenth week of the semester. The deadline is always advertised widely on campus each semester through the deans’ and department offices, as well as on the Ship website. If absolutely necessary, consider withdrawing from a course only within the established period, and only after discussing your intention with your professor and academic advisor.

**Go to class!**

Some students miss classes frequently because they think they have more important things to do. But the more you miss class, the more intimidating you will find class becomes. It’s a self-defeating cycle that results in poor grades and often, academic dismissal. Good students rarely miss class and, if you are on academic probation, you cannot afford to miss any class time.

**Fully participate in AIM.**

The Academic Improvement Plan (AIM) assists students on academic probation in developing strategies and skills that will help them to improve their cumulative grade point average. Learning specialists guide students in the AIM program to help them experience success in college. This structured program is designed to give students skills in studying, self-management, emotional intelligence, and personal responsibility, all of which can help them to improve their academic standing and achieve success in their courses.

Visit the Student Success Center in Mowrey Hall for more information on AIM.

**Visit the Learning Center**

The Learning Center, located on the first floor of the Student Success Center in Mowrey Hall, is the university’s primary site for tutoring services and academic support. Within the center, students are able to select from an array of options that can help them improve their academic performance, writing proficiency, and learning abilities.
Outside the center, students can peruse the Learning Center’s website to obtain information on tutoring options, view virtual workshops, find schedules for face-to-face workshops, access writing and study skills resources, and learn how to schedule an appointment with a tutor or a Learning Specialist.

**Speak to a Librarian.**
In addition to providing library instruction sessions in a wide range of courses, librarians are available at The Ezra Lehman Memorial Library at various times throughout the week for one-on-one consultations that will help you build on the skills you need to be successful at college-level research.

Asking for help at the beginning of an assignment can save you time that might be required in redoing assignments and help you earn a better grade.

Adapted from:
MAJOR AND MINOR REQUIREMENTS
Adding a minor to your program of study is an excellent way to broaden your background and increase your employability. The following minors are offered at Shippensburg University. Consult your academic advisor, the corresponding email address below, or the undergraduate catalog for more information.

<table>
<thead>
<tr>
<th>MINOR</th>
<th>CREDITS/GPA</th>
<th>CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>18 credits/2.0, ANTH 105, ANTH 111, ANTH 121 + 9 credits Anthropology electives at the 200+ level. Six of the nine elective credits must be at the 300-400 level</td>
<td><a href="mailto:kglore@ship.edu">kglore@ship.edu</a></td>
</tr>
<tr>
<td>Art</td>
<td>21 credits/2.0</td>
<td><a href="mailto:art@ship.edu">art@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - ART 101, ART 110, ART 215, ART 218, ART history elective + 6 credits any ART classes **ART 215 – fall only, ART218 – spring only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biochemistry</td>
<td>24-28 credits/2.0</td>
<td><a href="mailto:chem@ship.edu">chem@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - CHEM 301, CHEM 421/422, CHEM 426 - CHEM 496 must be taken concurrently with CHEM 421 **CHEM 121/125, CHEM 122/126, CHEM 221/225, CHEM 222/226 (Course with lab component) to declare</td>
<td></td>
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</tr>
<tr>
<td>Biology</td>
<td>19 credits/2.0</td>
<td><a href="mailto:biology@ship.edu">biology@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - BIOL 161, BIOL 162 + 11 BIOL credits - Elective are to be chosen from courses for Biology majors. At least 2-3 credit-hour courses must be at 300-level or above. Seminar, internship, and research may not be used for the minor. **Completion of BIOL 161 or 162 with “C” or higher to declare</td>
<td></td>
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</tr>
<tr>
<td>Business</td>
<td>18 credits/2.0</td>
<td><a href="mailto:business@ship.edu">business@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - ACCT 200, FINA 311, MGMT 305, MKGT 205 + 6 credits College of Business courses with advisement. Pre-requisite courses: ECON101 or ECON102 or ECON113; MATH 140 or MATH 117 or SAT 550 or higher</td>
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</tr>
<tr>
<td>Chemistry</td>
<td>23-27 credits/2.0</td>
<td><a href="mailto:chem@ship.edu">chem@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - 7 additional CHEM credits at 300/400 level **CHEM 121/125, CHEM 122/126, CHEM 221/225, CHEM 222/226 (Course with lab component) to declare</td>
<td></td>
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</tr>
<tr>
<td>Coaching</td>
<td>19 credits/2.0</td>
<td><a href="mailto:exsci@ship.edu">exsci@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - EXER 220, EXER 244, EXER 325, EXER 340, EXER 343 + 1 elective course from the following EXER 213, EXER 260, EXER 387, EXER 445, COST 225 or SOCI 275. Note: BIO 150, 238, or 350 is a prerequisite for EXER 343; We strongly recommend completing BIOL 150 as a General Education course</td>
<td></td>
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</tr>
<tr>
<td>Communication, Journalism &amp; Media</td>
<td>18 credits/2.3</td>
<td><a href="mailto:commjour@ship.edu">commjour@ship.edu</a></td>
</tr>
<tr>
<td>Required courses (6 credits): COM 111 Media Literacy (also counts as a critical thinking general education course); COM 112 Media Writing. Must pass both courses with a C or higher before taking other CJM classes. Electives: (12 credits) Customize the program to your interests and needs. Students can take any class listed in the major provided they take the required prerequisite/s or get special permission from the instructor for the course. Students can complete a professional concentration (public relations, visual media, broadcast media production or journalism) if they wish to take a specific sequence of classes, too. We also highly recommend COM 245 Diversity &amp; the Media, which is a diversity general education course.</td>
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</tr>
<tr>
<td>Computer Science</td>
<td>23-24 credits/2.0</td>
<td><a href="mailto:compsci@ship.edu">compsci@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - MATH 225, CMSC 110 or SWEN 100, CMSC 111 or ENGR 120, CMSC 310, CMPE 220, and CMSC/CMPE/SWEN at 300+</td>
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<tr>
<td>MINOR</td>
<td>CREDITS/GPA</td>
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<tr>
<td>Creative Writing</td>
<td>18 credits/2.0</td>
<td><a href="mailto:english@ship.edu">english@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - 12 credit hours from ENGL 224, ENGL 307, ENGL 308, ENGL 335, ENGL 427, ENGL 428, ENGL 435; 6 credit hours from any other 300-level English course in Advanced Studies in Literature.</td>
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</tr>
<tr>
<td>Criminal Justice</td>
<td>18 credits/2.5</td>
<td><a href="mailto:crimjust@ship.edu">crimjust@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - CRJU 100, CRJU 309 + choose 2 from CRJU 221, CRJU 41, CRJU 261 + 2 CRJU elective 300/400 level.</td>
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</tr>
<tr>
<td>Data Science</td>
<td>18-21 credits/2.0</td>
<td><a href="mailto:math@ship.edu">math@ship.edu</a></td>
</tr>
<tr>
<td>Start with a statistics class (MATH 217/MATH 375/SCMG 200) and a programming class (CMSC 104/CMSC 110/ENGR 110/ENGR 120/ITAN 240/SWEN 100) before taking MATH 219 - Data Science I (offered in Spring only). The rest of the minor is MATH 317 (Spring only), MATH 319 (Fall only) and one discipline-specific Capstone class.</td>
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</tr>
<tr>
<td>Disability Studies</td>
<td>18 credits/2.0</td>
<td><a href="mailto:disabilitystudies@ship.edu">disabilitystudies@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - DISA 100, DISA 400 + 4 interdisciplinary electives from approved list.</td>
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<tr>
<td>Economics</td>
<td>18 credits/2.0</td>
<td><a href="mailto:economics@ship.edu">economics@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - ECON 101/102 OR ECON 113 + 12-14 credits Economic electives.</td>
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</tr>
<tr>
<td>English</td>
<td>18 credits/2.0</td>
<td><a href="mailto:english@ship.edu">english@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - ENGL 130 + 5 additional ENGL courses, 2 must be at 300/400 level.</td>
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</tr>
<tr>
<td>Entrepreneurship</td>
<td>18 credits/2.0</td>
<td><a href="mailto:ent@ship.edu">ent@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - ACCT 200, ENTR 337, ENTR 433, FINA 311, &amp; MKGT 205 + 1 elective from ENTR 336, MGMT 305, MGMT 370 or MKGT 370.</td>
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</tr>
<tr>
<td>Ethnic Studies</td>
<td>18 credits/2.0</td>
<td><a href="mailto:ethnic@ship.edu">ethnic@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - ETHS 100, ETHS 101, ETHS 102 + 9 additional credits from approved list.</td>
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</tr>
<tr>
<td>Exercise Science</td>
<td>19 credits/2.0</td>
<td><a href="mailto:exsci@ship.edu">exsci@ship.edu</a></td>
</tr>
<tr>
<td>Required courses: EXER 150, EXER 343. Elective options (pick four): EXER 244, EXER 260, EXER 278, EXER 336, EXER 340, EXER 348, EXER 350, EXER 352, EXER 375, EXER 425. Note: BIOL 150, 238, or 350 is a prerequisite for EXER 343; We strongly recommend completing BIOL 150 as a General Education course.</td>
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</tr>
<tr>
<td>French</td>
<td>18 credits/2.0</td>
<td><a href="mailto:french@ship.edu">french@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - FREN 202, FREN 204, FREN 211, FREN 309 + two of the following FREN 380, FREN 392, FREN 400, FREN 411, FREN 490.</td>
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</tr>
<tr>
<td>French Cultural Studies</td>
<td>18 credits/2.0</td>
<td><a href="mailto:french@ship.edu">french@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - FREN 202, FREN 204, FREN 392 + one French course from approved list + two interdisciplinary courses from approved list.</td>
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</tr>
<tr>
<td>Geography-Earth Science</td>
<td>21 credits/2.0</td>
<td><a href="mailto:geog@ship.edu">geog@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - GEOG 100, 200-300 Level Geo/Earth science courses, 400 level Geo/Earth Science Course + 12 credits ESS or GEOG courses by advisement.</td>
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</tr>
<tr>
<td>Geographic Information Systems</td>
<td>18 credits/2.0</td>
<td><a href="mailto:geog@ship.edu">geog@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - GEOG 202, GEOG 363, GEOG 420 + three courses from approved list.</td>
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</table>

24
<table>
<thead>
<tr>
<th>MINOR</th>
<th>CREDITS/GPA</th>
<th>CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>German Studies</td>
<td>18 credits/2.0</td>
<td><a href="mailto:german@ship.edu">german@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - GERM 150 or 151, GERM 203 or 204, GERM 309 or 320, GERM 312 or 313 + two additional 200-400 level electives courses.</td>
<td></td>
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</tr>
<tr>
<td>Gerontology</td>
<td>18 credits/2.0</td>
<td><a href="mailto:dpbourassa@ship.edu">dpbourassa@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - GERT 100, GERT 301 or GERT 303 + 6 additional courses from approved interdisciplinary list.</td>
<td></td>
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</tr>
<tr>
<td>History</td>
<td>18 credits/2.0</td>
<td><a href="mailto:history@ship.edu">history@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses – HIST 105, HIST 106, HIST 201 OR 202 + 3 additional courses; 1 300-level European History, 1 300-level US History &amp; 1 300-level Africa/Asia/Latin American or Middle East course.</td>
<td></td>
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</tr>
<tr>
<td>Human Communication Studies</td>
<td>18 credits/2.0</td>
<td><a href="mailto:kalask@ship.edu">kalask@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - COST 200, COST 210 + 4 additional courses from approved list.</td>
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<td></td>
</tr>
<tr>
<td>International Development</td>
<td>21 credits/2.0</td>
<td><a href="mailto:ism@ship.edu">ism@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses: INTL 200, 3 credits of foreign language, 3 cr. Global Perspective elective, 3 cr. Area Studies elective, 9 cr. of Work Sector electives in Education, Health, Agriculture, Youth Development, or Community Economic Development. Contact the department for a list of approved course options.</td>
<td></td>
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</tr>
<tr>
<td>International Studies</td>
<td>21 credits/2.0</td>
<td><a href="mailto:ism@ship.edu">ism@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - INTL 200, INTL 300 + 2 of the following ANTH 111, GEOG 101, HIST 106, POLI 141, MGMT 370 + 3 additional courses from approved list.</td>
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</tr>
<tr>
<td>Marketing</td>
<td>18 credits/2.0</td>
<td><a href="mailto:mkt@ship.edu">mkt@ship.edu</a></td>
</tr>
<tr>
<td>Mathematics</td>
<td>18-21 credits/2.0</td>
<td><a href="mailto:math@ship.edu">math@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - 6 MATH courses MATH 211 or above, exceptions can be made for MATH 117 in place of MATH 217 or MATH 181 in place of MATH 211.</td>
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<tr>
<td>Military Science</td>
<td>18-21 credits/2.0</td>
<td><a href="mailto:rotc@ship.edu">rotc@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - MLSC 131, MLSC 132, MLSC 231, &amp; MLSC 232 + 10-12 credits of specific HIST, MLSC, &amp; POLI courses.</td>
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</tr>
<tr>
<td>Music</td>
<td>18 credits/2.0</td>
<td><a href="mailto:music@ship.edu">music@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - MUSI 140 MUSI 212, MUSI 320 + 3 additional classes at 300/400 level from approved list **MUSI121 must be taken before declaring or within the first 2 semesters after declaring music minor.</td>
<td></td>
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</tr>
<tr>
<td>Philosophy</td>
<td>18 credits/2.0</td>
<td><a href="mailto:history@ship.edu">history@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - 2 of the following PHIL 248, PHIL 248, PHIL 340 + 4 additional courses, which include 1 at 200-level and 1 at 300-level.</td>
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</tr>
<tr>
<td>Physics</td>
<td>24-26 credits/2.0</td>
<td><a href="mailto:physics@ship.edu">physics@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - PHYS 221, PHYS 222, PHYS 301, PHYS 321, PHYS 331 **Please note math pre-requisites to these classes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political Science</td>
<td>18 credits/2.0</td>
<td><a href="mailto:polisci@ship.edu">polisci@ship.edu</a></td>
</tr>
<tr>
<td>Required Courses - POLI 100, POLI 141, POLI 300 + 3 additional courses from approved list.</td>
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</tr>
</tbody>
</table>
MAJORS

The selection of a curriculum or area of specialization should be made with care after considering your academic strengths, areas of interest, plans for future study, and career goals. You may want to consult with friends, family members, university counselors, or faculty advisors before making a decision.

<table>
<thead>
<tr>
<th>MAJOR</th>
<th>REQUIRED GPA</th>
<th>REQUIREMENTS/NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art B.A.</td>
<td>2.0</td>
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<tr>
<td>Education (K-12)</td>
<td>3.0</td>
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</tr>
<tr>
<td>Biology B.S.</td>
<td>2.5</td>
<td>Admission to this major is competitive and selective. Students must have earned at least 15 credits and have grades of &quot;C&quot; or better in Principles of Biology I/II (BIOL 161/162) AND one of the following; Chemical Bonding OR successfully completed Pre-calculus or Calculus I with a &quot;C&quot; or better.</td>
</tr>
<tr>
<td>Biology/Biotechnology/Pre-Forensic Sci.</td>
<td>2.5</td>
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<tr>
<td>Biology/Clinical Sciences</td>
<td>2.5</td>
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<tr>
<td>Biology/Health Professions</td>
<td>2.8</td>
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<tr>
<td>Biology/ Ecology and Environmental</td>
<td>2.5</td>
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</tr>
<tr>
<td>MAJOR</td>
<td>REQUIRED GPA</td>
<td>REQUIREMENTS/NOTES</td>
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</tr>
<tr>
<td>Business B.S.B.A.</td>
<td>2.0</td>
<td>Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. First-year students must wait until the second semester to declare a Business major.</td>
</tr>
<tr>
<td>Accounting</td>
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<tr>
<td>Entrepreneurship</td>
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<tr>
<td>Finance</td>
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<td>Personal Financial Planning</td>
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<tr>
<td>Information Systems &amp; Analytics</td>
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<tr>
<td>Management</td>
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<tr>
<td>Human Resources Management</td>
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<tr>
<td>International Management</td>
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<tr>
<td>Marketing</td>
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<tr>
<td>Marketing Management</td>
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<tr>
<td>Digital Marketing and Analytics</td>
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<tr>
<td>Supply Chain Management</td>
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<tr>
<td>Logistics Management</td>
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</tr>
<tr>
<td>Chemistry B.S.</td>
<td>2.0</td>
<td>CHEM 121 is required. Prerequisites: MATH 175: Pre-Calculus or MATH 117: Statistics (either may be taken concurrently with CHEM 121) or math placement at Level 5 and one year of high school chemistry or CHEM 105 with a grade of “C” or better.</td>
</tr>
<tr>
<td>Biochemistry B.S.</td>
<td>2.0</td>
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</tr>
<tr>
<td>Chemistry/Pre-Pharmacy B.S.</td>
<td>2.8</td>
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<tr>
<td>Chemistry/Forensic Science B.S.</td>
<td>2.0</td>
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</tr>
<tr>
<td>Chemistry/Medical Science B.S.</td>
<td>3.2</td>
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<tr>
<td>Secondary Education Certification</td>
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</tr>
<tr>
<td>Civil Engineering</td>
<td>2.0</td>
<td>Students must be ready to start MATH 211: Calculus upon declaring (Math level 6). Students who are not ready to start MATH 211 are placed into the Computer Science &amp; Engineering General category.</td>
</tr>
<tr>
<td>Communication, Journalism and Media B.S.</td>
<td>2.3</td>
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<tr>
<td>Broadcast Media Production</td>
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<tr>
<td>Journalism</td>
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<tr>
<td>Public Relations</td>
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<tr>
<td>Visual Media</td>
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</tr>
<tr>
<td>Communication Studies</td>
<td>2.0</td>
<td>New majors are welcome. Students who have completed General Education courses can complete the major in 2 years and graduate on time if proper advisement is followed.</td>
</tr>
<tr>
<td>Computer Engineering B.S.</td>
<td>2.0</td>
<td>This is an academically challenging major and requires a significant effort outside the classroom. Students pursuing this major should have strong math skills. Math Level 6 is required to declare major.</td>
</tr>
<tr>
<td>Computer Science B.S.</td>
<td>2.0</td>
<td>Students need to be at math level 4 (MATH 140) or higher to declare the major. Students who are not at math level 4 are placed into the Computer Science &amp; Software Engineering General category.</td>
</tr>
<tr>
<td>Computer Graphics</td>
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<tr>
<td>Artificial Intelligence</td>
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<tr>
<td>Embedded Systems</td>
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<tr>
<td>Computer Science Application</td>
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<tr>
<td>Computer Science with Secondary Field</td>
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</tr>
<tr>
<td>Criminal Justice B.S.</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td>Economics B.S.</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Electrical Engineering B.S.</td>
<td>2.0</td>
<td>This is an academically challenging major and requires a significant effort outside the classroom. Students pursuing this major should have strong math skills. Math Level 6 is required to declare major.</td>
</tr>
<tr>
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</tr>
<tr>
<td>MAJOR</td>
<td>REQUIRED GPA</td>
<td>REQUIREMENTS/NOTES</td>
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<tr>
<td>------------------------------------------------</td>
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<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>English B.A. Literary Studies</td>
<td>2.0</td>
<td>Students must complete ENGL 130 and ENGL 213 by end of the second year, and ENGL 460 in the senior year. In addition, students must complete 9 credit hours of literary surveys, and 24 credit hours in advanced literary studies. Secondary Education students must complete 36 credit hours in TCH, EEC, and EDU courses, ENGL 366 and ENGL 426, 9 credit hours of literary surveys, and 15 credit hours in advanced literary studies.</td>
</tr>
<tr>
<td>Professional and Creative Writing</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Secondary Education Certification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exercise Science B.S. Allied Health Pre-Professional</td>
<td>2.5</td>
<td>Completion of at least 15 credits with a GPA of 2.50 or above and completion of BIOL 161, BIOL 162, or BIOL 237 (or their equivalents) with a grade of C or higher. Note: It is strongly recommended that students complete (or are scheduled to complete) BIOL 237 Anatomy &amp; Physiology I and BIOL 238 Anatomy &amp; Physiology II (or their equivalents) with a grade of C or higher before transferring to Exercise Science.</td>
</tr>
<tr>
<td>Exercise Science B.S. Human Performance and Fitness</td>
<td>2.0</td>
<td>Completion of at least 15 credits with a GPA of 2.0 or above Completion of any biology, chemistry or physics course: BIOL 237, BIOL 238, BIOL 161, BIOL 162, CHEM 103, CHEM 105, CHEM 121+125, PHYS 110 or PHYS 121+123 recommended (or their equivalents) with a grade of C or higher Note: It is strongly recommended that students complete (or are scheduled to complete) BIOL 237 Anatomy &amp; Physiology I and BIOL 238 Anatomy &amp; Physiology II (or their equivalents) with a grade of C or higher before transferring to Exercise Science.</td>
</tr>
<tr>
<td>Exercise Science B.S. Pre-Athletic Training Concentration</td>
<td>2.5</td>
<td>Completion of at least 15 credits with a GPA of 2.50 or above and completion of BIOL 161, BIOL 162, or BIOL 237 (or their equivalents) with a grade of C or higher. Note: This concentration is a 3+2 and therefore will be difficult for transfer students to complete. If you are interested in athletic training, look to the Allied Health Pre-Professional concentration instead.</td>
</tr>
<tr>
<td>French B.A.</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Secondary Education Certification</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Geoenvironmental Science</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Geography B.S. Geographic Information System</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>History B.A. Public History</td>
<td>2.0</td>
<td>Secondary Education students are encouraged to declare as soon as possible if considering this major, due to the state certification requirements.</td>
</tr>
<tr>
<td>Secondary Education B.S.Ed. (Social Studies)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary Arts Program</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>International Studies</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Mathematics B.S. Applied Mathematics</td>
<td>2.0</td>
<td>Students interested in becoming an actuary are recommended to pursue the Statistics Concentration along with a Business minor. *Secondary Education majors must have a 3.0 GPA to declare this major</td>
</tr>
<tr>
<td>Statistics</td>
<td>3.0</td>
<td>Students are required to complete a minor or advanced coursework in an associated discipline (Allied Electives) for the Applied, Statistics, and Custom Concentrations.</td>
</tr>
<tr>
<td>Secondary Education Certification*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dual Certification in Mathematics and Special Education*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Custom Concentration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>2.0</td>
<td>Students must be ready to start MATH 211 upon declaring (Math level 6). Students who are not ready to start MATH 211 are placed into the Computer Science &amp; Engineering General category</td>
</tr>
<tr>
<td>Political Science B.A.</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>MAJOR</td>
<td>REQUIRED GPA</td>
<td>REQUIREMENTS/NOTES</td>
</tr>
<tr>
<td>--------------------------------------------</td>
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<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Psychology B.A.</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Public Service B.S.</td>
<td>2.0</td>
<td>A student who has between 60 and 74 credits should have completed PLS 100 U.S. Government and Politics.</td>
</tr>
<tr>
<td>Social Work B.S.W</td>
<td>2.0</td>
<td>Students who do not meet GPA requirements should contact the Dept. Chair to discuss options and begin taking social work courses. IMPORTANT: Students must follow the Social Work program guide in effect at the time they were accepted to the department, not the one in effect at the time they entered Shippensburg.</td>
</tr>
<tr>
<td>Sociology B.A.</td>
<td>2.0</td>
<td>Sociology welcomes new majors at any time. An informational interview is required to declare the Sociology major. Please schedule an appointment with the department chair by contacting the Sociology and Anthropology Department.</td>
</tr>
<tr>
<td>Software Engineering B.S</td>
<td>2.0</td>
<td>Math Level 4 is required to declare major.</td>
</tr>
<tr>
<td>Spanish B.A.</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Secondary Education Certification</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Sustainability B.S</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Teacher Education B.S.Ed.</td>
<td>3.0</td>
<td>Admission to this major is competitive. Students must submit a letter of application to the department. Students who apply are ranked according to a score on a rating form. Enrollment is limited, and only top ranked students will be admitted.</td>
</tr>
</tbody>
</table>
THE GENERAL EDUCATION PROGRAM
THE GENERAL EDUCATION PROGRAM

Degree framework for undergraduate students
All degrees awarded by Shippensburg University must be structured to fit the following framework:
• The completion of a minimum of 120 credit hours in the selected curriculum. Students required to complete developmental courses should note that developmental coursework is additive to the 120-credit minimum.
• The completion of all general education courses and the course sequence requirements in the selected curriculum.
• An overall grade point average of at least 2.0 ("C") in the total program of courses.
• A cumulative grade point average of at least 2.0 ("C") in the major.
• In the case of teacher education students, a satisfactory history of development in student teaching.
• The completion of all final coursework.

Why have a General Education Program at Shippensburg University?
At the core of the curriculum lies the principle that a good education has two distinct purposes. The first of these is to acquire a set of competencies and a grounding in the arts and sciences which promote real intellectual growth in college and ample cultural awareness in the years beyond. The second purpose is to prepare students for a rewarding and socially beneficial vocation by exploring subjects not necessarily available within the confines of a prescribed major.

The program allows students to make personal choices. It also enables the students to satisfy native curiosity, explore unfamiliar territory, and cultivate sensitivity toward their environment and an awareness of their personal strengths and weaknesses.

All undergraduate students at the university are required to complete the General Education Program.

Overview: General Education Program
The new General Education Program at Shippensburg University comprises forty-five of the credit hours required for graduation. The program includes a series of special courses in five categories:
• Foundations (15 credits)
• Interconnections (9 credits)
• Citizenship and Responsibility (6 credits)
• Natural World and Technology (9 credits)
• Creativity and Expression (6 credits)

Advising for the General Education Program
When advising students, consider the following policies regarding the General Education Program at Shippensburg University:
• Expression and Creativity: Students must complete one Literature in addition to one Creative or Arts course.
• No more than two courses from one department will apply to a student’s General Education program. For example: If a student takes ENGL 114 to satisfy a Foundations course and then takes ENGL 250 for Literature followed by ENGL 224 for Creative, ENGL 224 will count as an elective and will not satisfy a General Education requirement.
• Students may not elect to take any of the five foundations courses “satisfactory-unsatisfactory”.
• Lastly, courses either count toward a student’s major or the General Education Program but not both.
## GENERAL EDUCATION PROGRAM OFFERINGS ’24

### Foundations (5 courses/15 credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIV 101 SU First Year Seminar, or</td>
<td>HIST 105 Historical Foundations of Global Cultures, or</td>
</tr>
<tr>
<td>HONR 113 Writing Intensive First Year Seminar</td>
<td>HONR 122 Historical Foundations of Global Cultures</td>
</tr>
<tr>
<td>ENGL 114 Academic Writing, or</td>
<td>COST 100 Introduction to Human Communication, or</td>
</tr>
<tr>
<td>ENGL 115 Advanced Academic Writing, or</td>
<td>HONR 100 Introduction to Human Communication</td>
</tr>
<tr>
<td>HONR 106 Honors Academic Writing</td>
<td></td>
</tr>
</tbody>
</table>

**Quantitative Reasoning Options (choose 1):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 105 Mathematics for Liberal Studies</td>
<td>MATH 181 Applied Calculus</td>
</tr>
<tr>
<td>MATH 107 Mathematics Models Applied to Money</td>
<td>MATH 211 Calculus I</td>
</tr>
<tr>
<td>MATH 111 Fundamentals of Mathematics II</td>
<td>MATH 217 Statistics I</td>
</tr>
<tr>
<td>MATH 117 Applied Statistics</td>
<td>*See your advisor to figure out which course is right for you and your major</td>
</tr>
</tbody>
</table>

### Interconnections (3 courses/9 credits)

**Diversity (at least one course from this group):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 245 Diversity and the Media</td>
<td>HONR 141 Honors: World Geography</td>
</tr>
<tr>
<td>DISA 100 Introduction to Disability Studies</td>
<td>HONR 160 Honors: Cultural Anthropology</td>
</tr>
<tr>
<td>ECSP 273 Intro. to Exceptionalities</td>
<td>HONR 165 Honors: Principles of Macroeconomics</td>
</tr>
<tr>
<td>ETHS 100 Introduction to Ethnic Studies</td>
<td>HONR 274 Honors: Intro. to International Politics</td>
</tr>
<tr>
<td>ETHS 101 Introduction to African American Studies</td>
<td>POLI 141 World Politics</td>
</tr>
<tr>
<td>ETHS 102 Introduction to Latino Studies</td>
<td>SPAN 153 Latino Pop Culture</td>
</tr>
<tr>
<td>FREN 150 French Civilization</td>
<td>SPAN 204 Ideas &amp; Cultures From Spanish-Speaking World</td>
</tr>
<tr>
<td>GEOG 103 Geography of the United States and Canada</td>
<td>SPAN 385 Aspectos De La Civilizacion Hispana</td>
</tr>
<tr>
<td>HONR 102 Honors: Introduction to Women’s Studies</td>
<td></td>
</tr>
<tr>
<td>HONR 140 Honors: Geo. of the United States &amp; Canada</td>
<td></td>
</tr>
<tr>
<td>HONR 151 Honors: General Psychology</td>
<td></td>
</tr>
<tr>
<td>INTL 252 Costa Rica: Politics, Economy, and Society</td>
<td></td>
</tr>
<tr>
<td>PSYC 101 General Psychology</td>
<td></td>
</tr>
<tr>
<td>SPAN 150 Spanish Civilization &amp; Culture</td>
<td></td>
</tr>
<tr>
<td>SOWK 265 Understanding Human Diversity for SW</td>
<td></td>
</tr>
<tr>
<td>WMST 100 Introduction to Women’s &amp; Gender Studies</td>
<td></td>
</tr>
</tbody>
</table>

**Global Perspectives (at least one course from this group):**

<table>
<thead>
<tr>
<th>Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 105 Great Discoveries in Archaeology</td>
<td>GERM101 Beginning German I</td>
</tr>
<tr>
<td>ANTH 111 Cultural Anthropology</td>
<td>GERM 102 Beginning German II</td>
</tr>
<tr>
<td>ECON 101 Principles of Macroeconomics</td>
<td>GERM 103 Intermediate German</td>
</tr>
<tr>
<td>FREN 204 Ideas &amp; Cultures From French-Speaking World</td>
<td>GERM 203 Intermediate German Communication</td>
</tr>
<tr>
<td>GEOG 101 World Geography</td>
<td>GERM 215 German for the Professions</td>
</tr>
<tr>
<td>GERM 150 German Civilization &amp; Culture</td>
<td>SPAN 101 Beginning Spanish I</td>
</tr>
<tr>
<td>GERM 204 Contemporary German Culture</td>
<td>SPAN 102 Beginning Spanish II</td>
</tr>
<tr>
<td>HIST 106 Modern World History</td>
<td>SPAN 103 Intermediate Spanish</td>
</tr>
<tr>
<td>HONR 123 Honors: Modern World History</td>
<td>SPAN 202 Intermediate Conversation</td>
</tr>
<tr>
<td></td>
<td>SPAN 330 Spanish for the Professions</td>
</tr>
</tbody>
</table>
Citizenship and Responsibility (2 courses from 2 categories/6 credits)

Critical Reasoning
ACEX 120 Academic Literacies for the 21st Century
ACEX 210 Writing Tutoring Theory and Praxis
ECON 113 Principles of Economics
ENGR 110 Modeling and Simulation
EXER 207 Stress Management
FINA 101 Personal Finance
GEOG 140 Human Geography
GERT 100 Introduction to Gerontology
COST 125 Survey of Communication Studies
HONR 130 Honors: Intro. To Philosophy
HONR 161 Honors: Intro to Sociology
MATH 225 Discrete Mathematics
PHIL 101 Introduction to Philosophy
PHIL 102 Critical Thinking
SOCI 101 Introduction to Sociology

Ethical Reasoning
HONR 105 Honors: Ethical Theories and Problems
PHIL 105 Ethical Theories and Problems

Citizenship
COMM 111 Media Literacy
ESSC 108 Introduction to Environmental Sustainability
HIST 201 Early History of the United States
HONR 279 Honors: U.S. Government and Politics
POLI 100 U.S. Government and Politics

Natural World and Technology (3 courses/9 credits)

Natural World (at least two courses)
ANTH 121 Physical Anthropology
BIOL 100 Basic Biology
BIOL 145 Environmental Biology
BIOL 150 Human Biology
BIOL 161 Principles of Biology: Cell Structure & Function
BIOL 162 Principles of Biology: Organismal Diversity
BIOL 208 Field Biology
BIOL 237 Human Anatomy and Physiology I
CHEM 103 Chemistry: A Cultural Approach
CHEM 105 Chemistry: An Observational Approach
CHEM 121 Chemical Bonding
ESSC 110 Introduction to Geology
ESSC 111 Introduction to Weather and Climate
ESSC 210 Physical Geology
HONR 108 Honors: Astronomy
HONR 142 Honors: Intro to the Atmosphere
HONR 145 Honors: Environmental Biology
HONR 159 Honors: Physical Anthropology
HONR 180 Honors: Physics for Society
HONR 186 Honors: Human Biology
HONR 196 Honors: A Cultural Approach
HONR 244 Honors: Introduction to Geology
PHYS 108 Astronomy
PHYS 110 Physics for Society
PHYS 121 Introduction to Physics I
PHYS 122 Introduction to Physics II
PHYS 205 Intermediate Physics I
PHYS 221 Fundamentals of Physics I

Technology
CMSC 103 Overview of Computer Science
CMSC 104 Programming in Python
CMSC 120 Intro to Computer Science and Metacognition
CMSC 180 Microcomputer Basic
ECON 102 Principles of Microeconomics
ENGR 120 - Programming for Engineers
HONR 166 Honors: Principles of Microeconomics
HONR 182 Honors: Overview of Computer Science
MATH 219 Data Science I
ITAN 300 Information Technology & Business Operations
Creativity and Expression (2 courses/6 credits)

**Literature (at least one):**
- ENGL 243 The Art of the Film
- ENGL 250 Literature and Society
- FREN 330 Masterpieces of French Literature
- FREN 331 Masterpieces of Francophone Literature
- GERM 151 German Cinema
- HONR 101 Honors: Introduction to the Theatre
- HONR 224 Honors: The Art of the Film
- HONR 249 Honors: Intro to Literature
- SPAN 152 Latino Literature
- SPAN 360 Masterpieces of Spanish Literature
- SPAN 361 Masterpieces of Spanish-American Literature
- THAR 121 Introduction to Theatre

**Creative**
- ENGL 224 Introduction to Creative Writing
- MCAE 100 Engineering Graphics

**Arts**
- ART 101 Art Appreciation
- ART 231 Art History I
- ART 232 Art History II
- ART 233 Art History III
- ART 339 History of American Art
- HONR 111 Honors: Intro. to Interdisciplinary Arts
- HONR 135 Honors: Art History III
- HONR 208 Honors: Opera and Music There
- HONR 210 Honors: Introduction to Music
- HONR 261 Honors: World Music
- INST 111 Intro. to Interdisciplinary Arts
- MUSI 121 Introduction to Music
- MUSI 129 American Popular Music
- MUSI216 Music and Film
- MUSI 227 Opera & Music Theatre
- MUSI 261 World Music
THE GENERAL EDUCATION PROGRAM
(PRE-FALL 2018)

Students enrolled prior to Fall 2018 follow these General Education Requirements. Students are advised to review their course options with their faculty advisor and/or consult the 2017-2019 Undergraduate Catalog for more information.

48 Credits

Part I: Required Skills and Competencies (15 Credits)
- Historical Foundations of Global Cultures
- Thinking Historically in a Global Age
- Intro to Human Communication
- Writing Intensive First Year Seminar/Advanced Placement Writing
- College-Level Mathematics

Part II: Categories of Knowledge
- Category A—Logic and Numbers for Rational Thinking (1 course - 3 credits)
- Category B—Linguistic, Literary, Artistic, & Cultural Traditions (3 courses - 9 credits)
- Category C—Biological & Physical Sciences (3 courses - 9 credits)
- Category D—Political, Economic, and Geographic Sciences (2 courses - 6 credits)
- Category E—Social and Behavioral Sciences (2 courses - 6 credits)

Part III: Additional Requirements
Students are required to take one diversity course to graduate. You can meet this requirement by taking a course that double counts as a diversity course and a general education, major, or free elective course.
COLLEGE OF ARTS AND SCIENCES
COLLEGE OF ARTS & SCIENCES DEGREE PROGRAMS

B.A.
Art
  Art
  Education K-12
English
  Literary Studies
  Prof and Creative Writing
  Secondary Education Certification
French #
History
  Public History
Human Communication
Interdisciplinary Art
International Studies
  Area Studies
  Global Perspectives
Political Science
Psychology
Sociology
Spanish #

# Secondary cert. available

All students completing a Bachelor of Arts (B.A.) program will be required to attain a Novice level of proficiency in a foreign language. Novice proficiency may be satisfied by the completion of three years of a foreign language in high school, three credits of intermediate level college coursework in a foreign language, or satisfactory completion of an intermediate level proficiency examination.

B.S.Ed.
History*
* Comprehensive Social Studies

B.S.
Biology #
  Biotechnology
  Clinical Sciences
  Ecology & Environmental Health Professions
Chemistry #
  Biochemistry
  Forensic Science
  Medical Sciences
  Pre-Pharmacy
Civil Engineering
Communication, Journalism & Mass Media
  Broadcast Media Production,
  Public Relations
  Journalism
Visual Media
Computer Engineering
Computer Science
  Computer Graphics
  Computer Science Applications
Related Discipline
Economics
  Business
  Mathematics
  Political Science
  Public Administration
Social Science
Electrical Engineering
Geoenvironmental Science
Geography
  Geographic Information Systems
Math #
  Statistics
  Applied Math
Mechanical Engineering
Physics
Public Service
Software Engineering
Sustainability
Art – B.A. ##

Requirements for the Art major  39 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Foundation Courses (12 crs)
Take during first year of program:
__ART 101 – Art Appreciation (3 cr) **
__ART 110 – Basic Drawing (3 cr)
__ART 215 – Color and Two-Dimensional Design (3 cr) F
__ART 218 – Three-Dimensional Design (3 cr) S

Additional Art Requirements (12 cr)
__ART 210 – Drawing II (3 cr) S
__ART 232 – Art History II (3 cr) F
__ART 233 – Art History III (3 cr) S
__ART 385 – Senior Art Seminar (3 cr)

Art Electives (15-18 cr)
Select 5 courses below–6 if ART 101, ART 232, or ART 233 is taken as a general education elective; 4 must be at least 300-level.
__ART 211 – Figure Drawing (3 cr)
__ART 216 – Visual Design Technology (3 cr)
__ART 217 – Design I: Page Layout & Composition (3 cr)
__ART 231 – Art History I (3 cr) F
__ART 100, 301, 302, 303, 304, 305 - Independent Studio (3 cr)
__ART 306 - Design II: Vector Illustration (3 cr) S
__ART 315 – Imagination, Creativity and Methodology (3 cr)
__ART 318 – Typography (3 cr)
__ART 319 – Design III: Photo Imagery, Editing (3 cr) S
__ART 321 – Watercolor I (3 cr) S
__ART 322 – Watercolor II (3 cr) S
__ART 326 – Painting I (3 cr) F
__ART 327 – Painting II (3 cr) S
__ART 337 – Printmaking I (3 cr) S
__ART 339 – History of American Art (3 cr)
__ART 338 – Printmaking II (3 cr)
__ART 340 – Ceramics (3 cr)
__ART 341 – Advanced Ceramics (3 cr) S
__ART 342 – Digital Ceramics (3 cr)
__ART 370 – Sculpture (3 cr) F
__ART 371 – Advanced Sculpture (3 cr)
__ART 372 – Dimensional Prototyping (3 cr)
__ART 395 – Internship in Art I (3 cr)
__ART 399 – Independent Study (3 cr)
__ART 410 – Advanced Digital/Graphic Design Studio (3 cr)
__ART 420 – Digital Fine Art & Design Printing (3 cr)
__ART 421 – Digital Painting (3 cr)
__ART 422 – Digital Printmaking (3 cr)
__ART 425 – Digital Media I (3 cr) S
__ART 430 – Digital Media II (3 cr) F
__ART 435 – Portfolio Design & Presentation (3 cr) S

Optional: Certificate in Graphic Design (18 cr)
Students who complete all six computer design courses will receive a certification in Graphic Design upon graduation. Students must fill out a change of major form to add the certification and apply for it when they apply to graduate.

__ART 217 – Graphic Design I: Page Composition (3 cr)
__ART 306 – Graphic Design II: Vector Illustration (3 cr)
__ART 319 – Design III: Photo Imagery, Editing (3 cr)
__ART 425 – Digital Media I (3 cr)
__ART 430 – Digital Media II (3 cr)
__ART 435 – Portfolio Design & Presentation (3 cr)

Also Required:
__Portfolio Review
__Yearly Student Art Exhibit
__Senior Exhibit

## B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

F=Fall only
S=Spring only

Graduation Requirements: 120 cr
Free Electives  33 cr
GPA needed to declare: 2.0

HELPFUL HINTS FOR ADVISING:

Year 1
ART 101 – Art Appreciation
ART 110 – Basic Drawing
ART 215 – Color/2-Dimensional Design F
ART 232 – Art History II F
ART 210 – Drawing II S
ART 218 – Three-Dimensional Design S

Notes: Double majors such as Art/Communications increase career options.

Art minor is available – 21 cr

Disclaimer: Courses may be subject to change.
Art, Secondary Education Certification – B.A. ##

Requirements for Art major with Secondary Education Certification  72 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Foundation Courses (36 cr)
__ART 101 – Art Appreciation (3 cr) **
__ART 110 – Basic Drawing (3 cr)
__ART 210 – Drawing II (3 cr) F
__ART 215 - Color/2-Dimensional Design (3 cr) F
__ART 218 – Three-Dimensional Design (3 cr) S
__ART 232 – Art History II (3 cr) F
__ART 233 – Art History III (3 cr) S
__ART 385 – Senior Art Seminar (3 cr)
__ART 217 – Computer Design I: Page Composition (3 cr)
__ART 326 - Painting I (3 cr) F
__ART 340 – Ceramics (3 cr)
__ART 370 – Sculpture (3 cr) F

Additional Requirements (21 cr)
__GEOG 103 – Geography of the U.S. & Canada (3 cr) **
__PSYC 101 – General Psychology (3 cr) **
__ENGL 190, ENGL 243, ENGL 248, OR ENGL 250 (3 cr) **
__MATH _________________(MATH 105 recommended) **
__MATH _________________(MATH 117 recommended) **

Select one or both:
__BIOL 145 – Environmental Biology (3 cr) **
__ESSC 108 – Conservation of Natural Resources (3 cr) **

Education Courses (36 cr)
__ART 356 - Social Structures of Aesthetics (3 cr)
__ART 400 - Contemporary Methods in Art Education (3 cr)
__TEED 207 - Org. & Psych. Foundations (3 cr)
__SPEE 273 - Introduction to Exceptionalities (3 cr)
__SPEE 423 - Effective Instructional Strategies (3cr)
__READ 413 - Teaching Reading to ELL (3 cr)
__SPEE 483 - Assessing Children with Exceptionalities (3 cr)
__EDFN 495 - Student Teaching & Practicum (12-15 cr)

Also Required:
__Portfolio Review
__Yearly Student Art Exhibit
__Senior Exhibit

## B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300

F=Fall only
S=Spring only

Graduation Requirements: 120 cr
Free Electives  3 cr
GPA Needed to Declare:  3.0

HELPFUL HINTS FOR ADVISING:

Year 1
ART 101 – Art Appreciation
ART 110 – Basic Drawing
ART 215 – Color/2-Dimensional Design F
ART 218 – Three-Dimensional Design S
ART 232 – Art History II F
ART 233 – Art History III S
ART 385 – Senior Art Seminar

Disclaimer: Courses may be subject to change.
Biology – B.S.

Requirements for the Biology major 55-56 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Biology Core Courses (13 cr)**
- BIOL 161 - Principles of Bio.: Cell Structure and Function (4 cr) **
- BIOL 162 - Principles of Bio.: Organismal Diversity (4 cr)
- BIOL 260 - Genetics (4 cr)
- BIOL 499 - Capstone Seminar in Biology (1 cr)

**Physiology Elective (4 cr)**
Select one:
- BIOL 350 - Human Physiology (4 cr)
OR
- BIOL 351 - Animal Physiology (4 cr)

**Additional Biology Electives (18 cr)**
Professional program requirements should be considered when choosing electives. At least 6 credits need to be at the 300 level or above. Only 3 credits of internship/research may be used here.
- BIOL __________________________
- BIOL __________________________
- BIOL __________________________
- BIOL __________________________
- BIOL __________________________

**Chemistry (16 cr)**
- CHEM 121 - Chemical Bonding (3 cr) **
- CHEM 125 - Lab IB (1 cr)
- CHEM 122 - Chemical Dynamics (3 cr)
- CHEM 126 - Lab IIB (1 cr)
- CHEM 221 - Organic Chemistry (3 cr)
- CHEM 225 - Lab IIIB (1 cr)
Select one:
- CHEM 227 - Introduction to Biochemistry (4 cr)
OR
- CHEM 222 - Organic Chemistry II (3 cr)
AND
- CHEM 226 - Lab IVB-Experiment. Org. Studies (1 cr)

**Physics (8 cr)**
- PHYS 121 - Introductory Physics I - Lecture (3 cr) **
- PHYS 123 - Physics I Lab (1 cr)
- PHYS 122 - Introductory Physics II - Lecture (3 cr)
- PHYS 125 - Physics II Lab (1 cr)

**Mathematics (7-8 cr)**
- MATH 211 - Calculus I (4 cr) **
AND
- MATH 117 - Applied Statistics (3-4 cr) **
OR
- MATH 217 - Statistics I (4 cr) **

Graduation Requirements: 120 cr
Free Electives 17-18 cr
GPA Needed to Declare: 2.5

**Declare Biology:** Admission to this major is competitive. Students must have earned at least 15 credits & have grades of “C” or better in BIOL 161/BIOL 162 and CHEM 121, MATH 175, or MATH 211.

**HELPFUL HINTS FOR ADVISING:**

- Students should begin their math sequence in their 1st year.

**Semester I**
- BIOL 161 - Principles of Bio I
- CHEM 121 - Chemical Bonding
- CHEM 125 - Chem Lab IB

**Semester II**
- BIOL 162 - Principles of Bio II
- CHEM 122 - Chemical Dynamics
- CHEM 126 - Chem Lab IIB

Notes: Physics is normally taken in the junior year

- Students lacking strong chemistry/math backgrounds should consider taking CHEM 105 before CHEM 121.

**Biology minor is available – 19 cr**

**Disclaimer:** Courses may be subject to change.
## Biology, Biotechnology Concentration – B.S.

Requirements for the Biology major with biotechnology concentration = 59-61 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

### Biology Core Courses (26 cr)

- **BIOL 161 – Principles of Bio.: Cell Structure and Function**
- **BIOL 162 – Principles of Bio.: Organismal Diversity (4 cr)**
- **BIOL 220 – Microbiology (4 cr)**
- **BIOL 260 – Genetics (4 cr)**
- **BIOL 385 – Cell Biology (3 cr)**
- **BIOL 418 – Molecular Biology (3 cr)**
- **BIOL 499 – Capstone Seminar in Biology (1 cr)**

**Physiology Elective (4 cr)**

Select one:
- **BIOL 350 – Human Physiology (4 cr)**
- **BIOL 351 – Animal Physiology (4 cr)**

**Experiential Elective (3 cr)**

Select one:
- **BIOL 397 – Intro to Research (3 cr)**
- **BIOL 391 – Internship (3 cr)**

**Additional Biology Electives (3 cr)**

Biology credits should total at least 41.

- **BIOL __________________________**
- **BIOL __________________________**
- **BIOL __________________________**

**Recommended Electives:**

- **BIOL 230 – Botany (3 cr)**
- **BIOL 324 – Pathogenic Microbiology (3 cr)**
- **BIOL 408 – Virology (3 cr)**
- **BIOL 409 – Immunology (3 cr)**

**Chemistry (19-20 cr)**

- **CHEM 121 – Chemical Bonding**
- **CHEM 125 – Lab I (1 cr)**
- **CHEM 122 – Chemical Dynamics (3 cr)**
- **CHEM 126 – Lab IIB (1 cr)**
- **CHEM 221 – Organic Chemistry (3 cr)**
- **CHEM 225 – Lab IIIB (1 cr)**

Select one:
- **CHEM 227 – Introduction to Biochemistry (4 cr)**
- **CHEM 222 – Organic Chemistry II (3 cr)**

**Physics (5 cr)**

- **PHYS 121 – Introductory Physics I - Lecture**
- **PHYS 123 – Physics I Lab (1 cr)**
- **PHYS 122 – Introductory Physics II – Lecture (3 cr)**
- **PHYS 125 – Physics II Lab (1 cr)**

**Mathematics (3-4 cr)**

- **MATH 211 – Calculus I**

AND:

- **MATH 117 – Applied Statistics (3 cr)**
- **MATH 217 – Statistics I (4 cr)**

Graduation Requirements: 120 cr

Free Electives = 12-14 cr

GPA Needed to Declare: 2.5

---

**Declare Biology:** Admission to this major is competitive. Students must have earned at least 15 credits & have grades of “C” or better in BIOL 161/BIOL 162 and CHEM 121, MATH 175, or MATH 211.

---

**HELPFUL HINTS FOR ADVISING:**

Students should begin their math sequence in their 1st year.

**Semester I**

<table>
<thead>
<tr>
<th>Biology</th>
<th>Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 161 - Principles of Bio</td>
<td>CHEM 121 - Chemical Bonding</td>
</tr>
<tr>
<td>CHEM 125 - Lab IB</td>
<td>CHEM 125 - Chem Lab IB</td>
</tr>
</tbody>
</table>

**Semester II**

<table>
<thead>
<tr>
<th>Biology</th>
<th>Chemistry</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 162 - Principles of Bio</td>
<td>CHEM 122 - Chemical Dynamics</td>
</tr>
<tr>
<td>CHEM 126 - Lab IIB</td>
<td>CHEM 126 - Chem Lab IIIB</td>
</tr>
</tbody>
</table>

**Notes:** Physics is normally taken in the junior year.

Students lacking strong chemistry/math backgrounds should consider taking CHEM 105 - Chemistry: An Observational Approach before CHEM 121 - Chemical Bonding.

**Disclaimer:** Courses may be subject to change.
### Biology, Clinical Science Concentration – B.S.

**Medical Technology, Cytotechnology, Histotechnology, and Respiratory Therapy**

#### Requirements for Biology major with Clinical Science Concentration

- **48-50 cr**

  General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

#### Biology Core Courses (20 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 161</td>
<td>Principles of Bio.: Cell Structure and Function **</td>
</tr>
<tr>
<td>BIOL 162</td>
<td>Principles of Bio.: Organismal Diversity (4 cr)</td>
</tr>
<tr>
<td>BIOL 220</td>
<td>Microbiology (4 cr)</td>
</tr>
<tr>
<td>BIOL 260</td>
<td>Genetics (4 cr)</td>
</tr>
<tr>
<td>BIOL 350</td>
<td>Human Physiology (4 cr)</td>
</tr>
<tr>
<td>BIOL 385</td>
<td>Cell Biology (3 cr)</td>
</tr>
<tr>
<td>BIOL 499</td>
<td>Capstone Seminar in Biology (1 cr)</td>
</tr>
</tbody>
</table>

#### Additional Biology Electives (7 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL</td>
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<td>BIOL</td>
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<td>BIOL</td>
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</tbody>
</table>

#### Medical Technology Concentration (8+ cr):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 409</td>
<td>Immunology (3 cr)</td>
</tr>
<tr>
<td>BIOL 324</td>
<td>Pathogenic Microbiology (3 cr)</td>
</tr>
<tr>
<td>BIOL 374</td>
<td>Hematology (2 cr)</td>
</tr>
</tbody>
</table>

**Recommended:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 317</td>
<td>Parasitology (3 cr)</td>
</tr>
<tr>
<td>BIOL 418</td>
<td>Molecular Biology (3 cr)</td>
</tr>
</tbody>
</table>

#### Cytotechnology Concentration (7 cr):

**Strongly recommended:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 371</td>
<td>Human Anatomy (4 cr)</td>
</tr>
<tr>
<td>BIOL 418</td>
<td>Molecular Biology (3 cr)</td>
</tr>
</tbody>
</table>

#### Histotechnology Concentration (7 cr):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 371</td>
<td>Human Anatomy (4 cr)</td>
</tr>
<tr>
<td>BIOL 375</td>
<td>Histology (3 cr)</td>
</tr>
</tbody>
</table>

#### Respiratory Therapy Concentration (7 cr):

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 371</td>
<td>Human Anatomy (4 cr)</td>
</tr>
<tr>
<td>BIOL 409</td>
<td>Immunology (3 cr)</td>
</tr>
</tbody>
</table>

**Recommended:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 238</td>
<td>Technical/Professional Writing I (3 cr)</td>
</tr>
</tbody>
</table>

#### Chemistry (19-20 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 121</td>
<td>Chemical Bonding **</td>
</tr>
<tr>
<td>CHEM 125</td>
<td>Lab IB (1 cr)</td>
</tr>
<tr>
<td>CHEM 122</td>
<td>Chemical Dynamics (3 cr)</td>
</tr>
<tr>
<td>CHEM 126</td>
<td>Lab II (1 cr)</td>
</tr>
<tr>
<td>CHEM 221</td>
<td>Organic Chemistry (3 cr)</td>
</tr>
<tr>
<td>CHEM 225</td>
<td>Lab IIIB (1 cr)</td>
</tr>
</tbody>
</table>

**Select one:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>__CHEM 227</td>
<td>Introduction to Biochemistry (4 cr)</td>
</tr>
<tr>
<td>OR</td>
<td>__CHEM 222</td>
</tr>
<tr>
<td>AND</td>
<td>__CHEM 226</td>
</tr>
</tbody>
</table>

#### Physics Requirements (5 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>__PHYS 121</td>
<td>Introductory Physics I - Lecture **</td>
</tr>
<tr>
<td>PHYS 123</td>
<td>Physics I Lab (1 cr)</td>
</tr>
<tr>
<td>__PHYS 122</td>
<td>Introductory Physics II - Lecture (3 cr)</td>
</tr>
<tr>
<td>PHYS 125</td>
<td>Physics II Lab (1 cr)</td>
</tr>
</tbody>
</table>

#### Mathematics Requirements (3-4 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>__MATH 211</td>
<td>Calculus I **</td>
</tr>
</tbody>
</table>

**Select one:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>__MATH 117</td>
<td>Applied Statistics (3-4 cr)</td>
</tr>
<tr>
<td>OR</td>
<td>__MATH 217</td>
</tr>
</tbody>
</table>

All SU coursework must be successfully completed prior to beginning the clinical program. Up to 30 credits will be transferred back to SU after successful completion of the clinical program.

**Graduation Requirements: 120 cr**

Free Electives = 23 cr

GPA Needed to Declare: 2.5

---

**Declare Biology:** Admission to this major is competitive. Students must have earned at least 15 credits & have grades of “C” or better in BIOL 161/BIOL 162 and CHEM 121, MATH 175, or MATH 211.

---

**HELPFUL HINTS FOR ADVISING:**

Students should begin their math sequence in their 1st year.

**Semester I**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 161</td>
<td>Principles of Bio</td>
</tr>
<tr>
<td>CHEM 121</td>
<td>Chemical Bonding</td>
</tr>
<tr>
<td>CHEM 125</td>
<td>Chem Lab IB</td>
</tr>
</tbody>
</table>

**Semester II**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 162</td>
<td>Principles of Bio</td>
</tr>
<tr>
<td>CHEM 122</td>
<td>Chemical Dynamics</td>
</tr>
<tr>
<td>CHEM 126</td>
<td>Chem Lab II</td>
</tr>
</tbody>
</table>

**Notes:** 24 credits must be taken in residence.

Physics is normally taken in the junior year.

Students lacking strong chemistry/math backgrounds should consider taking CHM 105 before CHM 121.

**Disclaimer:** Courses may be subject to change.
Biology, Ecology, Environment, and Conservation – B.S.

Requirements for Biology major with Ecology and Environmental Science Concentration
≈ 57-59 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Biology Core Courses (15 cr)
- BIOL 161 – Principles of Bio.: Cell Structure and Function **
- BIOL 162 – Principles of Bio.: Organismal Diversity (4 cr)
- BIOL 230 – Botany (3 cr)
- BIOL 242 – Ecology (3 cr)
- BIOL 260 – Genetics (4 cr)
- BIOL 499 – Capstone Seminar in Biology (1 cr)

Cellular Elective (4 cr)
Select one:
- BIOL 220 – Microbiology (4 cr)
OR
- BIOL 385 – Cell Biology (3 cr)******

Physiology Elective (4 cr)
Select one:
- BIOL 350 – Human Physiology (4 cr)
OR
- BIOL 351 – Animal Physiology (4 cr)***

Conservation and Management Elective (3 cr)
Select any one:
- BIOL 444 – Conservation Biology (3 cr)
OR
- BIOL 483 – Wildlife and Fisheries Management (3 cr)

Ecology Electives (9 cr)
Select any three:
- BIOL 363 – Vertebrate Zoology (3 cr)
- BIOL 406 – Mammalogy (3 cr)
- BIOL 412 – Ichthyology (3 cr)
- BIOL 417 – Herpetology (3 cr)
- BIOL 419 – Ornithology (3 cr)
- BIOL 430 – Principles of Evolution (3 cr)
- BIOL 442 – Aquatic Ecology (3 cr)
- BIOL 448 – Field Botany and Plant Taxonomy (3 cr)
- BIOL 4XX – Entomology (3 cr)
- BIOL 4XX – Freshwater Invertebrate Zoology (3 cr)
- BIOL 444 – or BIO 4XX

Additional Biology Electives (6 cr)****
- BIOL __________________________
- BIOL __________________________

Mathematics Requirements (7-8 cr)
- MATH 211 – Calculus I **
Select one:
- MATH 117 – Applied Statistics (3-4 cr)
OR
- MATH 217 – Statistics I (4 cr)

Chemistry (13 cr)
- CHEM 121 – Chemical Bonding **
- CHEM 125 – Lab IB (1 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 126 – Lab IIB (1 cr)
- CHEM 221 – Organic Chemistry (3 cr)
- CHEM 225 – Lab IIIB (1 cr)
Select one:
- CHEM 227 – Introduction to Biochemistry (4 cr)
OR
- CHEM 222 – Organic Chemistry II (3 cr)
AND
- CHEM 226 – Lab IVB-Experiment. Org. Studies (1 cr)

Physics**** (1 cr)
- PHYS 121 – Introductory Physics I - Lecture **
- PHYS 123 – Physics I Lab (1 cr)

Graduation Requirements: 120 cr
Free Electives = 14-16 cr*
GPA Needed to Declare: 2.5

*Courses in Geography/Earth Science, including GIS, are recommended.

** BIOL 351 is recommended

***One of the following Geography/Earth Science courses may be substituted for a biology course (3 credits):
ESSC 110 – Intro. to Geology (3)
ESSC 210 - Physical Geology (3)
ESSC 220 - Oceanography (3)
GEOG 202 - Introduction to GIS (3)
GEOG 224 - Soils (3)
GEOG 226 - Hydrology (3)
GEOG 244 - Land Use
GEOG 405 - Environmental Conservation & Management in PA
GEOG 421 - Environmental Law
GEOG 444 - Environmental Land-Use Planning

****PHYS 122 and PHYS 125 may be required by some graduate and professional programs.

*****PHYS 385 is recommended for students planning to attend graduate school.

Declare Biology: Admission to this major is competitive. Students must have earned at least 15 credits & have grades of “C” or better in BIOL 161/162 and CHEM 121, MATH 175, or MATH 211.

HELPFUL HINTS FOR ADVISING:
Students should begin their math sequence in their 1st year.
Semester I
- BIOL 161- Principles of Bio
- CHEM 121 – Chemical Bonding
- CHEM 125 – Chem Lab IB

Semester II
- BIOL 162 – Principles of Bio
- CHEM 122 – Chemical Dynamics
- CHEM 126 – Chem Lab IIB

Notes: Physics is normally taken in the junior year

Students lacking strong chemistry/math backgrounds should consider taking CHEM 105 before CHEM 121.

Disclaimer: Courses may be subject to change.
Biology, Health Professions Concentration – B.S.

Requirements for Biology major with Health Professions Concentration = 56-61 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Biology Core Courses (13 cr)

- BIOL 161 – Principles of Bio.: Cell Structure and Function **
- BIOL 162 – Principles of Bio.: Organismal Diversity (4 cr)
- BIOL 220 – Microbiology (4 cr)
- BIOL 260 – Genetics (4 cr)
- BIOL 499 – Capstone Seminar in Biology (1 cr)

Physiology Elective (4 cr)
Select one:

- BIOL 350 – Human Physiology (4 cr)
- BIOL 351 – Animal Physiology (4 cr)

Anatomy Elective (3-4 cr)
Select one:

- BIOL 370 – Comparative Vertebrate Anatomy (4 cr)
- BIOL 371 – Human Anatomy (4 cr) [pre-physical therapy, pre-physician assistant, pre-occupational therapy]
- BIOL 375 – Histology (3 cr)

Cellular Elective (3 cr)
Select one:

- BIOL 385 – Cell Biology (3 cr)
- BIOL 418 – Molecular Biology (3 cr)

Breadth Elective (3 cr)
Select one:

- BIOL 208 – Field Biology (3 cr)
- BIOL 210 – Field Zoology (3 cr)
- BIOL 230 – Botany (3 cr)
- BIOL 242 – Ecology (3 cr)
- BIOL 330 – Animal Behavior (3 cr)
- BIOL 362 – Invertebrate Zoology (3 cr)
- BIOL 363 – Vertebrate Zoology (3 cr)
- BIOL 406 – Mammalogy (3 cr)
- BIOL 412 – Ichthyology (3 cr)
- BIOL 417 – Herpetology (3 cr)
- BIOL 419 – Ornithology (3 cr)
- BIOL 430 – Principles of Evolution (3 cr)

Additional Biology Electives (9 cr)

Professional program requirements should be considered when choosing electives. Only 3 credits of internship or research may be used here.

- BIOL _____________________________
- BIOL _____________________________
- BIOL _____________________________

Chemistry Requirements (16-19 cr)

- CHEM 121 – Chemical Bonding **
- CHEM 125 – Lab IIB (1 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 126 – Lab IIB (1 cr)

Select one:

- CHEM 227 – Intro to Biochemistry (4 cr)
- OR
- CHEM 222 – Modern Organic Chem II (3 cr) AND
- CHEM 226 – Lab IVB (1 cr) AND
- CHEM 301 – Biochemistry I (3 cr)

Physics Requirements (5 cr)

- PHYS 121 – Introductory Physics I**
- PHYS 123 – Physics I Lab (1 cr)
- PHYS 122 – Introductory Physics II (3 cr)
- PHYS 125 – Physics II Lab (1 cr)

Mathematics Requirements (3-4 cr)

- MATH 211 – Calculus I **
Select one:

- MATH 117 – Applied Statistics (3-4 cr) ** OR
- MATH 217 – Statistics I (4 cr) **

Organic II w/lab and Biochemistry I are required for pre-med, pre-dental, pre-vet, and pre-pharmacy students. Pre-meds are urged to also take CHEM 420 – Biochemistry II. Some veterinary programs require a “full course” in biochemistry, i.e., Biochemistry I & II.

Graduation Requirements: 120 cr

Free Electives = 12-17 cr

GPA Needed to Declare: 2.8

Declare Biology: Admission to this major is competitive. Students must have earned at least 15 credits & have grades of “C” or better in BIOL 161/Biol 162 and CHEM 121, MATH 175, or MATH 211.

The policy of the Shippensburg University Health Professions Committee requires a minimum 3.2 cumulative QPA (medical, dental, veterinary applicants) or 3.0 cumulative QPA (optometry, podiatric applicants) in order for a student to be granted a practice interview and committee letter.

HELPFUL HINTS FOR ADVISING:

Students should begin their math sequence in their 1st year.

Semester I
BIOL 161 – Principles of Bio
CHEM 121 – Chemical Bonding
CHEM 125 – Chem Lab IB

Semester II
BIOL 162 – Principles of Bio
CHEM 122 – Chemical Dynamics
CHEM 126 – Chem Lab IIB

Notes: Physics is normally taken in the junior year

Students lacking strong chemistry/math backgrounds should consider taking CHEM 105 before CHEM 121.

Disclaimer: Courses may be subject to change.
Biology, Secondary Education Certification – B.S.

Requirements for the Biology major with Secondary Education Certification = 80 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Biology Core Courses (21 cr)**

- **BIOL 161 – Principles of Bio.: Cell Structure and Function **
- **BIOL 162 – Principles of Bio.: Organismal Diversity (4 cr)
- **BIOL 208 – Field Biology (3 cr)
- **BIOL 242 – Ecology (3 cr)
- **BIOL 260 – Genetics (4 cr)
- **BIOL 385 – Cell Biology (3 cr)
- **BIOL 430 – Principles of Evolution (3 cr)
- **BIOL 499 – Capstone Seminar in Biology (1 cr)

**Physiology Elective (4 cr)**

Select one:
- **BIOL 350 – Human Physiology (4 cr) OR
- **BIOL 351 – Animal Physiology (4 cr)**

**Biology Electives (9 cr)**

Only 3 credits of research or internship may count toward biology electives. Credits in excess of that number count as free electives.

- **CHEM 121 – Chemical Bonding **
- **CHEM 125 – Lab IB (1 cr)
- **CHEM 122 – Chemical Dynamics (3 cr)
- **CHEM 126 – Lab IIB (1 cr)
- **CHEM 221 – Organic Chemistry (3 cr)
- **CHEM 225 – Lab IIIB (1 cr)

Recommended:
- **CHEM 227 – Introduction to Biochemistry (4 cr)

**Physics Requirements (1 cr)**

- **PHYS 121 – Introductory Physics I - Lecture **
- **PHYS 123 – Physics I Lab (1 cr)

Recommended:
- **PHYS 122 – Introductory Physics II - Lecture (3 cr)
- **PHYS 125 – Physics II Lab (1 cr)

**Mathematics Requirements (3-4 cr)**

- **MATH 211 – Calculus I **
- **MATH 117 – Applied Statistics (3-4 cr)**
- **MATH 217 – Statistics I (4 cr)**

**College of Education and Human Services (33 cr)**

- **TEED 207 – Org. & Psych. Foundations (3 cr)
- **SPEE 273 - Introduction to Exceptionalities **
- **SPEE 423 - Effective Instructional Strategies (3 cr)
- **SPEE 483 - Assessing for Curriculum Decision Making (3 cr)
- **EDFN 440 – Teaching Science in Secondary Schools (3 cr)
- **EDFN 441 - Curriculum & Evaluation in Secondary Sci (3 cr)
- **READ 413 – Teaching Reading to ELL (3 cr)
- **EDFN 495 – Student Teaching & Practicum (12 cr)

Graduation Requirements: 120+ cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

**Declare Biology:** Admission to this major is competitive. Students must have earned at least 15 credits & have grades of “C” or better in BIOL 161/BIOL 162 and CHEM 121, MATH 175, or MATH 211.

**PAPA examinations:** All education majors must pass the first level of the PAPA assessments in reading, math, and writing before 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

**HELPFUL HINTS FOR ADVISING:**

Students should begin their math sequence in their 1st year.

**Semester I**

- **BIOL 161 – Principles of Bio**
- **CHEM 121 – Chemical Bonding**
- **CHEM 125 – Chem Lab IB**

**Semester II**

- **BIOL 162 – Principles of Bio**
- **CHEM 122 – Chemical Dynamics**
- **CHEM 126 – Chem Lab IIB**

**Notes:** Physics is normally taken in the junior year

Students lacking strong chemistry/math backgrounds should consider taking CHEM 105 before CHEM 121.

**Disclaimer:** Courses may be subject to change
## Chemistry, B.S.

Requirements for the Chemistry major = 59 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

### Chemistry Core Courses (46 cr)
- **CHEM 110 – The Chemistry Experience (1 cr)**
- **CHEM 121 – Chemical Bonding (3 cr) **
- CHEM 123 – Lab IA-Chemical Systems (1 cr)
- **CHEM 122 – Chemical Dynamics (3 cr)**
- CHEM 124 – Lab IIA-Experimental Quant. Analysis (3 cr)
- **CHEM 221 – Modern Organic Chemistry I (3 cr)**
- CHEM 223 – Lab IIIA-Experimental Org. Techniques (1 cr)
- **CHEM 222 – Modern Organic Chemistry II (3 cr)**
- CHEM 224 – Lab IVA-Qualitative Organic Analysis (3 cr)
- **CHEM 301 – Biochemistry I (3 cr)**
- **CHEM 313 – Chemistry Seminar (1 cr)**
- **CHEM 324 – Advanced Organic Lab (1 cr)**
- **CHEM 363 – Physical Chemistry I (4 cr)**
- **CHEM 364 – Physical Chemistry II (4 cr)**
- **CHEM 371 – Analytical Chemistry (4 cr)**
- **CHEM 381 – Intermediate Inorganic Chemistry (3 cr)**
- **CHEM 481 – Advanced Inorganic Chemistry (4 cr)**

Select one:
- **CHEM 420 – Biochemistry II (3 cr)**
- OR
- **CHEM 490 – Special Topics (3 cr)**

### Mathematics Requirements (8 cr)
- **MATH 211 – Calculus I (4 cr) **
- **MATH 212 – Calculus II (4 cr)**

### Physics Requirements (8 cr)
- **PHYS 205 – Intermediate Physics I (3 cr) **
- PHYS 124 – Physics IB Lab (1 cr)
- **PHYS 206 – Intermediate Physics II (3 cr)**
- PHYS 126 – Physics IIB Lab (1 cr)

### Biology Requirements (4 cr)
- **BIOL 161 – Prin. of Bio: Cell Str. & Funct. (4 cr) **

### Computer Science Requirements (4 cr)
- **CMSC 110 – Computer Science I (4 cr)**

Graduation Requirements: 120 cr
Free Electives = 16 cr
GPA Needed to Declare:  2.0

To graduate with American Chemical Society certification, students must declare and complete the American Chemical Society (ACS) certification Minor.

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. Satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

### HELPFUL HINTS FOR ADVISING:
Students should begin their math sequence in their 1st year.

#### Semester I
- CHEM 121 – Chemical Bonding
- CHEM 123 – Lab IA
- MATH 211 – Calculus I

#### Semester II
- CHEM 122 – Chemical Dynamics
- CHEM 124 – Lab IIA
- MATH 212 – Calculus II
- BIOL 161 – Prin. of Bio: Cell Structure & Function

#### Semester III
- PHYS 205 – Intermediate Physics I
- PHYS 123 – Lab I
- CHEM 221 – Modern Organic Chem I
- CHEM 223 – Lab IIIA

#### Semester IV
- PHYS 206 – Intermediate Physics II
- PHYS 125 – Lab II
- CHEM 222 – Mod Organic Chem II
- CHEM 224 – Lab IVA

Chemistry minor is available – 23-27 cr
Biochemistry minor is available – 24-28 cr

Disclaimer: Courses may be subject to change.
Chemistry, Biochemistry – B.S.

Requirements for Chemistry major with Biochemistry Concentration = 65 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Chemistry Requirements (46 cr)
- CHEM 110 – The Chemistry Experience (1 cr)
- CHEM 121 – Chemical Bonding (3 cr) **
- CHEM 123 – Lab IA-Chemical Systems (1 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 124 – Lab IIA-Experimental Quant. Analysis (3 cr)
- CHEM 221 – Modern Organic Chemistry I (3 cr)
- CHEM 223 – Lab IIIA-Experimental Org. Techniques (1 cr)
- CHEM 222 – Modern Organic Chemistry II (3 cr)
- CHEM 224 – Lab IVA-Qualitative Organic Analysis (3 cr)
- CHEM 301 – Biochemistry I (3 cr)
- CHEM 313 – Chemistry Seminar (1 cr)
- CHEM 324 – Advanced Organic Lab (1 cr)
- CHEM 363 – Physical Chemistry I (4 cr)
- CHEM 364 – Physical Chemistry II (4 cr)
- CHEM 371 – Analytical Chemistry (4 cr)
- CHEM 381 – Intermediate Inorganic Chemistry (3 cr)
- CHEM 420 – Biochemistry II (3 cr)
- CHEM 421 – Biochemistry Lab (1 cr)
- CHEM 496 – Introduction to Research III (1 cr)

Mathematics Requirements (8 cr)
- MATH 211 – Calculus I (4 cr) **
- MATH 212 – Calculus II (4 cr)

Physics Requirements (8 cr)
- PHYS 205 – Intermediate Physics I (3 cr) **
- PHYS 206 – Intermediate Physics II (3 cr)
- PHYS 124 – Physics IIB Lab (1 cr)
- PHYS 125 – Physics IIB Lab (1 cr)

Biology Requirements (14 cr)
- BIOL 161 – Prin. of Bio: Cell Str. & Funct. (4 cr) **
- BIOL 260 – Genetics (4 cr)
- BIOL 385 – Cell Biology (3 cr)
- BIOL 461 – Techniques in Biotechnology (3 cr)

Restricted Elective (3-4 cr)
Select one:
- CHEM 481 – Advanced Inorganic Chemistry (4 cr)
- OR
- BIOL 220 – Microbiology (4 cr)
- OR
- BIOL 408 – Virology (3 cr)
- OR
- BIOL 409 – Immunology (3 cr)

Recommended Electives:
- CMSC 110 Computer Science I (4 cr) **
- CHEM 490 Special Topics (3 cr)
- BIOL 418 – Molecular Biology (3 cr)

Graduation Requirements: 120 cr
Free Electives = 10 cr
GPA Needed to Declare: 2.0

To graduate with American Chemical Society certification, students must declare and complete the American Chemical Society (ACS) certification Minor.

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. Satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

HELPFUL HINTS FOR ADVISING:
Students should begin their math sequence in their 1st year.

Semester I
- CHEM 121 – Chemical Bonding
- CHEM 123 – Lab IA
- MATH 211 – Calculus I

Semester II
- CHEM 122 – Chemical Dynamics
- CHEM 124 – Lab IIA
- MATH 212 – Calculus II
- BIOL 161 – Prin. of Bio: Cell Structure & Function

Semester III
- PHYS 205 – Intermediate Physics I
- PHYS 123 – Lab I
- CHEM 221 – Modern Organic Chem I
- CHEM 223 – Lab II A
- BIOL 260 – Genetics

Semester IV
- PHYS 206 – Intermediate Physics II
- PHYS 125 – Lab II
- CHEM 222 – Mod Organic Chem II
- CHEM 224 – Lab IVA

Disclaimer: Courses may be subject to change.
Chemistry, Forensics – B.S.

Requirements for Chemistry major with Forensics Concentration = 65 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Chemistry Core Courses (43-44 cr)

- CHEM 110 – The Chemistry Experience (1 cr)
- CHEM 121 – Chemical Bonding (3 cr) **
- CHEM 123 – Lab IA-Chemical Systems (1 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 124 – Lab IIA-Experimental Quant. Analysis (3 cr)
- CHEM 221 – Modern Organic Chemistry I (3 cr)
- CHEM 223 – Lab IIIA-Experimental Org. Techniques (1 cr)
- CHEM 222 – Modern Organic Chemistry II (3 cr)
- CHEM 224 – Lab IVA-Qualitative Organic Analysis (3 cr)
- CHEM 301 – Biochemistry I (3 cr)
- CHEM 324 – Advanced Organic Lab (1 cr)
- CHEM 363 – Physical Chemistry I (4 cr)
- CHEM 364 – Physical Chemistry II (4 cr)
- CHEM 371 – Analytical Chemistry (4 cr)
- CHEM 381 – Intermediate Inorganic Chemistry (3 cr)
- CHEM 4xx – Chemistry Elective (3-4 cr)

Mathematics Requirements (8 cr)

- MATH 211 – Calculus I (4 cr)**
- MATH 212 – Calculus II (4 cr)

Physics Requirements (8 cr)

- PHYS 205 – Intermediate Physics I (3 cr) **
- PH124 – Physics IB Lab (1 cr)
- PHYS 206 – Intermediate Physics II (3 cr)
- PHYS 126 – Physics IIB Lab (1 cr)

Biology Requirements (8 cr)

- BIOL 161 – Prin. of Bio: Cell Str. & Funct. (4 cr) **
- BIOL 260 – Genetics (4 cr)

Criminal Justice Requirements (12 cr)

- CRJU 100 – Introduction to Criminal Justice (3 cr)
- CRJU 261 – Criminal Law and Procedures (3 cr)
- CRJU 336 – Introduction to Forensic Science (3 cr)
- CRJU 456 – Forensic Science: Evidence Analysis (3 cr)

Recommended Electives (9 cr)

- BIOL 418 – Molecular Biology (3 cr)
- BIOL 461 – Techniques in Biotechnology (3 cr)
- CRJU 321 – Criminal Investigation (3 cr)

Graduation Requirements: 120 cr
Free Electives = 10 cr
GPA Needed to Declare: 2.0

To graduate with American Chemical Society certification, students must declare and complete the American Chemical Society (ACS) certification Minor.

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. Satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

HELPFUL HINTS FOR ADVISING:

Students should begin their math sequence in their 1st year.

Semester I

- CHEM 121 – Chemical Bonding
- CHEM 123 – Lab IA
- MATH 211 – Calculus I

Semester II

- CHEM 122 – Chemical Dynamics
- CHEM 124 – Lab IIA
- MATH 212 – Calculus II
- BIOL 161 – Prin. of Bio: Cell Structure & Function

Semester III

- PHYS 205 – Intermediate Physics I
- PHYS 123 – Lab I
- CHEM 221 – Modern Organic Chem I
- CHEM 223 – Lab IIIA
- BIOL 260 – Genetics

Semester IV

- PHYS 206 – Intermediate Physics II
- PHYS 125 – Lab II
- CHEM 222 – Mod Organic Chem II
- CHEM 224 – Lab IVA

Disclaimer: Courses may be subject to change.
### Chemistry, Medical Sciences – B.S.

Requirements for Chemistry major with medical sciences concentration  
= 62 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Chemistry Core Courses (36-38 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>CHEM 110 – The Chemistry Experience</td>
<td>1 cr</td>
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<tr>
<td>CHEM 121 – Chemical Bonding</td>
<td>3 cr **</td>
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<tr>
<td>CHEM 122 – Chemical Dynamics</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 123 – Lab IA-Chemical Systems</td>
<td>1 cr</td>
</tr>
<tr>
<td>CHEM 124 – Lab IIA-Experimental Quant. Analysis</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 221 – Modern Organic Chemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 222 – Modern Organic Chemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 223 – Lab IIIA-Experimental Org. Techniques</td>
<td>1 cr</td>
</tr>
<tr>
<td>CHEM 224 – Lab IV – Qualitative Organic Analysis</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 301 – Biochemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 302 – Biochemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 313 – Chemistry Seminar</td>
<td>1 cr</td>
</tr>
<tr>
<td>CHEM 363 – Physical Chemistry I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CHEM 381 – Intermediate Inorganic Chemistry</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>CHEM 420 – Biochemistry II (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

Select one:
- CHEM 497 – Introduction to Research II (2 cr)

**Mathematics Requirements (8 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 211 – Calculus I</td>
<td>(4 cr) **</td>
</tr>
<tr>
<td>MATH 212 – Calculus II</td>
<td>(4 cr)</td>
</tr>
</tbody>
</table>

**Biology Requirements (18 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 161 – Prin. of Bio: Cell Str. &amp; Funct.</td>
<td>(4 cr) **</td>
</tr>
<tr>
<td>BIOL 162 – Prin. of Bio: Organismal Diversity</td>
<td>(4 cr)</td>
</tr>
<tr>
<td>BIOL 260 – Genetics</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>BIOL 385 – Cell Biology</td>
<td>(3 cr)</td>
</tr>
</tbody>
</table>

Select one:
- BIOL 350 – Human Physiology (4 cr)
- OR
- BIOL 351 – Animal Physiology (4 cr)

**Physics Requirements (8 cr)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 205 – Intermediate Physics I</td>
<td>(3 cr) **</td>
</tr>
<tr>
<td>PHYS 124 – Physics IA Lab</td>
<td>(1 cr)</td>
</tr>
<tr>
<td>PHYS 206 – Intermediate Physics II</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>PHYS 126 – Physics IIB Lab</td>
<td>(1 cr)</td>
</tr>
</tbody>
</table>

**Restricted Electives (3-8 cr)**

Select one or two:
- BIOL 220 – Microbiology (4 cr) OR
- BIOL 375 – Histology (3 cr) OR
- BIOL 408 – Principles of Virology (3 cr) OR
- BIOL 418 – Molecular Biology (3 cr) OR
- BIOL 461 – Techniques in Biotechnology (3 cr) OR
- CHEM 364 – Physical Chemistry II (4 cr) OR
- CHEM 371 – Analytical Chemistry (4 cr) OR

### Sociology and Psychology Requirements (6 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOCI 101 – Introduction to Sociology</td>
<td>(3 cr) **</td>
</tr>
<tr>
<td>PSYC 101 – General Psychology</td>
<td>(3 cr) **</td>
</tr>
</tbody>
</table>

**Recommended Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 409 – Immunology</td>
<td>(3 cr)</td>
</tr>
<tr>
<td>CHEM 324 – Advanced Organic Chemistry Lab</td>
<td>(1 cr)</td>
</tr>
<tr>
<td>CHEM 481 – Advanced Inorganic Chemistry</td>
<td>(4 cr)</td>
</tr>
<tr>
<td>CHEM 490 – Selected Topics in Chemistry</td>
<td>(1-3 cr)</td>
</tr>
<tr>
<td>CMSC 110 – Computer Science I - Lecture &amp; Lab</td>
<td>(4 cr)</td>
</tr>
<tr>
<td>SOCI 369 – Medical Sociology</td>
<td>(3 cr)</td>
</tr>
</tbody>
</table>

**Graduation Requirements: 120 cr**

Free Electives = 13 cr

GPA Needed to Declare: 3.2

To enter into this concentration, students must have a GPA of 3.2. Students in this concentration must maintain a GPA of 3.2 or better.

All chemistry majors will take a comprehensive examination in their junior year a time and place designated by the department. Satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

Students who choose this concentration are not eligible for American Chemical Society Certification.

### HELPFUL HINTS FOR ADVISING:

Students should begin their math sequence in their 1st year.

**Semester I**

- CHEM 121 – Chemical Bonding
- CHEM 123 – Lab IA
- MATH 211 – Calculus I

**Semester II**

- CHEM 122 – Chemical Dynamics
- CHEM 124 – Lab IIA
- MATH 212 – Calculus II

**Semester III**

- PHYS 205 – Intermediate Physics I
- PHYS 123 – Lab I
- BIOL 162 – Prin. of Bio: Organismal Diversity
- CHEM 221 – Modern Organic Chem I
- CHEM 223 – Lab IIIA
- BIOL 161 – Prin. of Bio: Cell Structure & Function

**Semester IV**

- PHYS 206 – Intermediate Physics II
- PHYS 125 – Lab II
- CHEM 222 – Mod Organic Chem II
- CHEM 224 – Lab IVA

**Disclaimer:** Courses may be subject to change.
Chemistry, Pre-Pharmacy Concentration – B.S.

Requirements for Chemistry major with Pre-Pharmacy Concentration = 62 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Chemistry Core Courses (43-44 cr)
- CHEM 110 – The Chemistry Experience (1 cr)
- CHEM 121 – Chemical Bonding (3 cr) **
- CHEM 123 – Lab IA-Chemical Systems (1 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 124 – Lab IIA-Experimental Quant. Analysis (3 cr)
- CHEM 221 – Modern Organic Chemistry I (3 cr)
- CHEM 223 – Lab IIIA-Experimental Org. Techniques (1 cr)
- CHEM 222 – Modern Organic Chemistry II (3 cr)
- CHEM 224 – Lab IVA-Qualitative Organic Analysis (3 cr)
- CHEM 301 – Biochemistry I (3 cr)
- CHEM 324 – Advanced Organic Lab (1 cr)
- CHEM 363 – Physical Chemistry I (4 cr)
- CHEM 364 – Physical Chemistry II (4 cr)
- CHEM 371 – Analytical Chemistry (4 cr)
- CHEM 381 – Intermediate Inorganic Chemistry (3 cr)
- CHEM 4XX – Chemistry Elective (3-4 cr)

Mathematics Requirements (11 cr)
- MATH 117 – Applied Statistics (3 cr) **
- MATH 211 – Calculus I (4 cr) **
- MATH 212 – Calculus II (4 cr)

Physics Requirements (8 cr)
- PHYS 205 – Intermediate Physics I (3 cr) **
- PHYS 124 – Physics IB Lab (1 cr)
- PHYS 206 – Intermediate Physics II (3 cr)
- PHYS 126 – Physics IIB Lab (1 cr)

Biology Requirements (16 cr)
- BIOL 161 – Prin. of Bio: Cell Str. & Funct. (4 cr)**
- BIOL 162 – Prin. of Bio: Organismal Diversity (4 cr)
- BIOL 220 – Microbiology (4 cr)
Select one:
- BIOL 350 – Human Physiology (4 cr)
- BIOL 371 – Human Anatomy (4 cr)

Graduation Requirements: 120 cr
Free Electives = 13 cr
GPA Needed to Declare: 2.0

All students are expected to have a minimum GPA of 2.8 by the end of the sophomore year. Some pre-professional programs will require a considerably higher GPA to be competitive for admission to a professional school.

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. To graduate with American Chemical Society certification, students must declare and complete the American Chemical Society (ACS) certification Minor.

HELPFUL HINTS FOR ADVISING:
Students should begin their math sequence in their 1st year.

Semester I
- CHEM 121 – Chemical Bonding
- CHEM 123 – Lab IA
- MATH 211 – Calculus I

Semester II
- CHEM 122 – Chemical Dynamics
- CHEM 124 – Lab IIA
- MATH 212 – Calculus II
- BIOL 161 – Prin. of Bio: Cell Structure & Function

Semester III
- PHYS 205 – Intermediate Physics I
- PHYS 123 – Lab I
- CHEM 221 – Modern Organic Chem I
- CHEM 223 – Lab IIIA
- BIOL 162 – Prin. of Bio: Organismal Diversity

Semester IV
- PHYS 206 – Intermediate Physics II
- PHYS 125 – Lab II
- CHEM 222 – Mod Organic Chem II
- CHEM 224 – Lab IVA

Disclaimer: Courses may be subject to change.
### Chemistry, Secondary Education Certification – B.S.

**Requirements for Chemistry major with Secondary Education Certification**  
Certification = 78 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

#### Chemistry Core Courses (39 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>__CHEM 110</td>
<td>The Chemistry Experience</td>
<td>1 cr</td>
</tr>
<tr>
<td>__CHEM 121</td>
<td>Chemical Bonding</td>
<td>3 cr **</td>
</tr>
<tr>
<td>__CHEM 123</td>
<td>Lab IA-Chemical Systems</td>
<td>1 cr</td>
</tr>
<tr>
<td>__CHEM 122</td>
<td>Chemical Dynamics</td>
<td>3 cr</td>
</tr>
<tr>
<td>__CHEM 124</td>
<td>Lab IIA-Experimental Quant. Analysis</td>
<td>3 cr</td>
</tr>
<tr>
<td>__CHEM 221</td>
<td>Modern Organic Chemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>__CHEM 223</td>
<td>Lab IIIA-Experimental Org. Techniques</td>
<td>1 cr</td>
</tr>
<tr>
<td>__CHEM 222</td>
<td>Modern Organic Chemistry II</td>
<td>3 cr</td>
</tr>
<tr>
<td>__CHEM 224</td>
<td>Lab IVA-Qualitative Organic Analysis</td>
<td>3 cr</td>
</tr>
<tr>
<td>__CHEM 301</td>
<td>Biochemistry I</td>
<td>3 cr</td>
</tr>
<tr>
<td>__CHEM 363</td>
<td>Physical Chemistry I (4 cr)</td>
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</tr>
<tr>
<td>__CHEM 364</td>
<td>Physical Chemistry II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>__CHEM 371</td>
<td>Analytical Chemistry (4 cr)</td>
<td></td>
</tr>
<tr>
<td>__CHEM 381</td>
<td>Intermediate Inorganic Chemistry (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

#### Mathematics (8 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>__MATH 211</td>
<td>Calculus I</td>
<td>4 cr **</td>
</tr>
<tr>
<td>__MATH 212</td>
<td>Calculus II</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

#### Physics Requirements (8 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>__PHYS 205</td>
<td>Intermediate Physics I</td>
<td>3 cr **</td>
</tr>
<tr>
<td>__PHYS 124</td>
<td>Physics IB Lab</td>
<td>1 cr</td>
</tr>
<tr>
<td>__PHYS 206</td>
<td>Intermediate Physics II</td>
<td>3 cr</td>
</tr>
<tr>
<td>__PHYS 126</td>
<td>Physics IIB Lab</td>
<td>1 cr</td>
</tr>
</tbody>
</table>

#### Biology (4 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>__BIOL 161</td>
<td>Prin. of Bio: Cell Str. &amp; Funct.</td>
<td>4 cr **</td>
</tr>
</tbody>
</table>

#### Psychology Requirement (3 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>__PSYC 101</td>
<td>General Psychology</td>
<td>3 cr **</td>
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</tbody>
</table>

#### College of Education and Human Services (33-36 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>__TEED 207</td>
<td>Org. &amp; Psych. Foundations</td>
<td>3 cr</td>
</tr>
<tr>
<td>__SPEE 273</td>
<td>Introduction to Exceptionalities</td>
<td>3 cr</td>
</tr>
<tr>
<td>__SPEE 423</td>
<td>Effective Instructional Strategies</td>
<td>3cr</td>
</tr>
<tr>
<td>__EDFN 440</td>
<td>Teaching of Science in Secondary Schools</td>
<td>3 cr</td>
</tr>
<tr>
<td>__EDFN 441</td>
<td>Curriculum &amp; Evaluation in Secondary Sci</td>
<td>3 cr</td>
</tr>
<tr>
<td>__READ 413</td>
<td>Teaching Reading to ELL</td>
<td>3 cr</td>
</tr>
<tr>
<td>__SPEE 483</td>
<td>Assessing Children with Exceptionalities</td>
<td>3 cr</td>
</tr>
<tr>
<td>__EDFN 495</td>
<td>Student Teaching &amp; Practicum</td>
<td>12-15 cr</td>
</tr>
</tbody>
</table>

Graduation Requirements: 123 cr  
Free Electives = 0 cr  
GPA Needed to Declare:  3.0

To graduate with American Chemical Society certification, students must declare and complete the American Chemical Society (ACS) certification Minor.

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. Satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.

**PAPA examinations:** All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

**HELPFUL HINTS FOR ADVISING:**

Students should begin their math sequence in their 1st year.

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
</tr>
</thead>
</table>
| **I**    | CHEM 121 - Chemical Bonding  
           | CHEM 123 - Lab IA  
           | MATH 211 - Calculus I |
| **II**   | CHEM 122 - Chemical Dynamics  
           | CHEM 124 - Lab IIA  
           | MATH 212 - Calculus II  
           | PSYC 101 - General Psychology |
| **III**  | PHYS 205 - Intermediate Physics I  
           | PHYS 123 - Lab I  
           | CHEM 221 - Modern Organic Chem I  
           | CHEM 223 - Lab IIIA  
           | BIOL 161 - Prin. of Bio: Cell Structure & Function |
| **IV**   | PHYS 206 - Intermediate Physics II  
           | PHYS 125 - Lab II  
           | CHEM 222 - Mod Organic Chem II  
           | CHEM 224 - Lab IVA |

**Disclaimer:** Courses may be subject to change.
Civil Engineering, B.S.

Requirements for Civil Engineering major = 88 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Engineering Core (12 cr)
- ENGR 100 – Engineering Seminar I (1 cr)
- ENGR 110 – Modeling & Simulation (3 cr)
- ENGR 120 – Programming for Engineers (3 cr)
- ENGR 200 – Engineering Seminar II (1 cr)
- ENGR 300 – Engineering Seminar III (1 cr)
- ENGR 310 – Statistical Process Control (3 cr)

Mathematics Requirements (19 cr)
- MATH 211 – Calculus I (4 cr) **
- MATH 212 – Calculus II (4 cr) **
- MATH 213 – Calculus III (4 cr)
- MATH 322 – Differential Equations (3 cr)
- MATH 375 – Probability and Stats for Engineers (4 cr)

Physical Science Requirements (11 cr)
- PHYS 205 – Intermediate Physics I Lecture (3 cr) **
- PHYS 124 – Intermediate Physics I Lab (1 cr)
- PHYS 206 – Intermediate Physics II Lecture (3 cr)
- PHYS 126 – Intermediate Physics II Lab (1 cr)
- ESSC 210 – Physical Geology (3 cr) **
- CHEM 121 – Chemical Bonding (3 cr) **
- CHEM 125 – LabIB-Chemical Systems (1 cr)

Civil and Mechanical Engineering Requirements (50 cr)
- MCAE 200 – Statics (3 cr)
- MCAE 210 – Dynamics (4 cr)
- MCAE 220 – Fluids (4 cr)
- CIVE 110 – Measurements and CAD (3 cr)
- CIVE 200 – Mechanics of Materials (4 cr)
- CIVE 300 – Structural Analysis (3 cr)
- CIVE 320 – Construction Methods and Materials (3 cr)
- CIVE 330 – Environmental Engineering (3 cr)
- CIVE 331 – Hydraulic Engineering (4 cr)
- CIVE 340 – Design of Concrete Structures (3 cr)
- CIVE 350 – Soil Mechanics (4 cr)
- CIVE 410 – Foundation Engineering (3 cr)
- CIVE 420 – Transportation Engineering (3 cr)
- CIVE 460 – Highway Engineering and Design (3 cr)
- CIVE 499 – Civil Engineering Capstone (3 cr)

No Concentration (9 cr)
- CIVE 310 – Design of Steel Structures (3 cr)
- CIVE 400 – Construction Project Management (3 cr)
- CIVE XXX – Civil Engineering Elective (3 cr)

Optional Environmental Concentration (12 cr)
- CIVE 436 – Engineering Hydrology (3 cr)
- CIVE 440 – Water and Wastewater Treatment (3 cr)
- CIVE 450 – Waste Management (3 cr)
- CIVE XXX – Civil or GEO/ESS Elective (related to Environmental Concentration) (3 cr)

Graduation Requirements: 120+ cr
Free Electives = 0 cr
GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING:

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Disclaimer: Courses may be subject to change.
Communication, Journalism and Media – B.S.
Broadcast Media Production, Journalism & Public Relations Concentrations

All students must complete 48 credits in the major to qualify for graduation. The major consists of five core courses (15 credits), four courses in a professional concentration (12 credits), and seven elective courses (21 credits). Prerequisites are listed in parentheses for certain courses. All majors also must pass a Cognate course in mathematics – either MATH 117 Applied Statistics (3 credits) or MATH 217 Statistics I (4 credits).

Prescribed General Education Courses (all concentrations; 6 credits):
COMM 111 Media Literacy (majors/minors must achieve a “C” grade or better before taking any other COMM courses)
COMM 245 Diversity & the Media

Global Languages Requirement:
All students must be proficient at the intermediate level. The intermediate level is level 103.

Theory and Writing Core (all concentrations; 5 courses, 15 credits):
COMM 112 Media Writing (majors/minors must achieve a “C” grade or better before taking any other COM courses)
COMM 284 Basic Media Production
COMM 294 Social Media Strategy
COMM 345 Media Law (Jr. standing)
COMM 445 Media Ethics & Professionalism (Senior standing)
COMM 445 and Professional Practicum

In preparation for COMM 445 – the capstone class for all majors – all students are required to complete three levels of practical experience in one of the four student media organizations advised by department faculty (The Slate, SUTV, WSYC or PRSSA) as follows:
• Students are required to develop a professional portfolio and can choose from among the four student media organizations, which will provide flexibility for students who wish to gain experience with different media.
• To enroll in COMM 445, faculty advisors will ensure that students are meeting their portfolio commitment and will coordinate with student media faculty advisers to help guide their students.
• Students who have not progressed in producing tangible materials for a professional portfolio will not be permitted to schedule COMM 445 until they have completed the practical experience. Transfer students who join the major as juniors will be required to meet student media requirements in their junior and senior years to be able to schedule COMM 445 in their senior year.

Professional Concentration Courses (4 courses, 12 credits):
All majors must select ONE professional concentration and pass all four courses listed. Courses in the other three concentrations can be used as electives.
Broadcast Media Production Concentration
COMM 224 Media Scriptwriting
COMM 251 Media Studio Production (COMM 284)
COMM 351 Media Field Production (COMM 284)
COMM 424 Media Producing & Performance (COMM 224 or 285; COMM 284) (Sr. only)

Journalism Concentration
COMM 285 Basic News Reporting
COMM 293 News Editing & Design (COMM 285)

COMM 375 Advanced News Reporting (COMM 285)
COMM 478 Digital Journalism (COMM 285; COMM 293) (Sr. only)

Public Relations Concentration
COMM 201 Principles of Public Relations
COMM 241 Public Relations Writing I
COMM 342 Public Relations Writing II (COMM 241)
COMM 432 Public Relations Research & Campaigns (COMM 201; COMM 241) (Sr. only)

Visual Media Concentration
COMM 260 Visual Literacy
COMM 360 Basic Digital Photography
COMM 362 Photojournalism or COMM 476 Magazine Media & Design
COMM 470 Advanced Digital Photography or COMM 481 Interactive Media Design

Electives (7 courses, 21 credits):
All students must select and pass seven elective courses, at least three of which must be at the 300 or 400 level, to complete the major. Elective courses may be chosen from the 12 professional concentration courses above that are not included in the student’s selected concentration and/or the courses listed below.
COMM 252 Digital Media Tools
COMM 290 Advertising Copywriting
COMM 305 Sports Journalism
COMM 335 Media Advertising & Sales
COMM 381 Promotional Media Design
COMM 395 Internship I (external from the department)
COMM 396 Internship II (external from the department)
COMM 401 Film in the Contemporary World
COMM 405 Brand Journalism
COMM 410 Women & the Media
COMM 425 Feature Writing
COMM 460 Case Studies in Public Relations
COMM 465 Documentary Storytelling
COMM 482 Internet Communication
COMM 483 Issues in Media Management
COMM 484 Media Programming
COMM 490, COMM 491, and COMM 492 Selected Topics

Above-average writing skills are needed in this major and students are highly encouraged to take courses that will enhance these skills. As part of the COMM 112: Media Writing course, a grammar/style proficiency exam is given to all students. This exam and course must be passed with a score of 70 or better to pass the course. Students are permitted to take the exam no more than two times.

Graduation Requirements: 120 cr
Free Electives = 27 cr
GPA needed to declare: 2.3
A Communication/Journalism minor is available - 18 cr.
Transfer courses are not permitted to count toward the minor.

Disclaimer: Courses may be subject to change.
Computer Engineering – B.S.

Requirements for Computer Engineering major = 70 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Engineering Core (12 cr)
- ENGR 100 – Engineering Seminar I (1 cr)
- ENGR 110 – Modeling & Simulation (3 cr)
- ENGR 120 – Programming for Engineers (3 cr)
- ENGR 200 – Engineering Seminar II (1 cr)
- ENGR 300 – Engineering Seminar III (1 cr)
- ENGR 310 – Statistical Process Control (3 cr)

Computer Science & Engineering Requirements (26 cr)
- CMPE 220 – Computer Organization (4 cr)
- CMPE 320 – Operating Systems (4 cr)
- CMPE 322 – Microcontrollers & Interfaces (4 cr)
- CMPE 411 – OS Design & Implementation (4 cr)
- CMPE 420 – Digital and Reconfigurable Computing (4 cr)
- ELEN 220 – Linear Circuit Analysis (4 cr)
- CMPE 499 – Engineering Design & Development (2 cr)

Elective Credits (12 cr)
(Must be taken at 300 or 400 level)
- CMPE ______________________ (4 cr)
- ENGR, CMPE, ELEN or SWEN _________________ (4 cr)
- ENGR, CMPE, ELEN or SWEN _________________ (4 cr)

Mathematics Requirements (19 cr)
- MATH 211 – Calculus I (4 cr)**
- MATH 212 – Calculus II (4 cr)
- MATH 213 – Calculus III (4 cr)
- MATH 225 – Discrete Mathematics (4 cr)
- MATH 322 – Differential Equations (3 cr)
- MATH 375 – Probability & Stats for Engineers (4 cr)

Physics Requirements (12 cr)
- PHYS 205 – Intermediate Physics I (3 cr)**
  PHYS 123 – Physics I Lab (1 cr)
- PHYS 206 – Intermediate Physics II (3 cr)
  PHYS 125 – Physics II Lab (1 cr)

Graduation Requirements: 120 cr
Free Electives = 5 cr
GPA Needed to Declare: 2.0

Students must be at a minimum math placement level of 6 to declare.

Students should be advised that this program is academically challenging. Significant effort outside of class, self-discipline, and commitment to completing tasks will be crucial for student success.

Students pursuing this major should be very strong academically, have strong math, logic, and reasoning skills; and a background in science.

HELPFUL HINTS FOR ADVISING:

Semester I
- ENGR 110 – Modeling
- ENGR 110 Engineering Seminar I
- MATH 211 – Calculus I
- PHYS 205 – Intermediate Physics I
- PHYS 123 – Physics I Lab

Semester II
- ENGR 210 – Prog. for Engineers
- MATH 212 – Calculus II
- PHYS 206 – Interm. Physics II
- PHYS 125 – Physics II Lab

Disclaimer: Courses may be subject to change.
Computer Science – B.S.
Computer Graphics, Computer Applications, & Related Discipline Concentrations

Requirements for Computer Science major = 65 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Mathematics Core (15 cr)
__MATH 211 – Calculus I (4 cr) **
__MATH 225 – Discrete Mathematics (4 cr)
__MATH 318 – Elementary Linear Algebra (3 cr)
Select one:
__MATH 217 – Statistics I (4 cr)
OR
__MATH 375 – Probability & Stats for Engineers (4 cr)

Computer Science Core (32 cr)
__CMSC 110 – Computer Science I-Lecture (4 cr) **
__CMSC 111 – Computer Science II (4 cr)
__SWEN 200 – Design Patterns (4 cr)
__CMPE 220 – Computer Organization (4 cr)
__CMSC 310 – Design and Analysis of Algorithms (4 cr)
__CMPE 320 – Operating Systems (4 cr)
__CMSC 410 – Theoretical Foundations of CS (4 cr)
__CMSC 498 – Senior Research Methods (2 cr)
__CMSC 499 – Senior Research and Development (2 cr)

Science Requirement (7-8 cr)
Select any two:
__BIOL 161 – Prin. of Bio: Cell Str. and Funct. (4 cr) **
__BIOL 162 – Prin. of Bio: Organismal Diversity (4 cr) **
__CHEM 121 – Chemical Bonding (3 cr) **
__CHEM 125 – Lab IB-Stoichiometry & Reactions (1 cr) **
__CHEM 126 – Lab IB-Equilibrium & Instr (1 cr) **
__ESSC 110 – Intro to Geology (3 cr) **
__PHYS 205 – Intermediate Physics I (3 cr)
__PHYS 124 – Physics I Lab (1 cr) **
__PHYS 206 – Intermediate Physics II (3 cr)
__PHYS 126 – Physics II Lab (1 cr) **

Artificial Intelligence Concentration (18-19 cr)
__CMSC 462 – Artificial Intelligence (4 cr)
__CMSC 402 – Big Data Analytics (4 cr)
__CMSC 403 – Machine Learning (4 cr)
__CMSC, SWEN, CMPE, or ELEN 4xx (3-4 cr)
Select one:
__MATH 326 – Mathematical Modeling (3 cr) **
__PSYC 325 – Psychology of Human Cognition (3 cr)

Computer Science Applications Concentration (18-20 cr)
__CMSC 371 – Database Management Systems (4 cr)
__CMSC 431 – Computer Networks (4 cr)
__CMSC 462 – Artificial Intelligence (4 cr)
__CMSC, SWEN, CMPE, or ELEN 3xx or 4xx (3-4 cr)
Select one:
__MLSC 231 – Self/Team Dev (2 cr) AND
__MLSC 232 – Indiv/Team Mil Tact (2 cr) **
__MLSC 344 – Bus Syst Analy Des (3 cr) **

Computer Graphics Concentration (18-19 cr)
__CMSC 350 – Introduction to Computer Graphics (4 cr)
__CMSC 361 – Video Game Programming (4 cr)
__CMSC 451 – Computer Graphics Algorithms (4 cr)
__CMSC, SWEN, CMPE, ELEN 3xx or 4xx (3-4 cr)
Select one:
__ART 217 – Computer Design I (3 cr) **
__GEOG 202 – GIS I: Intro to Geographic Info Systems (3 cr) **
__GEOG 339 – Remote Sensing (3 cr)

CS w/ Secondary Field Concentration
__major or minor in other discipline
__CMSC, SWEN, CMPE, ELEN 3xx or 4xx (4 cr)
__CMSC, SWEN, CMPE, ELEN 3xx or 4xx (4 cr)
Select one:
__CMSC 361 – Video Game Programming (4 cr)
__CMSC 371 – Database Mgt Systems (4 cr)
__CMSC 403 – Machine Learning (4 cr)
__CMSC 434 – Web Programming (4 cr)
__CMSC 451 – Comp Graph Algorithm (4 cr)

Graduation Requirements: 120 cr
Free Electives = 10 cr
GPA Needed to Declare: 2.0

Students who wish to design a personalized concentration may do so with the help of their advisor. The advisor will then submit the request to the department for approval. The student’s course of study must be approved by the department in writing.

To declare this major a student must earn a ‘C’ or better in CSC 110 Computer Science I and be at a minimum math placement of level 4.

HELPFUL HINTS FOR ADVISING:

Semester I
CMSC 110 – Computer Science I-Lecture
MATH 211 – Calculus I

Semester II
CMSC 111 – Computer Science II
MATH 225 – Discrete Mathematics

Semester III
SWEN 200 – Design Patterns
CMPE 220 – Computer Organization
BIOL 161, CHEM 121/123, ESSC 110, or PHYS 205/123

Semester IV
CMSC 310 – Design & Analysis of Algorithms
CMSC 320 – Operating Systems
BIOL 162, CHEM 122/124, ESSC 110 or PHYS 206/125

A computer science minor is available – 20-21 cr

Disclaimer: Courses may be subject to change.
Requirements for Economics major = 41-55 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

### Economics Requirements (27 cr)
- **ECON 101 – Prin. of Macroeconomics (3 cr)**
- **ECON 102 – Prin. of Microeconomics (3 cr)**
- **ECON 270 – Intermediate Macroeconomic Theory (3 cr)**
- **ECON 280 – Managerial Economics (3 cr)**
- Five additional 300+ Level ECON Electives

### Business Concentration (24-26 cr)
Courses below fulfill requirements for business minor.
- **ACCT 200 – Fundamentals of Financial Accounting (3 cr)**
- **FINA 311 – Financial Management (3 cr)**
- **MGMT 305 – Organization Behavior (3 cr)**
- **MKMT 305 – Principles of Marketing (3 cr)**
- **FINA or ACCT ____________________________ (3 cr)**

Select one:
- **MATH 181 – Applied Calculus (3 cr) ** OR
- **MATH 211 – Calculus I (4 cr) **

Select one:
- **MATH 117 – Applied Statistics (3 cr) ** OR
- **MATH 217 – Statistics I (4 cr) **

Select one:
- **SCMG 200 – Statistical Applications in Bus. (3 cr)**

### Data Science Concentration (23-27 cr)
- **MATH 217 – Statistics I (4 cr) **
- **MATH 219 - Data Science I (3 cr)**
- **MATH 317 - Statistics II (3 cr)**
- **MATH 319 - Data Science II (3 cr)**
- **ECON 333 – Research & Analysis in Economics (3 cr)**

Select one:
- **MATH 181 - Applied Calculus (3 cr) ** OR
- **MATH 211 - Calculus I (4 cr) **

Select one:
- **MATH 117 - Applied Statistics (3 cr) ** OR
- **MATH 217 - Statistics I (4 cr) **
- **SCMG 200 – Statistical Applications in Bus. (3 cr)**

### Mathematics Concentration (20-23 cr)
- **ECON ____________________________ (300+ level)**
- **MATH 211 - Calculus I (4 cr) **
- **MATH 212 - Calculus II (4 cr) **
- **MATH 217 - Statistics I (3 cr)**

Select 3 of the following, 2 must be 300+:
- **MATH 213 - Calculus III (4 cr)**
- **MATH 225 - Discrete Mathematics (4 cr) **
- **MATH 317 - Statistics II (3 cr)**
- **MATH 318 - Elementary Linear Algebra (3 cr)**
- **MATH 322 - Differential Equations (3 cr)**
- **MATH 425 - Advanced Algebraic Structures (3 cr)**

### Political Science Concentration (24-28 cr)
- **POLI 100 - U.S. Government & Politics (3 cr) **
- **POLI 201 - Foundations of Political Science (3 cr)**
- **POLI 300 - Advanced American Government (3 cr)**
- **POLI ____________________________ (300+ level)**
- **POLI ____________________________ (300+ level)**

Select one:
- **POLI 141 - World Politics (3 cr) **

### Public Administration Concentration (24-26 cr)
- **POLI 100 - U.S. Government & Politics (3 cr) **
- **POLI 271 - Introduction to Public Administration (3 cr)**
- **POLI 300 - Advanced American Government (3 cr)**
- **POLI ____________________________ (3 cr)**

Select one:
- **POLI 371 - Public Management (3 cr) OR**
- **POLI 373 - Public Financial Administration (3 cr)**

### Social Science Concentration (24-28 cr)
- **POLI 100 - U.S. Government & Politics (3 cr) **
- **POLI ____________________________ (300+ level)**
- **SOCI 241 - Contemporary Social Problems (3 cr)**
- **SOCI ____________________________ (300+ level)**
- **GEOG 230 - Economic Geography (3 cr)**
- **GEOG ____________________________ (300+ level)**

Select one:
- **POLI 141 - World Politics (3 cr) **

### Graduation Requirements: 120 cr
GPA Needed to Declare: 2.0
Free Electives = 20-34

Economics minor available – 18-19 cr
Electrical Engineering – B.S.

Requirements for Electrical Engineering major = 74 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Engineering Core (12 cr)
__ENGR 100 – Engineering Seminar I (1 cr)
__ENGR 110 – Modeling & Simulation (3 cr)
__ENGR 120 – Programming for Engineers (3 cr)
__ENGR 200 – Engineering Seminar II (1 cr)
__ENGR 300 – Engineering Seminar III (1 cr)
__ENGR 310 – Statistical Process Control (3 cr)

Computer Engineering Requirements (14 cr)
__CMPE 220 – Computer Organization (4 cr)
__CMPE 322 – Microcontrollers & Interfaces (4 cr)
__CMPE 420 – Digital and Reconfigurable Computing (4 cr)
__CMPE 499 – Engineering Design & Development (2 cr)

Electrical Engineering Requirements (20 cr)
__ELEN 220 – Linear Circuit Analysis (4 cr)
__ELEN 300 – Foundations of Electronic Systems (4 cr)
__ELEN 310 – Signals & Systems (4 cr)
__ELEN 360 – Communications Systems (4 cr)
__ELEN, CMPE, ENGR, SWEN ______________(300+ level)

Math Requirements (23 cr)
__MATH 211 – Calculus I (4 cr)
__MATH 212 – Calculus II (4 cr)
__MATH 213 – Calculus III (4 cr)
__MATH 225 – Discrete Mathematics (4 cr)
__MATH 322 – Differential Equations (3 cr)
__MATH 375 – Probability & Stats for Engineers (4 cr)

Physics Requirements (20 cr)
__PHYS 205 – Intermediate Physics I (3 cr)**
PHYS 123 – Physics I Lab (1 cr)
__PHYS 206 – Intermediate Physics II (3 cr)
PHYS 125 – Physics II Lab (1 cr)**
__PHYS 311 – Quantum I (3 cr)
__PHYS 321 – Electricity & Magnetism I (4 cr)

Graduation Requirements: 120 cr
Free Electives = 1 cr
GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING:

Semester I
ENGR 110 - Modeling
__ELEN 100 – Engineering Seminar I
MATH 211 - Calculus I
PHYS 123 - Physics I Lab
PHYS 205 - Intermediate Physics I

Semester II
ENGR 210 - Programming for Engineers
MATH 212 - Calculus II (4 cr)
PHYS 125 - Physics II Lab (1 cr)
PHYS 206 - Intermediate Physics II (3 cr)

Disclaimer: Courses may be subject to change.
English Core (9 cr)
__ENGL 130 – Literary Studies for Eng. Major & Minor (3 cr)
__ENGL 213 – Writing & Research About Literature (3 cr)
__ENGL 460 – Senior Seminar (3 cr)

Required Survey Courses (9 cr)
Select one:
__ENGL 233 – American Literature I (3 cr) OR
__ENGL 236 – British Literature I (3 cr)
Select one:
__ENGL 234 – American Literature II (3 cr) OR
__ENGL 237 – British Literature II (3 cr)
Select one:
__ENGL 240 – Global Literature (3 cr) OR
__ENGL 239 – Postcolonial Literature (3 cr)

Advanced Studies – Writing (3 cr)
Select at least one:
__ENGL 224 – Introduction to Creative Writing (3 cr)
__ENGL 229 – Advanced Composition (3 cr)
__ENGL 238 – Technical/Professional Writing I (3 cr)
__ENGL 307 – Poetry Writing (3 cr)
__ENGL 308 – Fiction Writing (3 cr)
__ENGL 323 – Reviewing the Arts for Publication (3 cr)
__ENGL 335 – Creative Nonfiction Writing (3 cr)
__ENGL 341 – Teaching Writing in the Secondary Schools (3 cr)
__ENGL 420 – Selected Topics in Writing (3 cr)
__ENGL 427 – Advanced Poetry Workshop (3 cr)
__ENGL 428 – Advanced Fiction Workshop (3 cr)
__ENGL 435 – Advanced Creative Nonfiction (3 cr)
__ENGL 438 – Technical Professional Writing II (3 cr)

Advanced Studies – Genres (3 cr)
Select at least one:
__ENGL 304 – Literary Criticism (3 cr)
__ENGL 333 – Cultural Studies (3 cr)
__ENGL 336 – Theories and Approaches (3 cr)
__ENGL 342 – Mythology (3 cr)
__ENGL 360 – Popular Genres (3 cr)
__ENGL 367 – Studies in Drama (3 cr)
__ENGL 368 – Studies in Fiction (3 cr)
__ENGL 369 – Studies in Poetry (3 cr)
__ENGL 373 – Studies in Creative Nonfiction (3 cr)
__ENGL 440 – Special Topics in Genre (3 cr)

Advanced Studies – History and Movements (3 cr)
Select at least one:
__ENGL 318 – Studies in Eng. Renaissance (3 cr)
__ENGL 330 – Shakespeare (3 cr)
__ENGL 337 – Romanticism (3 cr)
__ENGL 344 – Studies in Single Author (3 cr)
__ENGL 349 – Victorian Literature (3 cr)
__ENGL 363 – Modernism (3 cr)
__ENGL 364 – Postmodernism (3 cr)
__ENGL 366 – History & Structure of Eng Language (3 cr)
__ENGL 376 – Studies in Medieval Literature (3 cr)
__ENGL 377 – The Long 18th Century (3 cr)
__ENGL 380 – 19th Century Literature (3 cr)
__ENGL 383 – Literature After 1900 (3 cr)
__ENGL 430 – Special Topics in Lit History & Movements (3 cr)

Advanced Studies – Identities (3 cr)
Select at least one:
__ENGL 445 – Special Topics in Identities (3 cr)
__ENGL 385 – Studies in Postcolonial Literature (3 cr)
__ENGL 370 – Queer Studies (3 cr)
__ENGL 375 – African American Literature (3 cr)
__ENGL 345 – Women’s Literature (3 cr)
__ENGL 358 – Ethnic Literature (3 cr)
__ENGL 359 – Native American Literature (3 cr)
__ENGL 362 – Disability in Literature (3 cr)

Advanced Studies Electives (12 cr)
Choose 4 courses in Advanced Studies:
__ENGL _______________________________
__ENGL _______________________________
__ENGL _______________________________
__ENGL _______________________________

##B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

Graduation Requirements: 120 cr
Free Electives = 33 cr
GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING:

300-level courses should not be taken in the first 2 semesters.

Semester I ENGL 130 – Literary Studies for English
Semester II ENGL 213 – Writing & Research

An English minor is available – 18 cr
Requirements for English major = 42 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

English Core (9 cr)
- ENGL 130 – Literary Studies for Eng. Major & Minor (3 cr)
- ENGL 213 – Writing & Research About Literature (3 cr)
- ENGL 460 – Senior Seminar (3 cr)

Required Survey Courses (9 cr)
Select one:
- ENGL 233 – American Literature I (3 cr)
- OR
- ENGL 236 – British Literature I (3 cr)
Select one:
- ENGL 234 – American Literature II (3 cr)
- OR
- ENGL 237 – British Literature II (3 cr)
Select one:
- ENGL 240 – Global Literature (3 cr)
- OR
- ENGL 239 – Postcolonial Literature (3 cr)

Writing (12 cr)
- ENGL 229 - Advanced Composition (3 cr)
- ENGL 238 - Technical/Professional Writing I (3 cr)
- ENGL 323 - Reviewing the Arts for Publication (3 cr)
- ENGL 307 - Poetry Writing (3 cr)
- ENGL 308 - Fiction Writing (3 cr)
- ENGL 323 - Reviewing the Arts for Publication (3 cr)
- ENGL 335 - Creative Nonfiction Writing (3 cr)
- ENGL 341 - Teaching Writing in Secondary Schools (3 cr)
- ENGL 420 - Special Topics in Writing (3 cr)
- ENGL 427 - Advanced Poetry Workshop (3 cr)
- ENGL 428 - Advanced Fiction Workshop (3 cr)
- ENGL 435 - Advanced Creative Nonfiction (3 cr)
- ENGL 438 - Technical/Professional Writing II (3 cr)

Advanced Studies - Genres (3 cr)
Select at least one:
- ENGL 304 - Literary Criticism (3 cr)
- ENGL 333 - Cultural Studies (3 cr)
- ENGL 336 - Theories and Approaches (3 cr)
- ENGL 342 - Mythology (3 cr)
- ENGL 360 - Popular Genres (3 cr)
- ENGL 367 - Studies in Drama (3 cr)
- ENGL 368 - Studies in Fiction (3 cr)
- ENGL 369 - Studies in Poetry (3 cr)
- ENGL 373 - Studies in Creative Nonfiction (3 cr)
- ENGL 440 - Special Topics in Genre (3 cr)

Advanced Studies - History and Movements (3 cr)
Select at least one:
- ENGL 318 - Studies in Eng. Renaissance (3 cr)
- ENGL 330 - Shakespeare (3 cr)
- ENGL 337 - Romanticism (3 cr)
- ENGL 344 - Studies in Single Author (3 cr)
- ENGL 349 - Victorian Literature (3 cr)
- ENGL 363 - Modernism (3 cr)
- ENGL 364 - Postmodernism (3 cr)

Advanced Studies - Identities (3 cr)
Select at least one:
- ENGL 445 - Special Topics in Identities (3 cr)
- ENGL 385 - Studies in Postcolonial Literature (3 cr)
- ENGL 370 - Queer Studies (3 cr)
- ENGL 375 - African American Literature (3 cr)
- ENGL 345 - Women's Literature (3 cr)
- ENGL 358 - Ethnic Literature (3 cr)
- ENGL 359 - Native American Literature (3 cr)
- ENGL 362 - Disability in Literature (3 cr)

English Elective (3 cr)
Choose 1 course in Advanced Studies:
- ENGL ____________________________(3 cr)

A literature course taken to satisfy the Gen. Ed. Category B requirement does NOT double count for the English major or the English minor.

#B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

F=Fall only class
S=Spring only class

Graduation Requirements: 120 cr
Free Electives = 33 cr
GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING:
300-level courses should not be taken in the first 2 semesters.

Semester I
ENGL 130 - Literary Studies for English

Semester II
ENGL 213 - Writing & Research

An English minor is available - 18 cr

Disclaimer: Courses may be subject to change.
## English, Secondary Education Certification – B.A. ##

Requirements for English major with Secondary Cert. = 75 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

### Psychology Requirement (3 cr)
- PSYC 101 – General Psychology (3 cr) **

### Math Requirements (6 cr)
- MATH except 185 [MATH 105, 107 & 117, recommended] **
- MATH except 185 [MATH 105, 107 & 117, recommended] **

### English Core (15 cr)
- ENGL 130 – Literary Studies for Eng. Major & Minor (3 cr)
- ENGL 213 – Writing & Research About Literature (3 cr)
- ENGL 366 – History & Structure of English Language (3 cr)
- ENGL 426 – Teaching Adolescent Literature (3 cr)
- ENGL 460 – Senior Seminar (3 cr)

### Required Survey Courses (9 cr)
Select one:
- ENGL 233 – American Literature I (3 cr) OR
- ENGL 236 – British Literature I (3 cr)
Select one:
- ENGL 234 – American Literature II (3 cr) OR
- ENGL 237 – British Literature II (3 cr)
Select one:
- ENGL 240 – Global Literature (3 cr) OR
- ENGL 239 – Postcolonial Literature (3 cr)

### Advanced Studies – Writing (3 cr)
Select at least one:
- ENGL 224 – Introduction to Creative Writing (3 cr)
- ENGL 229 – Advanced Composition (3 cr)
- ENGL 238 – Technical/Professional Writing I (3 cr)
- ENGL 307 – Poetry Writing (3 cr)
- ENGL 308 – Fiction Writing (3 cr)
- ENGL 323 – Reviewing the Arts for Publication (3 cr)
- ENGL 335 – Creative Nonfiction Writing (3 cr)
- ENGL 420 – Selected Topics in Writing (3 cr)
- ENGL 427 – Advanced Poetry Workshop (3 cr)
- ENGL 428 – Advanced Fiction Workshop (3 cr)
- ENGL 435 – Advanced Creative Nonfiction (3 cr)
- ENGL 438 – Technical Professional Writing II (3 cr)

### Advanced Studies – Genres (3 cr)
Select at least one:
- ENGL 304 – Literary Criticism (3 cr)
- ENGL 333 – Cultural Studies (3 cr)
- ENGL 336 – Theories and Approaches (3 cr)
- ENGL 342 – Mythology (3 cr)
- ENGL 360 – Popular Genres (3 cr)
- ENGL 367 – Studies in Drama (3 cr)
- ENGL 368 – Studies in Fiction (3 cr)
- ENGL 369 – Studies in Poetry (3 cr)
- ENGL 373 – Studies in Creative Nonfiction (3 cr)
- ENGL 440 – Special Topics in Genre (3 cr)

### Advanced Studies – History and Movements (3 cr)
Select at least one:
- ENGL 318 – Studies in Eng. Renaissance (3 cr)
- ENGL 330 – Shakespeare (3 cr)
- ENGL 337 – Romanticism (3 cr)
- ENGL 344 – Studies in Single Author (3 cr)
- ENGL 349 – Victorian Literature (3 cr)
- ENGL 363 – Modernism (3 cr)
- ENGL 364 – Postmodernism (3 cr)
- ENGL 366 – History & Structure of Eng Language (3 cr)
- ENGL 376 – Studies in Medieval Literature (3 cr)
- ENGL 377 – The Long 18th Century (3 cr)
- ENGL 380 – 19th Century Literature (3 cr)
- ENGL 383 – Literature After 1900 (3 cr)
- ENGL 430 – Special Topics in Lit History & Movements (3 cr)

### Advanced Studies – Identities (3 cr)
Select at least one:
- ENGL 445 – Special Topics in Identities (3 cr)
- ENGL 385 – Studies in Postcolonial Literature (3 cr)
- ENGL 370 – Queer Studies (3 cr)
- ENGL 375 – African American Literature (3 cr)
- ENGL 345 – Women’s Literature (3 cr)
- ENGL 358 – Ethnic Literature (3 cr)
- ENGL 359 – Native American Literature (3 cr)
- ENGL 362 – Disability in Literature (3 cr)

### Advanced Studies Elective (3 cr)
Select one additional course in Advanced Studies:
- ENGL _____________________________(3 cr)

### Professional Education Requirements (33-36)
- TEED 207 – Org. & Psych. Foundations (3 cr)
- SPEE 273 – Introduction to Exceptionalities (3 cr)
- SPEE 290 – Introduction to English/Language Arts Ed (3 cr)
- SPEE 423 – Effective Instructional Strategies (3 cr)
- READ 413 – Teaching Reading to ELL (3 cr)
- EDFN 422 – Methods Teaching Eng in Secondary Ed (3 cr)
- EEFN 483 – Assessing Children with Exceptionalities (3 cr)
- EDFN 495 – Student Teaching & Practicum (12 cr)

A literature course taken to satisfy the Gen. Ed. requirement does NOT double count for the English major/minor.

### B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

Students must apply for “Professional Standing” the semester before ENG 422 to be admitted to the course. Students must not schedule any classes before noon the semester they take ENGL 422.

Graduation Requirements: 120 cr
Free Electives = 3 cr
GPA Needed to Declare: 3.0

Disclaimer: Courses may be subject to change.
French & French Secondary Certification – B.A. ##

Requirements for French major = 36 cr
Requirements for French major with Secondary Cert. = 66 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

French Core (30 cr)
- __FREN 202 – Intermediate Conversation (3 cr)
- __FREN 204 – Ideas and Cultures from the French (3 cr)
- __FREN 211 – Intermediate French Grammar (3 cr)
- __FREN 300 – Advanced French Conversation (3 cr)
- __FREN 308 – Diction et Comprehension (3 cr)
- __FREN 309 – Advanced French Grammar (3 cr)
- __FREN 316 – Composition and Stylistics (3 cr)
- __FREN 330 – Masterpieces of French Literature (3 cr)
- __FREN 331 – Masterpieces of Francophone Literature (3 cr)
- __FREN 340 – Genres Littéraires (3 cr)

French Electives (6 cr)
Select two, at least one at the 400-level:
- __FREN 380 – Aspects De La Civilisation FranÇaise (3 cr)
- __FREN 392 – French Cultural Studies Immersion (3 cr)
- __FREN 400 – Seminar: Advanced Studies in French (3 cr)
- __FREN 411 – Theory and Practice of Translation (3 cr)
- __FREN 490 – Selected Topics in French (3 cr)

French majors and minors are strongly urged to take history, political science, and geography courses that deal with Francophone countries.

Secondary Education Certification
- __TEED 207 - Organizational and Psych Foundations (3 cr)
- __TEED 251 – Elements of Middle Level Instruction (3 cr)
- __SPEE 273 - Introduction to Exceptionalities (3 cr)
- __SPEE 423 – Effective Instructional Strategies (3 cr)
- __SPEE 483 - Assessing Children with Exceptionalities (3 cr)
- __EDFN 426 - Methods of Teaching Foreign Languages (3 cr)
- __EDFN 495 – Student Teaching & Professional Practicum (3 cr)

Math requirement:
- __MATH ____________________________(except MAT 185)
- __MATH ____________________________(except MAT 185)

Literature requirement:
- __ENGL 190, ENGL 243, ENGL 248, OR ENGL 250 (3 cr)

Optional Translation Specialization Courses
- __FREN 320 - French for the Professions (3 cr)
- __FREN 380 – Aspects de la Civilisation Francaise (3 cr)
- __FREN 411 - Theory & Practice of Translation (3 cr)

Select one:
- __FREN 400 – Special Topics in French QR
- __FREN ___________________________(300+ level)

Graduation Requirements: 120 cr
Free Electives = 39 cr without Cert; 9 cr with Cert
GPA Needed to Declare: 2.0 without Cert; 3.0 with Cert

Basic Skills Examinations: All education majors must pass the first level of the Basic Skills assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300

Dual Certification: Students planning to teach French will find it to their advantage to work for dual certification in two languages: a language and English, or a language and another field. To achieve dual certification, a student must have the approval of both departments involved, follow an approved course of studies in the specialty areas, take the appropriate methods course, and complete student teaching in both fields. See the Global Languages and Cultures Department for details.

ACTFL Oral Proficiency: All French Secondary Education Certification student must pass the ACTFL Oral Proficiency Interview prior to graduation and reach an advanced low level minimum.

HELPFUL HINTS FOR ADVISING

Year I     Any introductory language courses necessary.

French Certificate & Translation in French Certificate available.
French Cultural Studies Minor & French Minor available.

Disclaimer: Courses may be subject to change.
Geoenvironmental Science – B.S.

Requirements for Geoenvironmental Science major = 45+ cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Geoenvironmental Core
__ESSC 111 – Intro to Weather and Climate (3 cr)
__ESSC 110 – Intro to Geology (3 cr)
__GEOG 202 – GIS I: Intro to GIS (3 cr)
__GEOG 226 – Hydrology (3 cr)
__GEOG 391 - Geography Seminar (3 cr)

GEO/ESS Electives and Complex Systems (27+ cr)

Geography Electives (3+ cr)
__GEOG 244 – Land Use (3 cr)
__GEOG 308 – Geography of Latin America (3 cr)
__GEOG 310 – Transportation Geography (3 cr)
__GEOG 313 – Geography of South and Southeast Asia (3 cr)
__GEOG 317 – Geography of East Asia (3 cr)
__GEOG 320 – Historical Geography (3 cr)
__GEOG 322 – Urban Geography (3 cr)
__GEOG 329 – Economic Geography (3 cr)
__GEOG 415 – Geography of Africa (3 cr)
__GEOG 450 – Geography: Geology Field Studies (1-3 cr)

Geoenvironmental Electives (3+ cr)
__ESSC 212 – Historical Geology (3 cr)
__ESSC 214 – Geology of National Parks (3 cr)
__ESSC 220 – Oceanography (3 cr)
__GEOG 203 – Climate, Energy, and Sustainability (3 cr)
__GEOG 306 – Geomorphology (3 cr)
__GEOG 397 – Introduction to Research (1-3 cr)
__GEOG 450 – Geography-Geology Field Studies (1-3 cr)
__GEOG 490 – Selected Topics in Geography (1-3 cr)

Technique Course Electives (3+ cr)
__GEOG 339 – Remote Sensing (3 cr)
__GEOG 352 – Cartography (3 cr)
__GEOG 363 – GIS II: Intermediate GIS (3 cr)
__GEOG 420 – GIS III: Advanced GIS (3 cr)
__GEOG 425 – Image Processing (3 cr)
__GEOG 440 – Field Techniques (3 cr)
__GEOG 441 – Quantitative Methods (3 cr)
__GEOG 463 – Applied Geophysical Imaging (3 cr)

Geoenvironmental Complex System Electives (12+ cr)
__ESSC 404 – Applied Human-Climate Interaction (3 cr)
__ESSC 410 – Sedimentary Geology & Paleoenvironments (3 cr)
__ESSC 413 – Mineral and Rock Resources (3 cr)
__ESSC 442 – Environmental Geology (3 cr)
__ESSC 452 – Coastal Environmental Oceanography (3 cr)
__ESSC 490 – Selected Topics (1-3 cr)
__GEOG 301 – Introduction to Biogeography (3 cr)
__GEOG 306 – Geomorphology (3 cr)
__GEOG 402 – Medical Geography (3 cr)
__GEOG 404 – Hydrogeology (3 cr)

Electives (6 cr)
Select two additional courses from the previous categories.

Internship (3 cr)
A junior status (60 cr) and 2.0 overall and major average required.
__GEOG 360 – Internship in Geography I (3 cr)

Allied Sciences (10+ cr)

Biology (3 cr)
__BIOL 162 – Principles of Biology: Organismal Diversity (4 cr)
__BIOL 142 – Intro to Ecology (3 cr)
__BIOL 208 – Field Biology (3 cr) Recommended
__BIOL 210 – Field Zoology (3 cr)
__BIOL 242 – Ecology Recommended
__BIOL 442 – Aquatic Ecology
__BIOL 448 – Field Botany and Plant Tax (3 cr) Recommended

Chemistry/Physics (7 cr)
__CHEM 105 – Chemistry: An Observational Approach (3 cr)
__CHEM 121 – Chemical Bonding (3 cr)
__CHEM 125 – Lab IB Stoichiometry and Reactions (1 cr)
__CHEM 122 – Chemical Dynamics (3 cr)
__CHEM 126 – Lab IIB Equilibrium and Instruments (1 cr)
__PHYS 121 – Introductory Physics I – Lecture (3 cr) Recommended
__PHYS 123 – Physics I Laboratory (1 cr) Recommended

Graduation Requirements: 120 cr
Free Electives = 11 cr
GPA Needed to Declare: 2.0

Disclaimer: Courses may be subject to change.
Geography, Geographic Information Systems Concentration – B.S.

Requirements for Geography, Geographic Information Systems Concentration = 60

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Geography Core (15 cr)
- GEOG 105 – Physical Geography (3 cr)
- GEOG 202 – GIS I: Intro to Geographic Info Syst. (3 cr)
- GEOG 329 – Economic Geography (3 cr)
- GEOG 391 – Geography Seminar (3 cr)

Select one:
- GEOG 322 – Urban Geography (3 cr) OR
- GEOG 244 – Land Use (3 cr)

Geographic Information Systems Concentration (24 cr)
- GEOG 339 – Remote Sensing (3 cr)
- GEOG 352 – Cartography (3 cr)
- GEOG 363 – GIS II: Intermediate HIS (3 cr)
- GEOG 420 – GIS III: Advanced GIS (3 cr)

Select two:
- GEOG 425 – Image Processing (3 cr)
- GEOG 440 – Field Techniques (3 cr)
- GEOG 441 – Qualitative Methods (3 cr)
- GEOG 463 – Applied Geophysical Imaging (3 cr)
- GEOG 4_________________ (400 level)

Select one:
- GEOG 244 – Land Use (3 cr) OR
- GEOG 301 – Intro Biogeography (3 cr) OR
- GEOG 310 – Transport Geography (3 cr) OR
- GEOG 322 – Urban Geography (3 cr) OR
- GEOG 427 – Sustainability (3 cr) OR
- GEOG 444 – Envir Land Use Plan (3 cr)

◆ if not taken in Geography Core.

Geography Internship
A junior status (60 cr) and 2.0 overall and major average required.
- GEOG 360, 361, 390, or 394 – Internship (3 cr)

Social Sciences (12 cr)
- POLI 100 – U.S. Government & Politics (3 cr)
- SOCI 101 – Intro to Sociology (3 cr)

Select two:
- PHIL 322 – Ethical Issues & Computer Technology (3 cr)
- POLI 231 – State and Local Government (3 cr)
- POLI 271 – Introduction to Public Administration (3 cr)
- POLI 331 – Urban Politics & Administration (3 cr)
- POLI 431 – Pennsylvania Local Government (3 cr)
- SOCI 220 – Social Stratification (3 cr)
- SOCI 346 – City and Community (3 cr)
- SOCI 363 – Population Problems (3 cr)

Art, Computer Science, Information Systems Electives (12-15 cr)
- CMSC 104 – Programming in Python (3 cr)

Select 3:
- ART 217 – Computer Design I (3 cr)
- CMSC 110 – Computer Science I - Lecture (4 cr) **
- CMSC 111 – Computer Science II (4 cr)
- CMSC __________________ (3-4 cr)
- ITAN 142 – Business Computer Systems (3 cr)
- ITAN 240 – Introduction to Programming Concepts (3 cr)
- ITAN 300 – Info Technology & Business Operations (3 cr)
- ITAN 355 – Database Applications (3 cr)

Math Requirement (3-4 cr)
Select one:
- MATH 140 – College Algebra (3 cr) ** OR
- MATH 175 – Precalculus (3 cr) ** OR
- MATH 211 – Calculus I (4 cr) ** OR
- MATH 225 – Discrete Mathematics (4 cr) **

English Requirement (3 cr)
- ENGL 238 – Technical/Professional Writing (3 cr)

Graduation Requirements: 120 cr
Free Electives = 15 cr
GPA Needed to Declare: 2.0

A 12-credit Geographic Information (GIS) Certificate Program also offered. See department for details.

Disclaimer: Courses may be subject to change.
History – B.A. ##

Requirements for History major = 30 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

History Core (18 cr)

- HIST 105 – Historical Foundation of Global Cultures (3 cr) **
- HIST 106 – Thinking Historically in a Global Age (3 cr) **
- HIST 201 – Early History of the United States (3 cr) **
- HIST 202 – Recent History of the United States (3 cr)
- HIST 203 – Theory and Practice of History (3 cr)
- HIST 397 – Seminar in Comparative History (3 cr)

Restricted Electives (12 cr)

- HIST ______________ (American History 300+ level)
- HIST ______________ (European History 300+ level)
- HIST ______________ (Africa/Asia/Latin Am/Mid East 300+)
- HIST ______________ (Africa/Asia/Latin Am/Mid East 300+)

No Concentration (6 cr)

- HIST ______________ (300+ level)
- HIST ______________ (300+ level)

European History Requirements (12 cr)

Select 4:

- HIST 320 – Europe Middle Ages: 300 to 1270 (3 cr)
- HIST 321 – Late Medieval Europe: 1270 to 1517 (3 cr)
- HIST 325 – History of the Tsarist Russia (3 cr)
- HIST 326 – History of the U.S.S.R. (3 cr)
- HIST 330 – History Modern Germany: 1919 to Present (3 cr)
- HIST 331 – History of Modern France: 1750 to Present (3 cr)
- HIST 332 – English History: 1066 to Present (3 cr)
- HIST 334 – Europe 1715-1815 (3 cr)
- HIST 337 – History of the Byzantine Empire (3 cr)
- HIST 348 – The History of Ancient Rome (3 cr)
- HIST 356 – History of 19th Century Europe (3 cr)
- HIST 357 – History of Holocaust (3 cr)
- HIST 359 – History of Western Political Thought (3 cr)
- HIST 361 – History of 20th Century Europe (3 cr)
- HIST 362 – Europe 1450-1715 (3 cr)
- HIST 386 – History Research Seminar (3 cr)
- HIST 387, 389, 391 – History Internship (3 cr)
- HIST 390, 394, 492, 496 – Selected Topics in History (3 cr)
- HIST 423 – Issues in 20th-Century Europe (3 cr)

American History Requirements (12 cr)

Select 4:

- HIST 301 – The West in American History (3 cr)
- HIST 302 – American Business History (3 cr)
- HIST 304 – American Diplomatic History (3 cr)
- HIST 305 – The Civil War Era (3 cr)
- HIST 307 – Contemporary U. S. History since 1945 (3 cr)
- HIST 309 – History of the American Worker (3 cr)
- HIST 314 – History of Jacksonian America (3 cr)
- HIST 318 – History of U.S. Women (3 cr)
- HIST 319 – Introduction to Public History (3 cr)
- HIST 338 – Colonial America (3 cr)
- HIST 341 – African-American History (3 cr)
- HIST 342 – U.S. Immigration and Ethnicity (3 cr)
- HIST 345 – Military History of the United States (3 cr)
- HIST 352 – The US and Vietnam (3 cr)
- HIST 358 – American Environmental History (3 cr)
- HIST 385, 388, 394, 490, 496 – Selected Topics (3 cr)
- HIST 386 – History Research Seminar (3 cr)
- HIST 387, 389, 391 – History Internship (3 cr)
- HIST 402 – Revolutionary America (3 cr)
- HIST 413 – Pennsylvania History (3 cr)
- HIST 428 – Issues in Gilded Age & Progressive Era (3 cr)
- HIST 430 – U.S. Cultural History (3 cr)
- HIST 433 – Oral History (3 cr)

History, Asian & Middle Eastern History Requirements (12 cr)

Select 4:

- HIST 339 – The Central Islamic Lands, 500-1700 (3 cr)
- HIST 344 – History of the Modern Middle East (3 cr)
- HIST 350 – History of Modern Japan (3 cr)
- HIST 353 – Modern Southeast Asia (3 cr)
- HIST 354 – Traditional China (3 cr)
- HIST 355 – History of Modern China (3 cr)
- HIST 382, 383, 394, 482, 483, 496 – Selected Topics (1-3 cr)
- HIST 386 – History Research Seminar (3 cr)
- HIST 387, 389, 391 – History Internship (3 cr)
- HIST 454 – China and the Outside World (3 cr)
- PHIL 336 – Concepts in Buddhism (3 cr)

Public History Concentration (12 cr)

Public History Methods:

Select one:

- HIST 390 – Selected Topics in History (3 cr)
- HIST 413 – Pennsylvania History (3 cr)
- HIST 430 – U.S. Cultural History (3 cr)
- HIST 433 – Oral History (3 cr)
- HIST 460 – Archives and Public History (3 cr)
- HIST 490 – Selected Topics in History (1-3 cr)

Required Internship:

- HIST 387, 389, 391 – History Internship I (3 cr)
- HIST 387, 389, 391 – History Internship II (3 cr)

Graduation Requirements: 120 cr
Free Electives = 36 cr
GPA Needed to Declare: 2.0

#B.A. students must attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

HELPFUL HINTS FOR ADVISING

Year 1

HIST 105 – Historical Foundations of Global Cultures
HIST 106 – Thinking Historically in a Global Age

History minor also available – 18 cr.

Disclaimer: Courses may be subject to change.
## History/Social Studies – B.S.Ed.

Requirements for History, Comprehensive Social Studies major = 69 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

### History Core (12 cr)
- **HIST 105 – Historical Foundation of Global Cultures (3 cr)**
- **HIST 106 – Thinking Historically in a Global Age (3 cr)**
- **HIST 201 – Early History of the United States (3 cr)**
- **HIST 202 – Recent History of the United States (3 cr)**

### Restricted History Electives (12 cr)
- **HIST ____________ (American History 300+ level)**
- **HIST ____________ (European History 300+ level)**
- **HIST ____________ (Africa/Asia/Latin Am/Mid East 300+)**
- **HIST ____________ (Africa/Asia/Latin Am/Mid East 300+)**

### History Electives (6 cr)
- **HIST ____________ (300+ level)**
- **HIST ____________ (300+ level)**

### Social Science Requirements (27 cr)
- **ECON 101 – Principles of Macroeconomics (3 cr)**
- **ECO 102 – Principles of Microeconomics (3 cr)**
- **GEOG 101 – World Geography (3 cr)**
- **GEOG 103 – Geography of the U.S. and Canada (3 cr)**
- **POLI 100 – U.S. Government and Politics (3 cr)**
- **POLI ____________ [recommended 231, 251, or 300]**
- **PSYC 101 – General Psychology (3 cr)**
- **SOCI 101 – Introduction to Sociology (3 cr)**

Select one:
- **ANTH 111 – Cultural Anthropology (3 cr) OR**
- **INTL 200 – Intro to International Studies (3 cr) OR**
- **GEOG ____________ (200 or 300 level) OR**
- **POLI ____________ (200 or 300 level) OR**
- **PHIL ____________**

### Math Requirement (6-8 cr)
- **MATH ____________ (except MAT 185)**
- **MATH ____________ (except MAT 185)**

Recommended:
- **MATH 117: Applied Statistics (3 cr)**

### Literature Requirement (3 cr)
- **ENGL 248 OR ENGL 250 (3 cr)**

### Professional Education Requirements (33 cr)
- **TEED 207 – Org. & Psych. Foundations (3 cr)**
- **SPEE 273 – Introduction to Exceptionalities (3 cr)**
- **SPEE 423 – Effective Instructional Strategies (3cr)**
- **READ 413 – Teaching Reading to ELL (3 cr)**
- **SPEE 483 – Assessing Children with Exceptionalities (3 cr)**
- **EDFN 412 – Teaching of Social Studies I (3 cr)**
- **EDFN 413 – Teaching of Social Studies II (3 cr)**
- **EDFN 495 – Student Teaching & Practicum (12 cr)**

Note: TEED 207 must be completed before EDFN 412 and EDFN 413.
EDFN 412 and EDFN 413 must be taken simultaneously. A cumulative

GPA of 3.0 is required to enroll in EDFN 412 and EDFN 413. SPEE 483 must be taken with EDFN 495.

**PAPA examinations:** All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level classes.

**Required:** 50 Level I Field Experience hours and Portfolio due between 75 and 90 credits. See B.S. Ed. Advisor for details.

**Graduation Requirements:** 120+ cr
Free Electives = 6 cr
GPA Needed to Declare: 3.0

**HELPFUL HINTS FOR ADVISING:**

Year 1
HIST 105 – Historical Foundations of Global Cultures
HIST 106 – Thinking Historically in a Global Age
GEOG 103 – Geography of U.S. and Canada

All ANTH, ECON, GEOG, INTL, POLI, PHIL courses must be passed with a grade of C or above.

**Disclaimer:** Courses may be subject to change.
Communication Studies – B.A. ##

Requirements for Human Communication Studies major = 36 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

General Education Communication Studies Offerings
- COST 100 – Intro to Human Communications (3 cr) **
- COST 125 – Survey of Human Communications (3 cr) **

Human Communications Core (15 cr)
- COST 200 – Human Communication Theory (3 cr) ♦
- COST 210 – Public Speaking (3 cr)
- COST 360 – Research Methods in Communication (3 cr)
- COST 370 – Rhetorical Criticism (3 cr)
- COST 400 – Senior Seminar (3 cr)

Rhetoric and Symbolism (3 cr)
Select at least one:
- COST 325 – Rhetoric African-Am. Struggle & Progress (3 cr)
- COST 345 – Environmental Communication (3 cr)
- COST 352 – Argumentation & Debate (3 cr)
- COST 356 – Persuasion (3 cr)
- COST 363 – Political Rhetoric (3 cr)
- COST 365 – Language and Meaning (3 cr)
- COST 375 – Special Topics in Rhetoric and Symbolism (3 cr)

Organizational Communication (3 cr)
Select at least one:
- COST 230 – Small Group Communication (3 cr)
- COST 260 – Computer-Mediated Communication (3 cr)
- COST 350 – Theories of Organizational Communication (3 cr)
- COST 351 – Special Topics Organizational Comm (3 cr)
- COST 372 – Communication for Training & Instruction (3 cr)
- COST 381 – Profess. Comm & Multi-media Presentation (3 cr)

Cultural Perspectives (3 cr)
Select at least one:
- COST 270 – Intergroup/Intercultural Communication (3 cr)
- COST 310 – African-American Communication (3 cr)
- COST 315 – Asian-American Communication (3 cr)
- COST 330 – Special Topics in Cultural Perspectives (3 cr)
- COST 335 – Popular Culture and Gender Construction (3 cr)
- COST 340 – Gender and Communication (3 cr)
- COST 410 – Feminist Perspectives on Comm. Theory (3 cr)

Interpersonal Communication (3 cr)
Select at least one:
- COST 220 – Nonverbal Communication (3 cr)
- COST 225 – Communication and Sport (3 cr)
- COST 250 – Interpersonal Communication (3 cr)
- COST 265 – Interviewing (3 cr)
- COST 333 – Communicating Identity (3 cr)
- COST 349 – Communication and Humor (3 cr)
- COST 349 – Special Topics in Interpersonal Comm. (3 cr)
- COST 385 – Resolving Conflict through Communication (3 cr)
- COST 430 – Advanced Interpersonal Communication (3 cr)

Free Human Communications Electives (9 cr)
Select 3 from Rhetoric and Symbolism, Organizational Communication, Cultural Perspectives, and/or Interpersonal Communication:
- COST ______________________________
- COST ______________________________
- COST ______________________________

Recommended Internship
Department permission required
- COST 391 – Internship I (3 cr)
- COST 392 – Internship II (3 cr)
- COST 393 – Internship III (3 cr)

Graduation Requirements: 120 cr
Free Electives = 39 cr
GPA Needed to Declare: 2.0

#B.A. students must attain proficiency in a foreign language.
Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

♦ Prerequisite for most upper-level courses.

HELPFUL HINTS FOR ADVISING

Year 1
COST 100 – Intro to Communication Studies
COST 125 – Survey of Communication Studies (prerequisite for COST 200)

Majors must select at least four COST courses at 300 level or above.

Communication Studies Minor available – 18 cr.

Disclaimer: Courses may be subject to change.
Interdisciplinary Arts – B.A. ##

Requirements for Interdisciplinary Arts major = 42 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Interdisciplinary Arts Core

__INST 111 – Introduction to Interdisciplinary Arts (3 cr) **
Select three (one to satisfy each Arts Concentration):

__ART 101 – Art Appreciation (3 cr) **
__COMM 111 – Intro to Mass Communication (3 cr)
__ENGL 243, 248, or 350 – English Literature (3 cr) **
__MUSI 121 – Intro to Music (3 cr) **
__THAR 121 – Intro to Theater (3 cr) **

Curriculum Track (42 cr)

Interdisciplinary Arts majors choose a primary concentration consisting of 5 courses (15 cr) and two secondary concentrations of 4 courses each (12 cr each). The primary concentration and at least one of the secondary concentrations must be in the arts, although one of the secondary concentrations can be in a discipline outside of the arts. Popular concentrations include communications, dance, art, English, music and theater.

In the curriculum track, majors are also required to take one course in each of the following three areas: History and Culture, Theory and Criticism, Arts Praxis and Professional Skills. See My Degree Audit for full list.

Primary Concentration (15 cr)

___   __________________________________________
___   __________________________________________
___   __________________________________________
___   __________________________________________
___   _________________________________(300+ level)

Secondary Concentration I (12 cr)

___   __________________________________________
___   __________________________________________
___   __________________________________________
___   _________________________________(300+ level)

Secondary Concentration II (12 cr)

___   __________________________________________
___   __________________________________________
___   __________________________________________
___   _________________________________(300+ level)

Senior Capstone (3 cr)

__INST 449 – Interdisciplinary Arts Senior Thesis (3 cr) OR
__INST 451 – Interdisciplinary Arts Showcase (3 cr) OR
__INST 452 – Interdisciplinary Arts Internship (3 cr) OR
__INST 453 - Interdisciplinary Arts Internship (3 cr)

Graduation Requirements: 120 cr
Free Electives = 33 cr
GPA Needed to Declare: 2.0

##B.A. students must attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

Disclaimer: Courses may be subject to change.
International Studies - B.A. ##

Requirements for International Studies major = 42 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

International Studies (6 cr)
___INTL 200 - Intro to International Studies, Concepts and Methods (3 cr)
___INTL 300 - International Studies Seminar (3 cr)

Requirements for Fall 2018 General Education (12 cr)
___HIST 105 - Historical Foundation of Global Cultures (3 cr) **
___HIST 106 - Modern World History (3 cr) **
___POLI 141 - World Politics (3 cr) **
___GEOG 140 Human Geography OR
___ECON 113 Principles of Economics ** (ECON 113 required for Global Business Concentration)

Select one:
___ANTH 111 – Cultural Anthropology (3 cr) OR
___GEOG 101 – World Geography (3 cr)

Foreign Language Requirement (9 cr)
___ ______________________________(200+ level)
___ ______________________________(200+ level)
___ ______________________________(200+ level)

*9 credit hours at the 200-level or higher in Arabic, French, German, or Spanish. 9 credit hours at any level for other languages.

Study Abroad or Internship Requirement (3 cr)
Select one:
___Study Abroad __________ OR
___Internship __________

Students must select two concentrations: 1) Global Perspectives concentration 2) Area Studies concentration.

Global Perspectives Concentration (12 cr)
Choose either Comparative Cultures, Political Relations, or Business & Economics:
___
___ ______________________________(300+ level)
___ ______________________________(300+ level)
*courses must come from at least 2 different disciplines; 6 credits at 300-level or higher

Area Studies Concentration (12 cr)
Choose either Africa & Middle East, Asia, Europe, or Latin America & Caribbean:
___
___ ______________________________(300+ level)
___ ______________________________(300+ level)
*courses must come from at least 2 different disciplines; 6 credits at 300-level or higher

Class list for concentrations available through My Degree Audit.

Graduation Requirements: 120 cr
Free Electives = 33 cr
GPA Needed to Declare: 2.0

##B.A. students must attain proficiency in a foreign language.

International Studies majors complete the B.A. requirement in the course of completing the major's foreign language requirement. B.A. proficiency is satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet the B.A. requirement through AP testing or CLEP testing.

International Studies Minor and International Development Minor also available - 21 cr. each/

Disclaimer: Courses may be subject to change.
Mathematics, B.S.

Requirements for mathematics major = 50 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Students must take all courses. Beyond the core courses, students must complete a concentration and do one of the following: complete a minor, complete a second major, or take 3 allied electives*, at least 1 of which must be a non-MAT course.

Mathematics Core (30 cr)

- MATH 185 – First Year Mathematics Seminar (Spring/1 cr) ** Qtag
- MATH 211 – Calculus I (4 cr) **
- MATH 212 – Calculus II (4 cr)
- MATH 213 – Calculus III (4 cr)
- MATH 217 – Statistics I (4 cr) **
- MATH 225 – Discrete Mathematics (4 cr) ** Rtag
- MATH 318 – Elementary Linear Algebra (3 cr)
- MATH 320 – Intro to Abstract Algebra (3 cr)
- MATH 441 – Real Analysis I (Fall/3 cr)

OR

- MATH 430 – Complex Analysis (Spring/3 cr)

Required Computer Science (3-4 cr)

Select one:
- CMSC 104 – Programming in Python (3 cr) ** Ttag
- CMSC 180 – Microcomputer Basic (3 cr) ** Ttag
- CMSC 110 – Computer Science I (4 cr) **

Applied Mathematics Concentration

- MATH 322 – Differential Equations (3 cr)
- MATH 326 – Mathematical Modeling (3 cr)
- MATH 410, 422, 476, or 491 (3 cr)
- MATH _______________ (300+ level)
- MATH _______________ (400 level)

Either complete a minor, complete a second major, or choose three allied electives numbered 300+ from ACCT, BIOL, CHEM, CMSC, CMPE, ECON, ESSC, FINA, MATH, ITAN, PHYS, SCMG, or SWEN:

- _______________ (300+ level)
- _______________ (300+ level)
- _______________ (300+ level)

Statistics Concentration

- MATH 317 – Statistics II (3 cr)
- MATH 476 – Probability (3 cr)
- MATH 486 – Mathematical Statistics (3 cr)
- MATH _______________ (300+ level)
- MATH _______________ (300+ level)

Either complete a minor, complete a second major, or choose three allied electives numbered 300+ from ACCT, BIOL, CHEM, CMSC, CMPE, ECON, ESSC, FINA, MATH, ITAN, PHYS, SCMG, or SWEN:

- _______________ (300+ level)
- _______________ (300+ level)
- _______________ (300+ level)

Custom Concentration (with advisement)

- MATH _______________ (300+ level)

Either complete a minor, complete a second major, or choose three allied electives numbered 300+ from ACCT, BIOL, CHEM, CMSC, CMPE, ECON, ESSC, FINA, MATH, ITAN, PHYS, SCMG, or SWEN:

- _______________ (300+ level)
- _______________ (300+ level)
- _______________ (300+ level)

Graduation Requirements: 120 cr

Free Electives = 25 cr

GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING

Semester I
- MATH 211 – Calculus I

Semester II
- MATH 185 – First Year Math Seminar
- MATH 212 – Calculus II
- MATH 225 – Discrete Mathematics

Mathematics minor also available - 18-21 cr.

Disclaimer: Courses may be subject to change.
Mathematics, Secondary Education Certification – B.S.

Requirements for Mathematics Secondary Education Certification = 74 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Mathematics Core (42 cr)
- MATH 185 - First Year Mathematics Seminar (3 cr)
- MATH 211 - Calculus I (4 cr) ** Qtag
- MATH 212 - Calculus II (4 cr)
- MATH 213 - Calculus III (4 cr)
- MATH 217 - Statistics I (4 cr)
- MATH 225 - Discrete Mathematics (4 cr) ** Rtag
- MATH 318 - Elementary Linear Algebra (3 cr)
- MATH 320 - Intro to Abstract Algebra (3 cr)
- MATH 441 - Real Analysis I (3 cr)

Required Computer Science (3-4 cr)
- CMSC 104 - Programming in Python (3 cr) ** Ttag OR
- CMSC 180 - Microcomputer Basic (3 cr) ** Ttag OR
- CMSC 110 - Computer Science I (4 cr)

Secondary Education Concentration
- MATH 326 - Mathematical Modeling (3 cr)
- MATH 333 - Geometry (3 cr) F, odd
- MATH 400 - History of Mathematics (3 cr) F, even
- MATH ________________________(400 level)

Professional Education Requirements (36 cr)
- TEED 207 - Org. & Psych. Foundations (3 cr)
- SPEE 273 - Introduction to Exceptionalities (3 cr) ** Dtag
- SPEE 423 - Effective Instructional Strategies (3 cr)
- READ 413 - Teaching Reading to ELL (3 cr)
- SPEE 483 - Assessing Children with Exceptionalities (3 cr)
- EDFN 371 - Technology in the Mathematics Classroom (3 cr)
- EDFN 434 - Teaching of Mathematics I (Spring/3 cr)
- EDFN 435 - Teaching of Mathematics II (Fall/3 cr)
- EDFN 495 - Student Teaching & Practicum (12 cr)

Optional Mathematics and Special Education Certification (21 cr)
Take the following in addition to the courses above:
- SPEE 280 - Best Practices in Collaboration (3 cr)
- SPEE 320 - Interventions for Comm. Impairments (3 cr)
- SPEE 325 - Interventions for Social, Emotional, Behav. (3 cr)
- SPEE 330 - Teaching Students with Exceptionalities (3 cr)
- SPEE 335 - Interventions for Cognitive or Physical (3 cr)
- SPEE 447 - Special Education Processes (3 cr)
- SPEE 546 - Transition for Students w/ Disabilities (3 cr)

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300

Graduation Requirements: 120+ cr
Free Electives = 1 cr
GPA Needed to Declare: 3.0

HELPFUL HINTS FOR ADVISING
Semester I
- MATH 211 - Calculus I

Semester II
- MATH 185 - First-Year Mathematics Seminar
- MATH 212 - Calculus II
- MATH 225 - Discrete Mathematics

Disclaimer: Courses may be subject to change.
Mechanical Engineering – B.S.

Requirements for Mechanical Engineering major = 82 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Math Requirements (19 cr.)
- MATH 211 – Calculus I (4 cr) **
- MATH 212 – Calculus II (4 cr) **
- MATH 318 – Elementary Linear Algebra (3 cr)
- MATH 375 – Probability & Statistics for Engineers (3 cr)
- MATH 322 – Differential Equations (3 cr)

Science Requirements (20 cr)
- CHEM 121 – Chemical Bonding (3 cr) **
- CHEM 125 – Lab IB-Stoichiometry & Reactions (1 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 126 – Lab IIB-Equilibrium & Instrumentation (1 cr)
- PHYS 205 – Intermediate Physics I Lecture (3 cr) **
- PHYS 123 – Physics I Lab (1 cr)
- PHYS 206 – Intermediate Physics II Lecture (3 cr) **
- PHYS 125 – Physics II Lab (1 cr)
- PHYS 331 – Mechanics I (4 cr)

Engineering Core (12 cr)
- ENGR 100 – Engineering Seminar I (1 cr)
- ENGR 110 – Modeling and Simulation (3 cr)
- ENGR 120 – Programming for Engineers (3 cr)
- ENGR 200 – Engineering Seminar II (1 cr)
- ENGR 300 – Engineering Seminar III (1 cr)
- ENGR 310 – Statistical Process Control (3 cr)

Mechanical Engineering Requirements (35 cr)
- CMPE 499 – Engineering Design & Development (2 cr)
- ELEN 220 – Linear Circuit Analysis (3 cr)
- MCAE 200 – Statics (4 cr)
- MCAE 210 – Dynamics (4 cr)
- MCAE 220 – Fluids (4 cr)
- MCAE 230 – Mechanics of Materials (4 cr)
- MCAE 300 – Engineering Materials (4 cr)
- MCAE 310 – Manufacturing Processes (4 cr)
- MCAE 320 – Machine Dynamics (4 cr)
- MCAE 410 – Mechanics of Thermodynamics (4 cr)
- MCAE 420 – Machine Design (4 cr)
- MCAE 450 – Thermal System Design (4 cr)

Engineering Elective (3-4 cr)
Select one:
- CIVE, CMPE, ELEN, ENGR, MCAE _______ (200+ level)
- MATH 213 – Calculus III (4 cr)
- MATH 410 – Numerical Analysis (4 cr)

Graduation Requirements: 120+ cr
Free Electives = 0 cr
GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING

Semester I
- MATH 211 – Calculus I
- PHYS 205/123 – Physics I Lecture & Lab
- ENGR 100 – Seminar I
- ENGR 110 – Modeling & Simulation

Semester II
- MATH 212 – Calculus II
- PHYS 206/125 – Physics II Lecture & Lab
- ENGR 120 – Programming for Engineers

Disclaimer: Courses may be subject to change.
Requirements for Physics major = 71-72 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Physics Core Requirements (32 cr)
- PHYS 205 – Intermediate Physics (3 cr)
- PHYS 124 – Physics Ib Lab (1 cr)
- PHYS 206 – Intermediate Physics II (3 cr)
- PHYS 126 – Physics IIb Lab (1 cr)
- PHYS 207 – Intermediate Physics III (3 cr)
- PHYS 127 – Physics Illb Lab (1 cr)
- PHYS 301 – Mathematical & Numerical Techniques (4 cr)
- PHYS 311 – Quantum I (4 cr)
- PHYS 321 – Electricity and Magnetism I (4 cr)
- PHYS 331 – Mechanics I (4 cr)
- PHYS 341 – Classical and Statistical Thermodynamics (4 cr)

Math Requirements (15 cr)
- MATH 211 – Calculus I (4 cr) **
- MATH 212 – Calculus II (4 cr) **
- MATH 213 – Calculus III (4 cr)
- MATH 322 – Differential Equations (3 cr)

Chemistry Requirement (4 cr)
- CHEM 121 – Chemical Bonding (3 cr) **
  CHEM 125 – Lab IB-Stoichiometry & Reactions (1 cr)

Computer Science/Engineering Requirement (3-4 cr)
Select one:
- CMSC 110 – Computer Science I-Lecture (4 cr) **
  OR
- ENGR 120 – Programming for Engineers (3 cr)

General Physics Concentration (29 cr)

Physics Electives (9-12 cr):
- PHYS ______________________(300+ level)
- PHYS ______________________(300+ level)
- PHYS ______________________(300+ level)

Free Electives (20 cr):
12 credits must be taken at the 300 level or higher. A minor in another discipline is strongly encouraged.

Advanced Physics Concentration (28-32 cr)
- CHEM 122 – Chemical Dynamics (3 cr)
- CHEM 126 – Laboratory IIb (1 cr)
- PHYS 411 – Quantum II (3 cr)
- PHYS 421 – Electricity & Magnetism II (3 cr)
- PHYS 431 – Mechanics II (3 cr)
- PHYS __________________(300+ level)
- PHYS __________________(300+ level)
- PHYS __________________(300+ level)
- PHYS __________________(300+ level)

Select one:
- PHYS 397 – Intro to Research (3 cr) OR
- PHYS 389 – Research II (3 cr)

Computational Physics Concentration (25-26 cr)
- MATH 318 – Elementary Linear Algebra (3 cr)
- MATH 410 – Numerical Analysis (3 cr)
- CMSC 111 – Computer Science II (4 cr)
- CMPE 322 – Microcontrollers & Interfaces (4 cr)
- PHYS 471 – Computational Physics (4 cr)
- PHYS ______________________(300+ level)
- PHYS ______________________(300+ level)

Select one:
- CMPE 220 – Computer Organization (4 cr) OR
  CMSC 371 – Database Management Systems (4 cr)

Graduation Requirements: 120 cr
Free Electives = 3-4 cr
GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING

Semester I
  MATH 211 – Calculus I
  PHYS 107 – Seminar for Physics Majors

Semester II
  MATH 212 – Calculus II
  PHYS 221 – Fundamentals of Physics I

Students are recommended to complete 1 semester of Calculus before starting the intermediate physics sequence.

Chemistry should be taken in the junior year. Exceptional students may take it earlier.

Computer Science I should be taken early in the program.

Physics minor is available – 26 cr.

Disclaimer: Courses may be subject to change.
Political Science – B.A. ##

Requirements for Political Science major = 36 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

General Education Recommendations:
__MATH 117 – Applied Statistics (3 cr) **
__SOCI 101 – Introduction to Sociology ** (3 cr)

Select one:
__ECON 101 – Principles of Macroeconomics (3 cr) ** OR
__ECON 102 – Principles of Microeconomics (3 cr) ** OR
__ECON 113 – Principles of Economics (4 cr) **

Select one:
__GEOG 101 – World Geography (3 cr) ** OR
__GEOG 103 – Geography of the U.S. & Canada ** (3 cr)

Political Science Core (21 cr)
__POLI 100 – U.S. Government & Politics (3 cr) **
__POLI 141 – World Politics (3 cr) **
__POLI 201 – Foundations of Political Science (3 cr)
__POLI 202 – Applications in Public Affairs (3 cr)
__POLI 300 – Advanced American Government (3 cr)
__POLI 301 – Political Science Research Methods (3 cr)
__POLI 399 – Senior Seminar (3 cr)

Experiential Learning (6 cr)

Select two:
__POLI 251 – Introduction to Comparative Politics (3 cr)
__POLI 252 – Costa Rica: Politics, Economy & Society (3 cr)
__POLI 307 – Applied Research in Political Science (1-3 cr)
__POLI 323 – Campaigns, Elections & Political Parties (3 cr)
__POLI 333 – Applications in State & Local Public Policy (3 cr)
__POLI 347 – Applied Diplomacy (3 cr)
__POLI 348 – Applied Diplomacy (3 cr)
__POLI 357 – Comparative Revolutions (3 cr)
__POLI 358 – European Political Economy & Security (3 cr)
__POLI 359 – European Political Integration & Identity (3 cr)
__POLI 395 – Internship I (3 cr)
__Any Study Abroad course in any discipline.

In addition to the required core and experiential learning, students need to take courses in three other applied competency areas (see below). To meet this requirement, students need 15 credits in oral communication, written communication, and problem solving.

Oral Communication (3 cr):
Select at least one:
__POLI 252 – Costa Rica: Politics, Economy & Society (3 cr)
__POLI 311 – The Legislative Process (3 cr)
__POLI 313 – The Judicial Process (3 cr)
__POLI 324 – Women in American Politics (3 cr)
__POLI 347 – Applied Diplomacy (3 cr)
__POLI 348 – Applied Diplomacy (3 cr)
__POLI 357 – Comparative Revolutions (3 cr)
__POLI 361 – Political Theory from Ancient Times-19th C (3 cr)
__POLI 373 – Public Financial Administration (3 cr)

Written Communication (3 cr):
Select at least one:
__POLI 231 – State and Local Government (3 cr)
__POLI 307 – Applied Research in Political Science (1-3 cr)
__POLI 312 – The American Presidency (3 cr)
__POLI 321 – Public Opinion and Political Media (3 cr)
__POLI 322 – Interest Groups in American Society (3 cr)
__POLI 324 – Women in American Politics (3 cr)
__POLI 325 – African American Politics (3 cr)
__POLI 341 – International Law & Organization (3 cr)
__POLI 351 – European Politics (3 cr)
__POLI 356 – Politics of Developing Regions (3 cr)
__POLI 363 – American Political Thought (3 cr)
__POLI 365 – The Federal System (3 cr)
__POLI 366 – First Amendment Freedoms (3 cr)
__POLI 367 – Criminal Law & Equal Protections (3 cr)
__POLI 371 – Public Management (3 cr)
__POLI 372 – Public Personnel Administration (3 cr)
__POLI 381 – Principles of Labor Relations (3 cr)

Problem Solving (3 cr):
Select at least one:
__POLI 271 – Intro to Public Administration (3 cr)
__POLI 325 – African American Politics (3 cr)
__POLI 331 – Urban Politics & Administration (3 cr)
__POLI 342 – American Foreign Policy (3 cr)
__POLI 343 – Global Economic and Political Conflict (3 cr)
__POLI 351 – European Politics (3 cr)
__POLI 356 – Politics of Developing Regions (3 cr)
__POLI 361 – Political Theory from Ancient Times-19th C (3 cr)
__POLI 362 – Contemporary Political Ideologies (3 cr)
__POLI 365 – The Federal System (3 cr)
__POLI 366 – First Amendment Freedoms (3 cr)
__POLI 367 – Criminal Law & Equal Protect. (3 cr)
__POLI 374 – Public Service Ethics (3 cr)

Students are required to obtain a minor, certificate, or select a 12 credit hour concentration in another department.

Graduation Requirements: 120 cr
Free Electives = 39 cr
GPA Needed to Declare: 2.0

##B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

Disclaimer: Courses may be subject to change.
Political Science, International Concentration – B.A. ##

Requirements for Political Science major with International Concentration = 36 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

General Education Recommendations:
- _MATH 117 - Applied Statistics (3 cr) **
- _SOCI 101 - Introduction to Sociology ** (3 cr)

Select one:
- _ECON 101 - Principles of Macroeconomics (3 cr) ** OR
- _ECON 102 - Principles of Microeconomics (3 cr) ** OR
- _ECON 113 - Principles of Economics (4 cr) **

Select one:
- _GEOG 101 - World Geography (3 cr) ** OR
- _GEOG 103 - Geography of the U.S. & Canada ** (3 cr)

Political Science Core (21 cr)
- _POLI 100 - U.S. Government & Politics (3 cr) **
- _POLI 141 - World Politics (3 cr) **
- _POLI 201 - Foundations of Political Science (3 cr)
- _POLI 202 - Applications in Public Affairs (3 cr)
- _POLI 251 - Introduction to Comparative Politics (3 cr)
- _POLI 301 - Political Science Research Methods (3 cr)
- _POLI 341 - International Law & Organization (3 cr)
- _POLI 399 - Senior Seminar (3 cr)

Experiential Learning (6 cr)

Select two:
- _POLI 252 - Costa Rica: Politics, Economy & Society (3 cr)
- _POLI 307 - Applied Research in Political Science (1-3 cr)
- _POLI 323 - Campaigns, Elections & Political Parties (3 cr)
- _POLI 333 - Applications in State & Local Public Policy (3 cr)
- _POLI 347 - Applied Diplomacy (3 cr)
- _POLI 348 - Applied Diplomacy (3 cr)
- _POLI 357 - Comparative Revolutions (3 cr)
- _POLI 358 - European Political Economy & Security (3 cr)
- _POLI 359 - European Political Integration & Identity (3 cr)
- _POLI 395 - Internship I (3 cr)
- _Any Study Abroad course in any discipline.

In addition to the required core and experiential learning, students need to take courses in three other applied competency areas (see below). To meet this requirement, students need 15 credits in oral communication, written communication, and problem-solving.

Oral Communication (3 cr):

Select at least one:
- _POLI 252 - Costa Rica: Politics, Economy & Society (3 cr)
- _POLI 311 - The Legislative Process (3 cr)
- _POLI 313 - The Judicial Process (3 cr)
- _POLI 324 - Women in American Politics (3 cr)
- _POLI 347 - Applied Diplomacy (3 cr)
- _POLI 348 - Applied Diplomacy (3 cr)
- _POLI 357 - Comparative Revolutions (3 cr)
- _POLI 361 - Political Theory from Ancient Times-19th C (3 cr)
- _POLI 373 - Public Financial Administration (3 cr)

Written Communication (3 cr):

Select at least one:
- _POLI 231 - State and Local Government (3 cr)
- _POLI 307 - Applied Research in Political Science (1-3 cr)
- _POLI 312 - The American Presidency (3 cr)
- _POLI 321 - Public Opinion and Political Media (3 cr)
- _POLI 322 - Interest Groups in American Society (3 cr)
- _POLI 324 - Women in American Politics (3 cr)
- _POLI 325 - African American Politics (3 cr)
- _POLI 341 - International Law & Organization (3 cr)
- _POLI 351 - European Politics (3 cr)
- _POLI 356 - Politics of Developing Regions (3 cr)
- _POLI 363 - American Political Thought (3 cr)
- _POLI 365 - The Federal System (3 cr)
- _POLI 366 - First Amendment Freedoms (3 cr)
- _POLI 367 - Criminal Law & Equal Protections (3 cr)
- _POLI 371 - Public Management (3 cr)
- _POLI 372 - Public Personnel Administration (3 cr)
- _POLI 381 - Principles of Labor Relations (3 cr)

Problem-Solving (3 cr):

Select at least one:
- _POLI 271 - Intro to Public Administration (3 cr)
- _POLI 325 - African American Politics (3 cr)
- _POLI 331 - Urban Politics & Administration (3 cr)
- _POLI 342 - American Foreign Policy (3 cr)
- _POLI 343 - Global Economic and Political Conflict (3 cr)
- _POLI 351 - European Politics (3 cr)
- _POLI 356 - Politics of Developing Regions (3 cr)
- _POLI 361 - Political Theory from Ancient Times-19th C (3 cr)
- _POLI 362 - Contemporary Political Ideologies (3 cr)
- _POLI 365 - The Federal System (3 cr)
- _POLI 366 - First Amendment Freedoms (3 cr)
- _POLI 367 - Criminal Law & Equal Protections (3 cr)
- _POLI 374 - Public Service Ethics (3 cr)

International Concentration Electives (12 cr)

Select four:
- _POLI 252 - Costa Rica: Politics, Economy & Society (3 cr)
- _POLI 307 - Applied Research in Political Science (1-3 cr)
- _POLI 342 - American Foreign Policy (3 cr)
- _POLI 343 - Global Economic & Political Conflict (3 cr)
- _POLI 347 - Applied Diplomacy (3 cr)
- _POLI 348 - Applied Diplomacy (3 cr)
- _POLI 351 - European Politics (3 cr)
- _POLI 356 - Politics of Developing Regions (3 cr)
- _POLI 358 - European Political Economy & Security (3 cr)
- _POLI 359 - European Political Integration & Identity (3 cr)
- _POLI 394 - Selected Topics in International Politics (3 cr)

Graduation Requirements: 120 cr

Free Electives = 39 cr

GPA Needed to Declare: 2.0

##B.A. students must attain proficiency in a foreign language. Proficiency may be satisfied by completing a language class at the 103 level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

A student may count a maximum of six internship credits toward the major. Additional internship credit hours can be used as credits applied toward graduation.

Disclaimer: Courses may be subject to change.
Psychology – B.A. ##

Requirements for Psychology major = 42 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

General Education Psychology Requirement (3 cr)
__PSYC 101 – General Psychology (3 cr) **

Psychology Core (27 cr)

Scientific Methods:
__PSYC 105 – Research Design & Statistics I (3 cr)
__PSYC 205 – Research Design & Statistics II (3 cr)
__PSYC 301 – Experimental Psychology (3 cr)

Select one from each category below:

Developmental:
__PSYC 265 – Childhood & Adolescence (3 cr) OR
__PSYC 352 – Psychology of Adulthood & Aging (3 cr)

Social/Personality:
__PSYC 240 – Psychology of Personality (3 cr) OR
__PSYC 270 – Social Psychology (3 cr)

Abnormal:
__PSYC 330 – Abnormal Psychology (3 cr) OR
__PSYC 355 – Child and Adolescent Psychopathology (3 cr)

Neuroscience:
__PSYC 320 – Behavioral Neuroscience (3 cr) OR
__PSYC 333 – Attention and Consciousness (3 cr)

Cognition/S&P:
__PSYC 323 – Sensation and Perception (3 cr) OR
__PSYC 325 – Psychology of Human Cognition (3 cr)

Learning/Behavioral:
__PSYC 235 – Conditioning and Learning (3 cr) OR
__PSYC 383 – Social Learning in Infants and Children (3 cr)

Psychology Electives (12 cr)
Select at least two from each category below:

Ethical & Social Responsibility in a Diverse World:
__PSYC 315 – Psych of Prejudice & Minority Experience (3 cr)
__PSYC 350 – Psychology of Sustainability (3 cr)
__PSYC 365 – Multicultural Psychology (3 cr)
__PSYC 410 – Psychology and Women (3 cr)
__PSYC 420 – Health Psychology (3 cr)
__PSYC 470 – Forensic and Legal Psychology (3 cr)

Professional Development:
__PSYC 311 – Applied Behavior Analysis (3 cr)
__PSYC 335 – Psychology of Social Influence (3 cr)
__PSYC 340 – Introduction to Clinical Psychology (3 cr)
__PSYC 361 – Psychology of Group Interaction (3 cr)
__PSYC 384 – Helping Skills for Human Services (3 cr)
__PSYC 432 – Psychology of Computers & the Internet (3 cr)
__PSYC 435 – Psychopharmacology (3 cr)
__PSYC 450 – Crisis Intervention (3 cr)
__PSYC 475 – Industrial and Organizational Psychology (3 cr)

Psychology Capstone (3 cr)
Select one:
__PSYC 374 or 375 – Advanced Research in Psychology (3 cr)
__PSYC 379 – Capstone Seminar in Psychology (3 cr)

__PSYC 385 – Internship in Psychology I (1–4 cr)
__PSYC 386 – Internship in Psychology II (1–4 cr)
__PSYC 440 – History and Systems of Psychology (3 cr)

Graduation Requirements: 120 cr
Free Electives = 33 cr
GPA Needed to Declare: 2.0

The remaining credits toward your 120 total should comprise a minor (minors are 18-21 credits), other courses of interest outside the major to broaden your higher educational experiences, and additional psychology courses.

Please note students must earn a grade of “C” or higher in all core courses.

##B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

Internship – Up to 6 credits can count toward an internship; internship may fulfill the capstone requirement but the credits DO NOT count toward the psychology major.

Students can take PSY 385 Internship I, or both PSY 385 and PSY 386 Internship II. If your internship involves one-to-one confidential and personal interaction with clients, you must take PSY 384 (Helping Skills for Human Professionals) prior to your internship. Likewise, if it involves group interaction, you must take PSY 361 (Group Interaction) prior to your internship. If your internship will involve interaction with children, you must have taken a child psychology or child development course prior to your internship. Comparable training may qualify. Please discuss your preparation with your agency, faculty internship coordinator, or the department internship coordinator.

HELPFUL HINTS FOR ADVISING:

Year I
PSYC 101 – General Psychology
PSYC 105 – Research Design & Statistics I

Year II
PSYC 205 – Research Design & Statistics II
Begin Foundation Courses

Year III
PSYC 301 – Experimental Psychology

Psychology minor available – 18 cr

Disclaimer: Courses may be subject to change.
## Public Service – B.S.

### Requirements for Public Service major = 45 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

#### Political Science Core (27 cr)
- POLI 100 – U.S. Government and Politics (3 cr) **
- POLI 202 – Applications in Public Affairs (3 cr)
- POLI 231 – State and Local Government (3 cr)
- POLI 271 – Introduction to Public Administration (3 cr)
- POLI 300 – Advanced American Gov’t & Public Policy (3 cr)
- POLI 301 – Political Science Research Methods (3 cr)
- POLI 302 – Public Policy Analysis (3 cr)
- POLI 372 – Public Personnel Administration (3 cr)
- POLI 373 – Public Financial Administration (3 cr)

#### Public Service Electives (6 cr)
Select 2 of the following:
- POLI 307 – Applied Research in Political Science (1-3 cr)
- POLI 331 – Urban Politics & Administration (3 cr)
- POLI 332 – Federal-State-Local Relations (3 cr)
- POLI 333 – Applications in State & Local Public Policy (3 cr)
- POLI 365 – Constitutional Law: The Federal System (3 cr)
- POLI 374 – Public Service Ethics (3 cr)
- POLI 381 – Principles of Labor Relations (3 cr)
- POLI 389 – Selected Topics in Public Administration (3 cr)
- POLI 395 – Internship I (3 cr)
- POLI 396 – Internship II (3 cr)
- POLI 397 – Internship III (3-6 cr)
- POLI 431 – Pennsylvania Local Government (3 cr)

#### Political Science Elective (3 cr)
- POLI _________________________
- POLI __________________________(300+ level)

#### Sociology Requirements (6 cr)
- SOCI 101 – Introduction to Sociology (3 cr) **
Select one:
- SOCI 241 – Contemporary Social Problems (3 cr)
- SOCI 243 – Minority Groups (3 cr)
- SOCI 258 – Women’s Roles and Status (3 cr)
- SOCI 346 – City and Community (3 cr)
- SOCI 351 – Race Relations (3 cr)
- SOCI 354 – Social Movements & Social Change (3 cr)
- SOCI 363 – Population Problems (3 cr)
- SOCI 365 – Elites in Society (3 cr)
- SOCI 425 – Sociology of Law (3 cr)

### Graduation Requirements: 120 cr
- Free Electives = 33 cr
- GPA Needed to Declare: 2.0

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**Internship**: The department strongly encourages students to complete an internship. To qualify for an internship, a student must have a 2.0 overall QPA and a 2.3 QPA in the public administration major. Students must have completed the following courses to be eligible for an internship: POLI 100, POLI 201, POLI 231, POLI 271, POLI 300, and POLI 301. A student can count a maximum of six internship credits toward the major.

**Public Service minor available – 18 cr**

**Disclaimer**: Courses may be subject to change.
Sociology - B.A. ##

Requirements for Sociology major = 36 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Sociology Core (21 cr)

__SOCI 101 – Introduction to Sociology (3 cr) **
__SOCI 201 – Sociological Practice (3 cr)
__SOCI 220 – Social Inequality (3 cr)
__SOCI 311 – Internship (3 cr)
__SOCI 380 – Classical Social Theory (3 cr)
__SOCI 385 – Introduction to Social Research (3 cr)
__SOCI 415 – Senior Seminar (3 cr)

Sociology Electives (15 cr)

__SOCI ___________________________
__SOCI ___________________________
__SOCI ___________________________
__SOCI ___________________________
__SOCI ___________________________

Allied Fields Requirements (6-7 cr)

__ANTH 111 – Cultural Anthropology (3 cr) **

OR

__ANTH 105 – Great Discoveries in Archeology (3 cr)

AND

__MAT 117 – Applied Statistics (3 cr) **

Possible special interest areas:

Cross Cultural Anthropology

__ANTH 111 – Cultural Anthropology (3 cr) **
__ANTH 211 – Comparative Cultures (3 cr)
__ANTH 312 – Comparative Marriages & Family (3 cr)
__ANTH 351 – Peoples & Cultures of Europe (3 cr)

Anthropology and Archaeology

__ANTH 105 – Great Discoveries in Archeology (3 cr)
__ANTH 330 – Mammoth Hunters & Mound builders (3 cr)
__ANTH 360 – Aztec & Maya Archaeology (3 cr)

Social Inequality & Diversity

__SOCI 220 – Social Inequality (3 cr)
__SOCI 243 – Race in America (3 cr)
__SOCI 258 – Gender, Culture & Power (3 cr)
__SOCI 320 – Sociology of Disability (3 cr)
__SOCI 365 – Elites in Society (3 cr)

Culture and Social Change

__SOCI 265 – Global Society (3 cr)
__SOCI 363 – Growth & Change of Human Populations (3 cr)
__SOCI 370 – Sociology of Music (3 cr)
__SOCI 375 – Popular Culture (3 cr)
__SOCI 354 – Social Movements & Social Change (3 cr)

Gender, Sexuality & Family

__SOCI 257 – Family in Modern Society (3 cr)
__SOCI 258 – Gender, Culture & Power (3 cr)
__SOCI 363 – Growth & Change of Human Populations (3 cr)
__SOCI 445 – Sexuality & Sexual Orientation (3 cr)

Deviance

__SOCI 244 – Criminology (3 cr)
__SOCI 345 - Deviance and Social Control (3 cr)
__SOCI 391 – Violence (3 cr)

Disability, Aging & Health

__SOCI 320 - Sociology of Disability (3 cr)
__SOCI 369 – Medical Sociology (3 cr)
__SOCI 371 – Social Dynamics of Aging (3 cr)

Social Institutions/Organizations

__SOCI 257 – Family in Modern Society (3 cr)
__SOCI 275 – Sociology of Religion (3 cr)
__SOCI 346 – City & Community (3 cr)
__SOCI 369 – Medical Sociology (3 cr)
__SOCI 435 - Gender, Organizations & Leadership (3 cr)

Graduation Requirements: 120 cr
Free Electives = 39 cr
GPA Needed to Declare: 2.0

Free electives are to be taken in appropriate fields with advisement. They may be utilized to pursue various special interest areas in sociology or to develop the equivalent of a minor or a second concentration. Language or research tools may be alternative recommendations.

##B.A. students must attain proficiency in a foreign language.

Proficiency may be satisfied by completing a language class at the 103 (intermediate) level or three years of any one foreign language in high school. Students may also meet this requirement through AP testing or CLEP testing.

Internship - Internships in sociology are highly recommended and may be taken for a total of 9 credits of which 6 credits can be applied to the major.

HELPFUL HINTS FOR ADVISING

Year I

SOCI 101 – Introduction to Sociology
MAT 117 – Applied Statistics
ANTH 111 – Cultural Anthropology

Year II

SOCI 201 – Thinking Sociologically
SOCI 220 – Social Inequality

Year III

SOCI 380 – Classical Social Theory
SOCI 385 – Introduction to Social Research

Year IV

SOCI 415 – Senior Seminar

A sociology minor is available – 18 cr
An anthropology minor is available – 18 cr

Disclaimer: Courses may be subject to change.
Software Engineering, B.S.

Requirements for Software Engineering major = 73 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Engineering Core (12 cr)**
- ENGR 100 - Engineering Seminar I (1 cr)
- ENGR 120 - Programming for Engineers (3 cr)
- ENGR 200 - Engineering Seminar II (1 cr)
- ENGR 300 - Engineering Seminar III (1 cr)
- ENGR 310 - Statistical Process Control (3 cr)

**Software Engineering (20 cr)**
- SWEN 100 - Intro to Software Engineering (3 cr)
- SWEN 200 - Design Patterns (4 cr)
- SWEN 300 - Crafting Quality Code (4 cr)
- SWEN 400 - Large Scale Architecture (4 cr)
- SWEN 415 - Interdisciplinary Development (4 cr)

**Computer Science (12 cr)**
- CMSC 110 - Computer Science I (4 cr)
- CMSC 310 - Design & Analysis of Algorithms (4 cr)
- CMSC 371 - Database Management Systems (4 cr)

**Computer Engineering (8 cr)**
- CMPE 220 - Computer Organization (4 cr)
- CMPE 320 - Operating Systems (4 cr)

**Mathematics Requirements (9 cr)**
- MATH 211 - Calculus I (4 cr) **
- MATH 225 - Discrete Mathematics (4 cr) **
- MATH 375 - Probability and Stats for Engineers (4 cr)

**Natural Science (8 cr)**
Select two:
- BIOL 161 - Prin. of Bio: Cell Str. and Funct. (4 cr) **
  OR
- CHEM 121 - Chemical Bonding (3 cr) **
- CHEM 125 - Lab IB-Stoichiometry & Reactions (1 cr)
  OR
- PHYS 205 - Intermediate Physics I (3 cr)
- PHYS 123 - Physics I Lab (1 cr) **

**Allied Courses (12 cr)**
Select 3-4 courses. At least 10 credits must be taken beyond the Natural Science requirements:
- BIOL 161 - Prin. of Bio: Cell Str. and Funct. (4 cr) **
- BIOL 162 - Prin. of Bio: Organismal Diversity (4 cr) **
- CHEM 121 - Chemical Bonding (3 cr) ** AND
- CHEM 125 - Lab IB-Stoichiometry & Reactions (1 cr)
- CHEM 122 - Chemical Dynamics (3 cr) ** AND
- CHEM 126 - Lab IIIB-Equilibrium & Instrumentation (1 cr)
- PHYS 205 - Intermediate Physics I (3 cr) AND
- PHYS 123 - Physics I Lab (1 cr) **
- PHYS 206 - Intermediate Physics II (3 cr) AND
- PHYS 125 - Physics II Lab (1 cr) **
- MATH 219 - Data Science I (3 cr)
- MATH 317 - Statistics I (4 cr)
- MATH 318 - Elementary Linear Algebra (4 cr)
- MATH 319 - Data Science II (3 cr)
- MATH 320 - Intro to Abstract Algebra (3 cr)
- MATH 326 - Mathematical Modeling (3 cr)
- MATH 410 - Numerical Analysis (3 cr)
- MATH 421 - Number Theory and Cryptography (3 cr)
- MATH 450 - Combinatorics (3 cr)

**Elective (4 cr)**
- CMSC, CMPE, or SWEN _________________(300+ level)
- CMSC, CMPE, or SWEN _________________(300+ level)

Graduation Requirements: 120 cr
Free Electives = 2 cr
GPA Needed to Declare: 2.0

To declare or retain this major, a student must earn a ‘C’ or better in CMSC 110 Computer Science I and be at a minimum math placement level of 4.

**HELPFUL HINTS FOR ADVISING:**

Semester I
- SWEN 100 – Intro to Software Engineering (4 cr)
- MATH 211 – Calculus I (4 cr)

Semester II
- ENGR 120 – Programming (4 cr)
- MATH 225 – Discrete Math (4 cr)

Disclaimer: Courses may be subject to change.
Spanish & Spanish, Secondary Education Certification – B.A.

Requirements for Spanish major = 36 cr
Requirements for Spanish major with Secondary Cert = 66 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Spanish Core Requirements (30 cr)**
- SPAN 202 - Intermediate Conversation (3 cr)
- SPAN 204 - Ideas and Cultures from Spanish (3 cr)
- SPAN 211 - Intermediate Contextualized Grammar (3 cr)
- SPAN 302 - Advanced Spanish Conversation (3 cr)
- SPAN 309 - Spanish Phonetics (3 cr)
- SPAN 312 - Contextualized Grammar (3 cr)
- SPAN 313 - Advanced Composition and Stylistics (3 cr)
- SPAN 343 - Introduction to Literary Studies (3 cr)
- SPAN 360 - Masterpieces of Spanish Literature (3 cr)
- SPAN 361 - Masterpieces of Spanish-American Lit. (3 cr)

**Spanish Electives (6 cr)**
- SPAN ______________________________ (300+ level)
- SPAN ______________________________ (400 level)

**Secondary Education Certification (33 cr)**
- TEED 207 - Organizational & Psych Foundations (3 cr)
- TEED 251 - Elements of Middle-Level Instruction (3 cr)
- SPEE 273 - Introduction to Exceptionalities (3 cr)
- SPEE 423 - Effective Instructional Strategies (3 cr)
- SPEE 483 - Assessing Children with Exceptionalities (3 cr)
- EDFN 426 - Methods of Teaching Foreign Languages (3 cr)
- EDFN 495 - Student Teaching & Practicum (12 cr)

**Math requirement:**
- MATH __________________________ (except MAT 185) **
- MATH __________________________ (except MAT 185) **

**Literature requirement:**
- ENGL 243, ENGL 248, OR ENGL 250 (3 cr) **

**Environmental requirement:**
- _________________________________

**Optional Translation Specialization**
- SPAN 330 - Spanish for the Professions (3 cr)
- SPAN 420 - Theory and Practice of Translation (3 cr)
- SPAN 425 - Advanced Oral Interpreting (3 cr)

**Basic Skills Examinations:** All education majors must pass the first level of the Basic Skills assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300

**Dual Certification:** Students planning to teach Spanish will find it to their advantage to work for dual certification in two modern languages: a modern language and English, or a modern language and another field. To achieve dual certification, a student must have the approval of both departments involved, follow an approved course of studies in the specialty areas, take the appropriate methods course, and complete student teaching in both fields. See the Modern Languages Department for details.

**ACTFL Oral Proficiency:** All Spanish Secondary Education Certification student must pass the ACTFL Oral Proficiency Interview prior to graduation and reach an advanced low level minimum.

**Graduation Requirements:** 120 cr
Free Electives with Education Cert = 9 cr
Free Electives without Education Cert = 39 cr
GPA Needed to Declare: 3.0

**Free Electives:** The advisor will suggest courses from other programs that pertain to the history and culture of Spanish speaking countries. Or student may choose a second Major or other minors. Free Electives are courses not previously taken.

**HELPFUL HINTS FOR ADVISING**

**Year I**
Any introductory language courses necessary.

Spanish Minor available - 18 cr

**Disclaimer:** Courses may be subject to change.
Sustainability, Environmental Conservation Concentration – B.S.

Requirements for Sustainability major with Environmental Conservation Concentration = 60 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Sustainability Core (6 cr)**
- ESSC 108 – Introduction to Environmental Sustainability (3 cr) **
  - OR
  - BIOL 145 – Environmental Biology (3 cr)
  - GEOG 427 – Sustainability (3 cr)

**Concentration Core (9 cr)**
- GEOG 202 – GIS I: Intro to GIS (3 cr)
- GEOG 329 – Economic Geography (3 cr)
- GEOG 391 – Geography Seminar (3 cr)

**Sustainable Systems Requirements (9 cr)**
Select three:
- GEOG 203 – Climate, Energy, & Sustainability (3 cr)
- ESSC 214 – Geology of National Parks (3 cr)
- GEOG 301 – Intro to Biogeography (3 cr)
- GEOG 406 – Sustainable Food Systems (3 cr)
- GEOG 444 – Environmental Land Use Planning (3 cr)
- GEOG 446 – Water Resources Management (3 cr)
- GEOG 450 – Geography-Geology Field Studies (1-3 cr)
  - Recommended

**Human Sustainability Requirements (6 cr)**
Select two:
- GEOG 140 – Human Geography (3 cr) **
- GEOG 244 – Land Use (3 cr)
- GEOG 310 – Transportation Geography (3 cr)
- GEOG 322 – Urban Geography (3 cr)

**Technique Course Requirements (6 cr)**
Select two:
- GEOG 339 – Remote Sensing (3 cr)
- GEOG 352 – Cartography (3 cr)
- GEOG 363 – GIS II: Intermediate GIS (3 cr)
- GEOG 420 – GIS III: Advanced GIS (3 cr)
- GEOG 425 – Image Processing (3 cr)
- GEOG 440 – Field Techniques (3 cr)
- GEOG 441 – Quantitative Methods (3 cr) Recommended
- GEOG 450 – Geography-Geology Field Studies (1-3 cr)
  - Recommended
- GEOG 463 – Applied Geophysical Imaging (3 cr)

**Biology Requirements (6 cr)**
- BIOL 162 – Principles of Bio: Organismal Diversity (4 cr) **
  - OR
  - BIOL 205 – Marine Biology (3 cr)
  - BIOL 208 – Field Biology (3 cr)
  - BIOL 210 – Field Zoology (3 cr)
  - BIOL 230 – Botany (3 cr)
  - BIOL 242 – Ecology (3 cr) Recommended
  - BIOL 245 – Marine Ecology (3 cr)
  - BIOL 442 – Aquatic Ecology (3 cr)
  - BIOL 444 – Conservation Biology (3 cr)

**Psychology and Sociology Requirements (9 cr)**
Select one:
- PSYC 101 – General Psychology (3 cr) ** OR
- SOCI 101 – Intro to Sociology (3 cr) **
Select two:
- PSYC 350 – Psych of Sustainability (3 cr) Recommended
- SOCI 265 – Global Society (3 cr)
- SOCI 346 – City and Community (3 cr)
- SOCI 354 – Social Movements and Social Change (3 cr)
- SOCI 363 – Population Problems (3 cr)
- SOCI 404 – Global Leadership for Global Society (3 cr)

**Economics and Business Requirements (6 cr)**
- ECON 102 – Principles of Microeconomics (3 cr)
  - OR
  - ECON 345 – The Economics of Growth & Development (3 cr)
  - ECON 355 – Environmental Economics (3 cr) Recommended
- MGMT 447 – Business and Society (3 cr)
- ITAN 142 – Business Computer Systems (3 cr)
- ITAN 242 – Design & Development of User Info Syst. (3 cr)
- SCMG 420 – Global Logistics Systems (3 cr)

**English, History, and Communication Requirements(6 cr)**
Select two:
- ENGL 238 – Technical Writing (3 cr)
- ENGL 359 – Native American Literature (3 cr)
- ENGL 438 – Technical Professional Writing II (3 cr)
- COST 345 – Environmental Comm. (3 cr) Recommended
- HIST 358 – American Enviro. History (3 cr) Recommended

Graduation Requirements: 120 cr
Free Electives = 15 cr
GPA Needed to Declare: 2.0

Disclaimer: Courses may be subject to change.
GROVE COLLEGE OF BUSINESS DEGREE PROGRAMS

B.S.B.A.
Accounting
Entrepreneurship
  Innovation Management
Finance
  Personal Financial Planning
Business Management
  Human Resource Management
  International Management
Information Systems and Analytics
Marketing
  Marketing Management
  Digital Marketing and Analytics
Supply Chain
  Logistics Management
SUGGESTED PLAN FOR B.S.B.A. STUDENTS

**FRESHMAN YEAR**

**Fall Semester**
- UNIV 101 First Year Experience
- Academic Writing*
- College Algebra
- Business Computer Systems*
- Foundations of Business Administration (2 cr.)*

**Spring Semester**
- Human Comm Studies*
- Historical Foundation of Global Cultures*
- Applied Calculus I
- General Education Elective*
- Principles of Economics (4 cr.)*
  or a General Education Elective

**SOPHOMORE YEAR**

**Fall Semester**
- Fund. of Financial Accounting
- Principles of Economics (4 cr.)
  or a General Education Elective
- American Legal Environment*
- Principles of Marketing*
- General Education Elective

**Spring Semester**
- Managerial Accounting
- Managerial Economics
- Statistical Applications in Business*
- Major Course/General Education Elective
- General Education Elective

**JUNIOR YEAR**

**Fall Semester**
- Financial Management*
- Organizational Behavior*
- General Education Elective
- Supply Chain Operations Mgt*
  or General Education Elective
- Major Course
  or General Education Elective

**Spring Semester**
- Major Course*
- Major Course*
- General Education Elective*
- Free Elective*
- Free Elective*

**SENIOR YEAR**

**Fall Semester**
- Business and Society*
- Major Course
- Major Course
- General Education Elective
- Free Elective (Major course for ACC, ISA &
  PFP Majors)

**Spring Semester**
- Strategic Management*
- Major Course
- Major Course
- Free Elective/General Education Requirement
- Free Elective

*These courses can be interchanged between semesters within the specified year.

Courses in bold are part of the business core curriculum.

Please note that the sequencing of courses may vary depending on the specific requirements within a particular major. For example, Accounting, Information Systems and Analytics, Business Management, Human Resource Management, International Management, and Entrepreneurship, majors should begin their major coursework during the first semester of their junior year.

Check with your advisor or departmental office for further information.
BSBA Core Course Flow Chart

**Requirements for Business Majors**
- Pass ENGL 114 with a “C”
- Maintain 2.0 GPA overall and in the business core and the major
- Complete general education requirements
- Earn at least 120 credits

**First Year**
- BUSN 101 – Foundations of Business Admin. (2 cr) Grade of “C” or higher required
- ECON 113**† – Principles of Economics (4 cr) Grade of “C” or higher required
- MATH 140 – College Algebra Grade of “C” or higher required
- ITAN 142 – Business Computer Systems

**Sophomore Year**
- ACCT 200** – Fundamentals of Financial Accounting
- MATH 181* – Applied Calculus I
- MKTG 205** – Principles of Marketing
- ECON 280 – Managerial Economics
- SCM 200 – Statistical Applications in Business
- BLAW 261 – American Legal Environment
- FINA 311 – Financial Management

**Junior Year**
- ACCT 201** – Managerial Accounting
- MGMT 305 – Organizational Behavior
- SCMG 330 – Supply Chain & Operations Management

**Senior Year**
- MGMT 497 – Strategic Management
- MGMT 447 – Business & Society
- MGMT 447 – Strategic Management
- MGMT 447 – Business & Society

* This course is a general education course that is required for the BSBA core.
† ECON 101 and ECON 102 must both be passed (at least one with a C grade or higher) to replace ECON 113.
** Accounting majors should take ACCT 200 as first-semester sophomores and ACCT 201 as second-semester sophomores. Accounting and
Personal Financial Planning majors must earn a “C” grade or higher in ACCT 200 and ACCT 201. Marketing majors must earn a “C” grade or higher in MKTG 205.
Accounting – B.S.B.A.

Requirements for Accounting major = 62 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

B.S.B.A. Core (48 cr)
- MATH 140 – College Algebra (3 cr) **
- MATH 181 – Applied Calculus (3 cr) **
- ACCT 200 – Fundamentals of Financial Accounting (3 cr)
- ACCT 201 – Managerial Accounting (3 cr)
- BLAW 261 – American Legal Environment (3 cr)
- BUSN 101 – Foundations of Business Administration (2 cr)
- ECON 113 – Principles of Economics (4 cr) **
- ECON 280 – Managerial Economics (3 cr)
- FINA 311 – Financial Management (3 cr)
- MGMT 305 – Organizational Behavior (3 cr)
- MGMT 447 – Business and Society (3 cr)
- MGMT 497 – Strategic Management (3 cr)
- ITAN 142 – Business Computer Systems (3 cr)
- MKTG 205 – Principles of Marketing (3 cr)
- SCMG 200 – Statistical Applications in Business (3 cr)
- SCMG 330 – Supply Chain & Operations Management (3 cr)

Accounting Core (18 cr)
- ACCT 306 – Tax Accounting (3 cr)
- ACCT 310 – Intermediate Accounting I (3 cr)
- ACCT 311 – Intermediate Accounting II (3 cr)
- ACCT 312 – Cost Determination and Analysis (3 cr)
- ACCT 404 – Auditing (3 cr)
- ACCT 418 – Accounting Information and Control Systems (3 cr)

Accounting Electives (6 cr)
Choose two:
- ACCT 401 – Advanced Accounting (3 cr) OR
- ACCT 406 – Advanced Tax Accounting (3 cr) OR
- ACCT 412 – Advanced Cost Analysis and Control (3 cr) OR
- ACCT 420 – Fraud Examination (3 cr) OR
- ACCT 490 – Selected Topics in Accounting (3 cr)

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

Substitutions: Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

Graduation Requirements: 120 cr
Free Electives = 13 cr

HELPFUL HINTS FOR ADVISING:

Semester I
- BUSN 101 – Foundations of Business
- MATH 140 – College Algebra
- ITAN 142 – Business Computer Systems

Semester II
- MATH 181 – Applied Calculus I
- ECON 113 – Principles of Economics

Semester III
- ACCT 200 – Fundamentals of Accounting
- BLAW 261 – American Legal Environment
- MKTG 205 – Principles of Marketing

Semester IV
- ACCT 201 – Managerial Accounting
- ECON 280 – Managerial Economics
- SCMG 200 – Statistical Applications

Notes:
- MATH 140 is recommended before taking ECON 113.
- MATH 140 and ITAN 142 are prerequisites for SCMG 200.

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

Disclaimer: Courses may be subject to change.
Entrepreneurship – B.S.B.A.

Requirements for Entrepreneurship major = 59 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**B.S.B.A. Core (48-49 cr)**
- MATH 140 – College Algebra (3 cr)
- MATH 181 – Applied Calculus (3 cr) **
- ACCT 200 – Fundamentals of Financial Accounting (3 cr)
- ACCT 201 – Managerial Accounting (3 cr)
- BLAW 261 – American Legal Environment (3 cr)
- BUSN 101 – Foundations of Business Administration (2 cr)
- ECON 113 – Principles of Economics (4 cr) **
- ECON 280 – Managerial Economics (3 cr)
- FINA 311 – Financial Management (3 cr)
- MGMT 305 – Organizational Behavior (3 cr)
- MGMT 447 – Business and Society (3 cr)
- MGMT 497 – Strategic Management (3 cr)
- ITAN 142 – Business Computer Systems (3 cr)
- MKTG 205 – Principles of Marketing (3 cr)
- SCMG 200 – Statistical Applications in Business (3 cr)
- SCMG 330 – Supply Chain & Operations Management (3 cr)

**Entrepreneurship Requirements (15 cr)**
- ENTR 336 – Product Design & Development (3 cr) F
- ENTR 337 – Issues in Entrepreneurship (3 cr) S
- ENTR 338 – Social and Green Entrepreneurship (3 cr) S
- ENTR 431 – Corporate Entrepreneurship (3 cr)

**Entrepreneurship Track (6 cr)**
- ENTR 432 – Entrepreneurship (3 cr) S
- ENTR 433 – Small Business Management (3 cr) S

**Innovation Management Track (6 cr)**
- ENTR 480 – Innovation Management (3 cr)
- ENTR 481 – Innovation Competencies and Tools (3 cr)

Notes:
- MATH 140 is recommended before taking ECON 113.
- MATH 140 and ITAN 142 are prerequisites for SCMG 200.

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

Substitutions: Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

Graduation Requirements: 120 cr
Free Electives = 16 cr

F=Fall only
S=Spring only

**HELPFUL HINTS FOR ADVISING:**

Semester I
- BUSN 101 – Foundations of Business
- MATH 140 – College Algebra
- ITAN 142 – Business Computer Systems

Semester II
- MATH 181 – Applied Calculus I
- ECON 113 – Principles of Economics
- MKTG 205 – Principles of Marketing

Semester III
- ACCT 200 – Fundamentals of Accounting
- BLAW 261 – American Legal Environment

Semester IV
- ACCT 201 – Managerial Accounting
- ECON 280 – Managerial Economics
- SCMG 200 – Statistical Applications

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

Disclaimer: Courses may be subject to change.
## Finance – B.S.B.A

Requirements for Finance major = 63 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

### B.S.B.A. Core (48-49 cr)
- MATH 140 – College Algebra (3 cr)**
- MATH 181 – Applied Calculus (3 cr)**
- ACCT 200 – Fundamentals of Financial Accounting (3 cr)
- ACCT 201 – Managerial Accounting (3 cr)
- BLAW 261 – American Legal Environment (3 cr)
- BUSN 101 – Foundations of Business Administration (2 cr)
- ECON 113 – Principles of Economics (4 cr)**
- ECON 280 – Managerial Economics (3 cr)
- FINA 311 – Financial Management (3 cr)
- MGMT 305 – Organizational Behavior (3 cr)
- MGMT 447 – Business and Society (3 cr)
- MGMT 497 – Strategic Management (3 cr)
- ITAN 142 – Business Computer Systems (3 cr)
- MKTG 205 – Principles of Marketing (3 cr)
- SCMG 200 – Statistical Applications in Business (3 cr)
- SCMG 330 – Supply Chain & Operations Management (3 cr)

### Finance Concentration (21 cr)
- FINA 312 – Investments (3 cr)
- FINA 313 – Advanced Financial Management (3 cr) S
- FINA 314 – Financial Institutions (3 cr) F
- FINA 333 – Applied Company & Security Analysis (3 cr) S

Select three of the following:
- FINA 320 – Risk Management and Insurance (3 cr)
- FINA 322 – Estate Planning (3 cr)
- FINA 324 – Retirement Planning and Employee Benefits (3 cr)
- FINA 340 – Principles of Real Estate (3 cr)
- FINA 393 – Selected Topics in Finance (1-3 cr)
- FINA 405 – Real Estate Finance, Investments, & Appraisal Analysis (3 cr)
- FINA 414 – Bank Management (3 cr)
- FINA 421 – Personal Financial Planning Capstone (3 cr)
- FINA 425 – Global Financial Management (3 cr)
- FINA 434 – Investment Management Program I (1-3 cr)
- FINA 435 – Investment Management Program II (1-3 cr)
- FINA 442 – Derivatives Markets (3 cr)
- FINA 490 – Selected Topics in Finance (1-3 cr)

### Personal Financial Planning Concentration (21 cr)
- FINA 312 – Investments (3 cr) F
- FINA 320 – Risk Management & Insurance (3 cr) S
- FINA 322 – Estate Planning (3 cr) F
- FINA 324 – Retirement Planning & Employee Benefits (3 cr) S
- FINA 333 – Applied Company & Security Analysis (3 cr) S
- FINA 421 – Personal Financial Planning Capstone (3 cr) S
- ACCT 306 – Tax Accounting (3 cr) S

### Mathematical Competency:
Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

### Substitutions:
Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

Graduation Requirements: 120 cr
Free Electives = 12 cr

### HELPFUL HINTS FOR ADVISING:

#### Semester I
- BUSN 101 - Foundations of Business
- MATH 140 - College Algebra
- ITAN 142 – Business Computer Systems

#### Semester II
- MATH 181 – Applied Calculus I
- ECON 113 – Principles of Economics

#### Semester III
- ACCT 200 – Fundamentals of Accounting
- BLAW 261 – American Legal Environment
- SCMG 200 – Statistical Applications

#### Semester IV
- ACCT 201 – Managerial Accounting
- ECON 280 – Managerial Economics
- MKTG 205 – Principles of Marketing

### Notes:
- MATH 140 is recommended before taking ECON 113.
- MATH 140 and ITAN 142 are prerequisites for SCMG 200.

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

F=Fall only S=Spring only

### Disclaimer:
Courses may be subject to change.
Business Management – B.S.B.A.

Requirements for Business Management major = 59 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

B.S.B.A. Core (48-49 cr)
- MATH 140 – College Algebra (3 cr) **
- MATH 181 – Applied Calculus (3 cr) **
- ACCT 200 – Fundamentals of Financial Accounting (3 cr)
- ACCT 201 – Managerial Accounting (3 cr)
- BLAW 261 – American Legal Environment (3 cr)
- BUSN 101 – Foundations of Business Administration (2 cr)
- ECON 113 – Principles of Economics (4 cr) **
- ECON 280 – Managerial Economics (3 cr)
- FINA 311 – Financial Management (3 cr)
- MGMT 305 – Organizational Behavior (3 cr)
- MGMT 447 – Business and Society (3 cr)
- MGMT 497 – Strategic Management (3 cr)
- ITAN 142 – Business Computer Systems (3 cr)
- MKTG 205 – Principles of Marketing (3 cr)
- SCMG 200 – Statistical Applications in Business (3 cr)
- SCMG 330 – Supply Chain & Operations Management (3 cr)

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

Substitutions: Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

Management Concentration (18 cr)
- MGMT 340 – Human Resources Management (3 cr)
- MGMT 394 – Leadership for Business (3 cr)
- MGMT 498 – Strategy Implementation (3 cr)
Select four:
- ENTR 337 – Issues in Entrepreneurship (3 cr)
- ENTR 432 – Entrepreneurship (3 cr)
- ENTR 431 – Corporate Entrepreneurship (3 cr)
- ENTR 433 – Small Business Management (3 cr)
- MGMT 342 – Labor Relations & Collective Bargaining (3 cr)
- MGMT 346 – Human Resources Management Law (3 cr)
- MGMT 349 – International Human Resource Management (3 cr)
- MGMT 370 – International Business (3 cr)
- MGMT 447 – Business and Society (3 cr)
- MGMT 494 – Leadership & Decision-Making (3 cr)
- MKTG 360 – International Marketing (3 cr)
- SCMG 200 – Statistical Applications in Business (3 cr)
- SCMG 330 – Supply Chain & Operations Management (3 cr)

International Management Concentration (30 cr)
- MGMT 340 – Human Resource Management (3 cr)
- MGMT 370 – International Business (3 cr)
- MGMT 470 – International Management (3 cr)
- MKTG 360 – International Marketing (3 cr)
Select two:
- ANTH 220 – Anthropology for International Studies (3 cr)

Graduation Requirements: 120 cr
Free Electives = 16 cr

Notes:
MATH 140 is recommended before taking ECON 113.
MATH 140 and ITAN 142 are prerequisites for SCMG 200.

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

Disclaimer: Courses may be subject to change.
Information Systems and Analytics – B.S.B.A.

Requirements for ISA major = 59 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

B.S.B.A. Core (48-49 cr)

- _MATH 140 – College Algebra (3 cr) **
- _MATH 181 – Applied Calculus (3 cr) **
- _ACCT 200 – Fundamentals of Financial Accounting (3 cr)
- _ACCT 201 – Managerial Accounting (3 cr)
- _BLAW 261 – American Legal Environment (3 cr)
- _BUSN 101 – Foundations of Business Administration (2 cr)
- _ECON 113 – Principles of Economics (4 cr) **
- _ECON 280 – Managerial Economics (3 cr)
- _FINA 311 – Financial Management (3 cr)
- _MGMT 305 – Organizational Behavior (3 cr)
- _MGMT 447 – Business and Society (3 cr)
- _ITAN 142 – Business Computer Systems (3 cr)
- _ITAN 240 – Introduction to Programming Concepts (3 cr) F
- _ITAN 340 – Business Programming (3 cr) S
- _ITAN 344 – Business Systems Analysis and Design (3 cr) F
- _ITAN 355 – Database Applications (3 cr) F
- _ITAN 425 – Analytics and Tech Integration (3 cr) S
- _ITAN 446 – Applied Project Management (3 cr) S
- _ITAN 422 – Design & Development of User Info Syst. (3 cr) S
- _ITAN 399 – Introduction to Corporate Cybersecurity (3 cr) F
- _ITAN 442 – Electronic Commerce & Tech Integration (3 cr) S

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

Substitutions: Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

Information Systems & Analytics Requirements (21 cr)

- _ITAN 242 – Design & Development of User Info Syst. (3 cr) S
- _ITAN 399 – Introduction to Corporate Cybersecurity (3 cr) F
- _ITAN 442 – Electronic Commerce & Tech Integration (3 cr) S

Select one:

- _ITAN 240 – Introduction to Programming Concepts (3 cr) F
- _ITAN 340 – Business Programming (3 cr) S
- _ITAN 344 – Business Systems Analysis and Design (3 cr) F
- _ITAN 355 – Database Applications (3 cr) F
- _ITAN 425 – Analytics and Tech Integration (3 cr) S
- _ITAN 446 – Applied Project Management (3 cr) S

Graduation Requirements: 120 cr
Free Electives = 16 cr

HELPFUL HINTS FOR ADVISING:

<table>
<thead>
<tr>
<th>Semester I</th>
<th>BUSN 101 – Foundations of Business</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>MATH 140 – College Algebra</td>
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<tr>
<td></td>
<td>ITAN 142 – Business Computer Systems</td>
</tr>
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| Semester II | MATH 181 – Applied Calculus I       |
|            | ECON 113 – Principles of Economics  |

| Semester III| ACCT 200 – Fundamentals of Accounting|
|             | BLAW 261 – American Legal Environment|
|             | SCMG 200 – Statistical Applications |

| Semester IV | ACCT 201 – Managerial Accounting    |
|            | ECON 280 – Managerial Economics     |
|            | MKTG 205 – Principles of Marketing  |

Notes:

- MATH 140 is recommended before taking ECON 113.
- MATH 140 and ITAN 142 are prerequisites for SCMG 200.

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

Disclaimer: Courses may be subject to change.
Marketing – B.S.B.A.

Requirements for Marketing Management major = 69 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

B.S.B.A. Core (48-49 cr)
- MATH 140 - College Algebra (3 cr)**
- MATH 181 - Applied Calculus (3 cr)**
- ACCT 200 - Fundamentals of Financial Accounting (3 cr)
- ACCT 201 - Managerial Accounting (3 cr)
- BLAW 261 - American Legal Environment (3 cr)
- BUSN 101 - Foundations of Business Administration (2 cr)
- ECON 113 - Principles of Economics (4 cr)**
- ECON 280 - Managerial Economics (3 cr)
- FINA 311 - Financial Management (3 cr)
- MGMT 305 - Organizational Behavior (3 cr)
- MGMT 447 - Strategic Management (3 cr)
- ITAN 142 - Business Computer Systems (3 cr)
- MKTG 205 - Principles of Marketing (3 cr)
- SCMG 200 - Statistical Applications in Business (3 cr)
- SCMG 330 - Supply Chain & Operations Management (3 cr)

Marketing Management Concentration (21 cr)
- MKTG 206 - Consumer Behavior (3 cr) F
- MKTG 325 - Advertising and Promotional Strategy (3 cr) F
- MKTG 360 - International Marketing (3 cr) F
- MKTG 370 - Services Marketing (3 cr) F
- MKTG 430 - Marketing Research (3 cr) F
- MKTG 495 - Marketing Management (3 cr) S

Select one:
- MKTG 335 - Digital Marketing (3 cr) F
- MKTG 339 - Social Media Marketing (3 cr) F
- MKTG 352 - Principles of Retailing (3 cr)
- MKTG 365 - Relationship Marketing (3 cr)
- MKTG 380 - Sports Marketing (3 cr)
- MKTG 390 - Selected Topics in Marketing (3 cr)
- MKTG 490 - Selected Topics in Marketing (3 cr)
- ENTR 337 - Issues in Entrepreneurship (3 cr)
- ITAN 300 - Information Tech. And Business Operations (3 cr)
- MGMT 450 - Negotiation (3 cr)
- FINA 340 - Principles of Real Estate (3 cr)

Digital Marketing and Analytics Concentration (21 cr)
- MKTG 206 - Consumer Behavior (3 cr) F
- MKTG 331 - Marketing Analysis I (3 cr) F
- MKTG 335 - Digital Marketing (3 cr) F
- MKTG 339 - Social Media Marketing (3 cr) F
- MKTG 430 - Marketing Research (3 cr) F
- MKTG 451 - Marketing Analytics II (3 cr) S

Select one:
- MKTG 325 - Advertising and Promotional Strategy (3 cr) F
- MKTG 352 - Principles of Retailing (3 cr)
- MKTG 360 - International Marketing (3 cr) F
- MKTG 365 - Relationship Marketing (3 cr)
- MKTG 370 - Services Marketing (3 cr) F
- MKTG 380 - Sports Marketing (3 cr)

Graduation Requirements: 120 cr
Free Electives = 12 cr

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

Substitutions: Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

Notes:
- MATH 140 is recommended before taking ECON 113.
- MATH 140 and ITAN 142 are prerequisites for SCMG 200.

F=Fall only
S=Spring only

HELPFUL HINTS FOR ADVISING:

Semester I
- BUSN 101 - Foundations of Business
- MATH 140 - College Algebra
- ITAN 142 - Business Computer Systems

Semester II
- MATH 181 - Applied Calculus I
- ECON 113 - Principles of Economics

Semester III
- ACCT 200 - Fundamentals of Accounting
- BLAW 261 - American Legal Environment
- SCMG 200 - Statistical Applications

Semester IV
- ACCT 201 - Managerial Accounting
- ECON 280 - Managerial Economics
- MKTG 205 - Principles of Marketing

Notes: See the Prerequisite Flow Chart for B.S.B.A Core Courses for prerequisites and other course flow recommendations for the B.S.B.A.

Disclaimer: Courses may be subject to change.
Supply Chain Management – B.S.B.A.

Requirements for major in Supply Chain Management = 59 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**B.S.B.A. Core (48-49 cr)**
- __MATH 140 – College Algebra (3 cr) **
- __MATH 181 – Applied Calculus (3 cr) **
- __ACCT 200 – Fundamentals of Financial Accounting (3 cr)
- __ACCT 201 – Managerial Accounting (3 cr)
- __BLAW 261 – American Legal Environment (3 cr)
- __BUSN 101 – Foundations of Business Administration (2 cr)
- __ECON 113 – Principles of Economics (4 cr) **
- __ECON 280 – Managerial Economics (3 cr)
- __FINA 311 – Financial Management (3 cr)
- __MGMT 305 – Organizational Behavior (3 cr)
- __MGMT 447 – Business and Society (3 cr)
- __MGMT 497 – Strategic Management (3 cr)
- __ITAN 142 – Business Computer Systems (3 cr)
- __SCMG 200 – Statistical Applications in Business (3 cr)
- __SCMG 330 – Supply Chain & Operations Management (3 cr)

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MATH 140.

Substitutions: Completion of ECON 101 & ECON 102 will satisfy the requirement for ECON 113.

**Supply Chain Management Concentration (18 cr)**
- __SCMG 315 – Strategic Procurement (3 cr)
- __SCMG 355 – Managing Quality & Continuous Improvement (3 cr)
- __SCMG 370 – Integrated Supply Chain Systems (3 cr)
- __SCMG 380 – Data Mining for Supply Chain Mgmt (3 cr)
- __SCMG 420 – Global Logistics Systems (3 cr)

Select one:
- __ACCT 312 – Cost Determination and Analysis (3 cr)
- __ECON 355 – Environmental Economics (3 cr)
- __FINA 320 – Risk Management and Insurance (3 cr)
- __FINA 340 – Principles of Real Estate (3 cr)
- __FINA 405 – Real Estate Finance, Investment & Appraisal Analysis (3 cr)
- __GEOG 202 – GIS I: Intro to Geographic Info Systems (3 cr)
- __MGMT 340 – Human Resource Management (3 cr)
- __MGMT 342 – Labor Relations & Collective Bargaining (3 cr)
- __MGMT 370 – International Business (3 cr)
- __MGMT 394 – Leadership for Business (3 cr)
- __MGMT 450 – Negotiation (3 cr)
- __ITAN 310 – Info Technology & Business Analytics (3 cr)
- __ITAN 446 – Applied Project Management (3 cr)
- __MKTG 310 – Personal Selling (3 cr)
- __MKTG 342 – B2B Marketing & Analysis (3 cr)
- __MKTG 365 – Relationship Marketing (3 cr)
- __MKTG 370 – Services Marketing (3 cr)
- __SCMG 315 – Strategic Procurement (3 cr)
- __SCMG 355 – Managing Quality & Continuous Improvement (3 cr)
- __SCMG 380 – Data Mining for Supply Chain Mgmt (3 cr)

**Logistics Management Concentration (18 cr)**
- __SCMG 370 – Integrated Supply Chain Systems (3 cr)
- __SCMG 390 – Strategic Warehouse Management (3 cr) S
- __SCMG 410 – Distribution Systems in Supply Chains (3 cr) S
- __SCMG 420 – Global Logistics Systems (3 cr)

Select two:
- __ACCT 312 – Cost Determination and Analysis (3 cr)
- __ECON 355 – Environmental Economics (3 cr)
- __FINA 320 – Risk Management and Insurance (3 cr)
- __FINA 340 – Principles of Real Estate (3 cr)
- __FINA 405 – Real Estate Finance, Investment & Appraisal Analysis (3 cr)
- __GEOG 202 – GIS I: Intro to Geographic Info Systems (3 cr)
- __MGMT 340 – Human Resource Management (3 cr)
- __MGMT 342 – Labor Relations & Collective Bargaining (3 cr)
- __MGMT 370 – International Business (3 cr)
- __MGMT 394 – Leadership for Business (3 cr)
- __MGMT 450 – Negotiation (3 cr)
- __ITAN 310 – Info Technology & Business Analytics (3 cr)
- __ITAN 446 – Applied Project Management (3 cr)
- __MKTG 310 – Personal Selling (3 cr)
- __MKTG 342 – B2B Marketing & Analysis (3 cr)
- __MKTG 365 – Relationship Marketing (3 cr)
- __MKTG 370 – Services Marketing (3 cr)
- __SCMG 315 – Strategic Procurement (3 cr)
- __SCMG 355 – Managing Quality & Continuous Improvement (3 cr)
- __SCMG 380 – Data Mining for Supply Chain Mgmt (3 cr)

Graduation Requirements: 120 cr

Free Electives = 16 cr

F=Fall only  S=Spring only

Notes:
MATH 140 is recommended before taking ECON 113.
MATH 140 and ITAN 142 are prerequisites for SCMG 200.

All B.S.B.A. majors in the John L. Grove College of Business should satisfactorily complete the 100-/200-level business core courses during their freshman and sophomore years and the 300-400-level business core courses during their junior and senior years, as listed below.

Disclaimer: Courses may be subject to change.
COLLEGE OF EDUCATION & HUMAN SERVICES
COLLEGE OF EDUCATION & HUMAN SERVICES
DEGREE PROGRAMS

B.S.
Criminal Justice
Exercise Science

B.S.W.
Social Work

B.S.Ed.
Teacher Education
  Early Childhood/Elementary Education PK-4
  Elementary/Middle School Education 4-8
  Elementary/Middle School Education 4-8/Special Education Dual Certification
FOR STUDENTS INTERESTED IN TEACHING PK-4 OR 4-8

Many individuals have found that they enjoy working with children or young adults through babysitting, summer camps, athletics, etc. and then decide that they would like to teach these age groups. This enjoyment and appreciation of youth is a basic necessity for a teacher but as one educator said, “You can’t teach what you don’t know.” Therefore, the teacher education program for either early childhood/elementary education (Grades PK-4, Special Education PK-4 Dual Education Majors) or elementary/middle level education (Grades 4-8) majors is a blend of practical experiences with children grounded in a solid academic background in the general education program and in the major.

If you, as an exploratory student, are considering one of these majors, it must be a sound decision based on the understanding that you will be teaching children and young adults to take their places in society in the 21st century. You will need to: be a literate individual, knowledgeable in the math, sciences, social sciences and humanities; hone/sharpen critical and creative thinking skills, problem solving skills; have an appreciation of multicultural and international perspectives; and have an understanding of special needs children in inclusive classrooms in order to fulfill your responsibility to the children you teach.

All three programs at Shippensburg consist of a four-year program leading to the degree of Bachelor of Science in Education. Successful completion of this program of study qualifies the graduate for a variety of professional employment possibilities. The PK-4 Early Childhood/Elementary program leads to a PK-4 teaching certificate, thus qualify- ing the graduate for employment in any level pre-kindergarten through fourth grade. The dual Special Education/ PK-4 program leads to both PK-4 and special education certification. Those students choosing the Elementary/Middle Level program will select either one or two subjects in which they will be certified for the fourth through eighth grade level. The subject areas are: Social Studies, Language Arts, Math or Science. If a student selects the option to be certified in two subjects, one of the subjects must be math or science.

The curriculum for the programs can be divided into two parts: first, the university’s General Education requirements; and secondly, the education certification course requirement which focus on the particular grade band that a student will be certified to teach. Students must successfully complete the PAPA by a designated point before being permitted to continue, and complete required coursework with grades of “C” or higher. They must also have a 3.0 grade point average before gaining entry into either program.

Students need to demonstrate initiative, patience, and empathy for children as they learn to plan and guide the child’s program and to observe the child’s application of skills and knowledge. Their program emphasizes knowing how and when to help the child learn using a reflective model of teaching. Through study, direct observation, and participation, students grow in understanding various methods of teaching and become skillful in the use of curriculum materials and specialized equipment. They critically ex- amine various courses of study and the newer techniques of measuring and assessing children’s social and academic growth.

Source: Urbanowicz, M.J., Teacher Education.
Shippensburg University, January, 1992.
Hockersmith, P.E., School of Education and Human Services, June 2005.
Updated: Royce, C., Teacher Education, Shippensburg University, July, 2009.

Entry Requirements

For admission into one of the program areas in the Department of Teacher Education, complete and submit the application on the next page. Data used in the selection process include: your completed application form which includes a Statement of Commitment, high school and college GPA. If you are selected, you will be notified prior to scheduling so that you can select appropriate courses.

Required: a minimum 3.0 GPA from Shippensburg prior to completing the application.
Suggestions: Have an academic advisor read the Statement of Commitment prior to submitting the application.
INTRA-CAMPUS TRANSFER

The screening procedures for students currently enrolled in programs at Shippensburg University who seek admission to programs within the Teacher Education Department.

1. Opportunity for transfer is provided throughout the fall and spring semesters. Applications will only be considered after a GPA of at least 15 credits is established. A completed hard-copy application must be delivered to the Teacher Education office.

2. Data used in the decision process are:
   1. Completed application form (submitted on time)
   2. University GPA - 3.0 required
   3. Statement of Professional Commitment (Please respond to the following prompts)
      1. Why have you chosen this career?
      2. What abilities or qualities do you have to offer this profession?
      3. Why do you want to work with children?
   4. Communication Skills
      1. Basic Oral Communication
      2. College Writing
   3. Print a copy of your transcript and attach to this application.
   4. Additional requirements for applicants with 60 credits or enrolling in junior level classes:
      1. Passing scores on Basic Skills Test.
   5. Before student teaching all D and F grades must be repeated in a face-to-face regular semester or summer class at Shippensburg University.

Applicants will be ranked and offered admission as space becomes available.
FOR STUDENTS INTERESTED IN TEACHING SECONDARY EDUCATION

Shippensburg University has no Secondary Education Department. All students interested in teaching in a specific discipline must apply directly to the department as the degree will be a degree in the subject area with certification added.

Most secondary programs can be completed in 4 years. In situations where a student wants to complete requirements for more than one certification area, an additional semester may be needed. Field work beginning in the first education course (American School) and additional department requirements must be completed. All secondary majors must achieve a B average by graduation in order to be certified in the state of Pennsylvania.

Entry Requirements for all education majors:

1. A minimum 3.0 Grade Point Average.
2. Declare at the beginning of each semester.
3. Discuss the major with education professors who teach the secondary methods courses.

Suggestions: Contact the College of Education and Human Services at 717-477-1487 if you have questions regarding secondary education programs.
Requirements for Criminal Justice major = 60 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

**Social & Behavioral Science Requirements (9 cr)**
- **POLI 100 - U.S. Government & Politics (3 cr) **
- **PSYC 101 - General Psychology (3 cr) **
- **SOCI 101 - Introduction to Sociology (3 cr) **

**Required Core (21 cr)**
- **CRJU 100 - Intro to Criminal Justice (3 cr)**
- **CRJU 221 - Policing a Democracy (3 cr)**
- **CRJU 241 - Survey of Corrections (3 cr)**
- **CRJU 261 - Criminal Law & Procedures (3 cr)**
- **CRJU 309 - Theories of Crime & Crime Control (3 cr)**
- **CRJU 310 - Research Methods (3 cr)**
- **CRJU 452 - Race, Ethnicity & Crime (3 cr)**

**Capstone Course (3 cr)**
- **CRJU 454 - Policy, Professionalism, and Ethics (3 cr)**

**Criminal Justice Electives (21 cr)**
Select 7 of the following:
- **CRJU 321 - Criminal Investigation (3 cr)**
- **CRJU 326 - Victimology: The Victim and the Law (3 cr)**
- **CRJU 336 - Introduction to Forensic Science (3 cr)**
- **CRJU 342 - Crime Prevention (3 cr)**
- **CRJU 345 - Organization & Mgmt of CRJ Agencies (3 cr)**
- **CRJU 351 - Juvenile Justice (3 cr)**
- **CRJU 356 - White Collar Crime (3 cr)**
- **CRJU 365 - Hate Crime (3 cr)**
- **CRJU 370 - Mock Trial (3 cr)**
- **CRJU 377 - Hate Crime (3 cr)**
- **CRJU 381 - Mental Health and the Criminal Justice System (3 cr)**
- **CRJU 396 - Selected Topics in Criminal Justice (3 cr)**
- **CRJU 397 - Selected Topics in Criminal Justice (3 cr)**
- **CRJU 398 - Selected Topics in Victimology (3 cr)**
- **CRJU 411 - Terrorism (3 cr)**
- **CRJU 433 - Evidence Law (3 cr)**
- **CRJU 440 - Community Corrections (3 cr)**
- **CRJU 456 - Forensic Science: Evidence Analysis (3 cr)**
- **CRJU 461 - Social Construction of Homicide (3 cr)**
- **CRJU 463 - Comparative Criminal Justice (3 cr)**
- **CRJU 464 - Popular Culture, Crime and Justice (3 cr)**
- **CRJU 466 - Women and Criminal Justice (3 cr)**
- **CRJU 469 - Victim Treatment and Services (3 cr)**
- **CRJU 471 - Internship in Criminal Justice I (3 cr)**
- **CRJU 472 - Internship in Criminal Justice II (3 cr)**
- **CRJU 481 - Independent Study (1-3 cr)**

Each section of Internship is 3 crs & requires 120 hrs of agency work. Therefore, 3 credits = 120 hrs of work, 6 credits = 240 hrs and so on. **Departmental approval is required.**

**Interdisciplinary Courses (15 cr)**
Criminal Justice and Military Science courses will not fulfill this requirement.
- ___________________(at least 200 level)
- ___________________(at least 200 level)
- ___________________(at least 200 level)
- ___________________(at least 200 level)

Graduation Requirements: 120 cr
Free Electives = 15 cr
GPA Needed to Declare: 2.3

Criminal Justice majors are limited to 45 credits of CRJU courses. CRJU courses cannot be used for Free Electives or for Interdisciplinary Courses.

A Criminal Justice minor is available - 18 cr
A certificate in Victimology and Victim Services is available - 12 cr

**Disclaimer:** Courses may be subject to change.
Requirements for Early Childhood/Elementary Education major = 75 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elem: Early Childhood (PreK-4) Planning Sheet on Department of Teacher Education webpage for General Education requirements.

Mathematics Requirement (6 cr)
__MATH 110 – Fundamentals of Math I (3 cr) **
__MATH 111 – Fundamentals of Math II (3 cr)

Professional Core (60 cr)
__ECED 210 – The Early Childhood Profession (3 cr)
__ECED 220 – Developmental Sci: Physical, Motor, Health (3 cr)
__ECED 260 – Developmental Sci: Cognitive & Language (3 cr)
__ECED 320 – Developmental Sci: Social & Emotional (3 cr)
__ECED 333 – Social Studies Methods for PK-4th Grade (3 cr)
__ECED 343 – Mathematics Methods I for Pre-K & K (3 cr)
__ECED 370 – Assessing Young Children (3 cr)
__ECED 373 – Science and Technology Methods in PK-4 (3 cr)
__ECED 393 – Mathematics Methods II, Grades 2-4 (2 cr)
__ECED 394 – Technology Instruction (1 cr)
__ECED 415 – Professional Practicum in PK-4 (3 cr)
__ECED 440 – Building Family & Community Partner (3 cr)
__ECED 453 – Integrated Curriculum Pre-K-4 (3 cr)
__ECED 480 – Early Childhood Professional Seminar (3 cr)
__SPEE 273 – Introduction to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__SPEE 483 – Assessing Children with Exceptionalities (3 cr)
__READ 323 – Processes of Word/Text/Comprehension (3 cr)
__READ 363 – Reading and Writing in PK-4 (3 cr)
__READ 383 – English Language Learners in PK-4 (2 cr)
__READ 443 – Reading Measures & Interventions in PK-4 (4 cr)

Student Teaching (12 cr)
__ECED 489 – Early Childhood Student Teaching (12 cr)

Optional Reading Minor (15 cr)
__READ 334 – Classroom Literacy Assessment (Winter Online)
__READ 330 – Content Area Reading (Summer Online)
__READ 345 – Teaching Language Arts (Summer F-to-F)
__READ 340 – Seminar in Literacy Tutoring (Summer F-to-F)
__READ 350 – Text Accessibility & Compr (Summer Online)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING:

Semesters I & II General Education courses

Disclaimer: Courses may be subject to change.
Requirements for Special Education & Early Childhood Education major = 90 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Early Childhood & Special Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Mathematics Requirement (6 cr)
- MATH 110 - Fundamentals of Math I (3 cr) **
- MATH 111 - Fundamentals of Math II (3 cr) **

Professional Core (75 cr)
- ECED 210 - The Early Childhood Profession (3 cr)
- ECED 280 - Physical, Language & Cognitive Develop. (3 cr)
- ECED 320 - Social & Emotional Basis (3 cr)
- ECED 333 - Social Studies Methods for PK-4th Grade (3 cr)
- ECED 370 - Assessing Young Children (3 cr)
- ECED 373 - Science and Technology Methods in PK-4 (3 cr)
- ECED 393 - Mathematics Methods II, Grades 2-4 (2 cr)
- ECED 394 - Technology Instruction (1 cr)
- ECED 415 - Professional Practicum in PK-4 (3 cr)
- ECED 440 - Building Family & Community Partner (3 cr)
- ECED 453 - Integrated Curriculum Pre K-4 (3 cr)
- ECED 480 - Early Childhood Professional Seminar (3 cr)
- SPEE 273 - Introduction to Exceptionalities (3 cr)
- SPEE 280 - Best Practices in Collaboration (3 cr)
- SPEE 320 - Interventions for Comm. Impairments (3 cr)
- SPEE 325 - Interventions for Social/Emotional (3 cr)
- SPEE 330 - Teaching Students with Exceptionalities(3 cr)
- SPEE 335 - Interventions for Cognitive and/or Physical (3 cr)
- SPEE 423 - Effective Instructional Strategies (3 cr)
- SPEE 447 - Special Education Processes (3 cr)
- SPEE 483 - Assessing Children with Exceptionalities (3 cr)
- READ 323 - Processes of Word/Text/Comprehension (3 cr)
- READ 363 - Reading and Writing in PK-4 (3 cr)
- READ 383 - English Language Learners in PK-4 (2 cr)
- READ 443 - Reading Measures & Interventions in PK-4 (4 cr)

Student Teaching (12 cr)
- SPEE 489 - Student Teaching & Practicum (12 cr)

Graduation Requirements: 135 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, English/Language Arts Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education major with English/Language Arts Concentration = 72 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
__PSYC 101 – General Psychology (3 cr) **

Mathematics Requirements (9 cr)
__MATH 205 – Conceptual Mathematics for Middle-Level (3 cr)
__MATH 140 – College Algebra (3 cr) **
Select one:
__MATH 117 – Applied Stats (3 cr) [math placement 2-4] ** OR
__MATH 217 – Statistics I (3 cr) [math placement 5-6] **

Professional Core (36 cr)
__TEED 206 – Social Foundations of Middle Level Ed (3 cr)
__TEED 261 – Adolescent Development & Learning (3 cr)
__SPEE 483 – Assessing Children with Exceptionalities (3 cr)
__SPEE 273 – Intro to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__READ 232 – Reading in the Elementary School (3 cr)
__READ 329 – Reading in the Content Area (3 cr)
__READ 405 – Writing in Elementary Classrooms (3 cr)
__TEED 251 – Elements of Middle Level Instruction (3 cr)
__TEED 322 – Teaching Middle Level Language Arts (3 cr)
__TEED 345 – Assessment & Evaluation (3 cr)
__READ 413 – Teaching Reading to ELL (3 cr)

Concentration Area (15 cr)
__TEED 303 – Books and Materials (3 cr)
__ENGL 224 – Intro to Creative Writing (3 cr)
__ENGL 366 – History and Str of English Language (3 cr)
__ENGL 426 – Adolescent Literature (3 cr)
Select one:
__ENGL 234 – American Literature II (3 cr) OR
__ENGL 236 – British Literature I (3 cr) OR
__ENGL 237 – British Literature II (3 cr) OR
__ENGL 239 – Postcolonial Literature (3 cr) OR
__ENGL 240 – Global Literature (3 cr) OR
__ENGL 342 – Mythology (3 cr) OR
__ENGL 345 – Women’s Literature (3 cr) OR
__ENGL 349 – Victorian Literature (3 cr) OR
__ENGL 358 – Ethnic Literature (3 cr) OR
__ENGL 359 – Native American Literature (3 cr) OR
__ENGL 362 – Disability in Literature (3 cr) OR
__ENGL 375 – African-American Literature (3 cr) OR
__ENGL 385 – Studies in Postcolonial Literature (3 cr)

Student Teaching Requirement (15 cr)
__EDFN 409 – Seminar Middle Lvl Student Teaching (3 cr)
__EDFN 495 – Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)
__SPEE 280 – Best Practices in Collaboration (3 cr)
__SPEE 320 – Interventions (3 cr)
__SPEE 325 – Interventions (3 cr)
__SPEE 330 – Teaching Students with Exceptionalities (3 cr)
__SPEE 335 – Interventions (3 cr)
__SPEE 447 – Special Education Processes (3 cr)

Graduation Requirements: 120 cr
Free Electives = 3 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing before they are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, Math and Language Arts Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education with Math and Language Arts Concentration = 76-79 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
__PSYC 101 – General Psychology (3 cr) **

Mathematics Concentration (19-20 cr)
__MATH 105 – Mathematics for Liberal Studies (3 cr)
__MATH 205 – Conceptual Mathematics for Middle-Level (3 cr)
__MATH 225 – Discrete Mathematics (4 cr) **
Select one:
__MATH 181 – Applied Calculus (3 cr) ** OR
__MATH 175 – Pre-Calculus (3 cr) ** OR
__MATH 211 – Calculus I (4 cr) **
Select one:
__MATH 333 – Geometry (3 cr) OR
__MATH 400 – History of Math (3 cr) OR
__MATH 317 – Statistics II (3 cr)
Select one:
__MATH 117 – Applied Statistics (3 cr) ** OR
__MATH 217 – Statistics I (3 cr) **

Language Arts Concentration (12 cr)
__ENGL 250 – Literature and Society (3 cr) **
__TEED 303 – Books and Materials (3 cr)
__ENGL 366 – History & Str. of English Language (3 cr)
__ENGL 426 – Adolescent Literature (3 cr)

Professional Core (39 cr)
__TEED 206 – Social Foundations of Middle Level Ed (3 cr)
__TEED 261 – Adolescent Development & Learning (3 cr)
__SPEE 483 – Assessing Children with Exceptionalities (3 cr)
__SPEE 273 – Intro to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__READ 232 – Reading in the Elementary School (3 cr)
__READ 329 – Reading in the Content Area (3 cr)
__READ 405 – Writing in Elementary Classrooms (3 cr)
__TEED 251 – Elements of Middle Level Instruction (3 cr)
__TEED 322 – Teaching Middle Level Language Arts (3 cr)
__TEED 342 – Teaching Middle Level Math (3 cr)
__TEED 345 – Assessment & Evaluation (3 cr)
__READ 413 – Teaching Reading to ELL (3 cr)

Student Teaching Requirement (15 cr)
__EDFN 409 – Seminar Middle Level Student Teaching (3 cr)
__EDFN 495 – Student Teaching & Practicum (12 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Requirements for Elementary/Middle Level Education with Math and Science Concentration = 78-80 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
__PSYC 101 – General Psychology (3 cr) **

Mathematics Concentration (19-20 cr)
__MATH 105 – Mathematics for Liberal Studies (3 cr)
__MATH 205 – Conceptual Mathematics for Middle-Level (3 cr)
__MATH 225 – Discrete Math (4 cr) **
Select one:
__MATH 181 – Applied Calculus (3 cr) ** OR
__MATH 175 - Pre-Calculus (3 cr) ** OR
__MATH 211 – Calculus I (4 cr) **
Select one:
__MATH 333 – Geometry (3 cr) OR
__MATH 400 – History of Math (3 cr) OR
__MATH 317 – Statistics II (3 cr)
Select one:
__MATH 117 – Applied Statistics (3 cr) ** OR
__MATH 217 – Statistics I (3 cr) **

Science Concentration (20 cr)
__CHEM 105 – An Observational Approach (3 cr)
__ESSC 110 – Intro to Geology (3 cr)
__PHYS 121 – Physics I Lecture (3 cr) **
__PHYS 123 – Physics I Lab (1 cr)
__ESSC 111 – Intro to Atmosphere (3 cr) **
__BIOL 162 – Prin. of Bio: Organismal Diversity (4 cr) **
Select one:
__BIOL 100 – Basic Biology (3 cr) OR
__BIOL 142 – Intro to Ecology (3 cr) OR
__BIOL 145 – Environmental Biology (3 cr) OR
__ESSC 210 – Physical Geology (3 cr)

Professional Core (27 cr)
__TEED 206 – Social Foundations of Middle Level Ed (3 cr)
__TEED 261 – Adolescent Development & Learning (3 cr)
__SPEE 483 – Assessing Children with Exceptionalities (3 cr)
__SPEE 273 – Introduction to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__READ 232 – Reading in the Elementary School (3 cr)
__READ 329 – Reading in the Content Area (3 cr)
__READ 405 – Teaching Writing in 4-8 Classrooms (3 cr)
__TEED 345 – Assessment & Evaluation Strategies (3 cr)
__TEED 342 – Teaching Middle Level Math (3 cr)
__TEED 366 – Teaching Science at the Middle Level (3 cr)
__READ 413 – Teaching Reading to ELL (3 cr)

Student Teaching (15 cr)
__EDFN 409 – Seminar Middle Level Student Teaching (3 cr)
__EDFN 495 – Student Teaching & Practicum (12 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING
Semesters I & II General Education

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, Math and Social Studies Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education major with Math and Social Studies Concentration = 76-78 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Psychology Requirement (3 cr)
__PSYC 101 - General Psychology (3 cr) **

Mathematics Concentration (19-20 cr)
__MATH 105 - Mathematics for Liberal Studies (3 cr)
__MATH 205 - Conceptual Mathematics for Middle-Level (3 cr)
__MATH 225 - Discrete Mathematics (4 cr) **
Select one:
__MATH 181 - Applied Calculus (3 cr) ** OR
__MATH 175 - Pre-Calculus (3 cr) ** OR
__MATH 211 - Calculus I (4 cr) **
Select one:
__MATH 333 - Geometry (3 cr) OR
__MATH 400 - History of Math (3 cr) OR
__MATH 317 - Statistics II (3 cr)
Select one:
__MATH 117 - Applied Statistics (3 cr) ** OR
__MATH 217 - Statistics I (3 cr) **

Social Studies Concentration (18 cr)
__GEOG 101 - World Geography (3 cr) **
__ECON 101 - Principles of Macroeconomics (3 cr) **
__POLI 100 - U.S. Government and Politics (3 cr) **
__GEOG 140 - Cultural Geography (3 cr) **
__HIST 106 - Modern World History (3 cr) **
Select one:
__ECON 345 - Economics of Growth & Development (3 cr)
__POLI 311 - Legislative Process (3 cr)
__POLI 312 - The American Presidency (3 cr)
__POLI 313 - The Judicial Process (3 cr)
__POLI 342 - American Foreign Policy (3 cr)
__POLI 356 - Politics of Developing Regions (3 cr)
__HIST 201 - Early History of the US (3 cr)
__HIST 202 - Recent History of the US (3 cr)
__HIST 301 - The West in American History (3 cr)
__HIST 302 - American Economic History (3 cr)
__HIST 304 - American Diplomatic History (3 cr)
__HIST 305 - The Civil War (3 cr)
__HIST 306 - History of the South (3 cr)
__HIST 309 - History of the American Worker (3 cr)
__HIST 314 - Jacksonian America (3 cr)
__HIST 318 - History of US Women (3 cr)
__HIST 338 - Colonial America (3 cr)
__HIST 341 - African American History (3 cr)
__HIST 342 - US Immigration & Ethnicity (3 cr)
__HIST 345 - Military History of the US (3 cr)
__HIST 402 - Revolutionary America (3 cr)
__HIST 413 - Pennsylvania History (3 cr)

Professional Core (39 cr)
__TEED 206 - Social Foundations of Middle Level Ed (3 cr)
__TEED 261 - Adolescent Development & Learning (3 cr)
__SPEE 483 - Assessing Children with Exceptionalities (3 cr)
__SPEE 273 - Intro to Exceptionalities (3 cr)
__SPEE 423 - Effective Instructional Strategies (3 cr)
__READ 232 - Reading in the Elementary School (3 cr)
__READ 329 - Reading in the Content Area (3 cr)
__READ 405 - Writing in Elementary Classrooms (3 cr)
__TEED 251 - Elements of Middle Level Instruction (3 cr)
__TEED 342 - Teaching Middle Level Math (3 cr)
__TEED 345 - Assessment & Evaluation (3 cr)
__TEED 348 - Teaching Middle Level Social Studies (3 cr)
__READ 413 - Teaching Reading to ELL (3 cr)

Student Teaching (15 cr)
__EDFN 409 - Seminar Middle Level Student Teaching (3 cr)
__EDFN 495 - Student Teaching and Practicum (12 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, Mathematics Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education major with Mathematics Concentration = 67 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)

PSYC 101 - General Psychology (3 cr) **

Mathematics Concentration (22-24 cr)

MATH 105 - Mathematics for Liberal Studies (3 cr) **
MATH 205 - Conceptual Mathematics for Middle-Level (3 cr)
MATH 225 - Discrete Mathematics (4 cr) **
MATH ___________________________(200+ level)

Select one:

MATH 181 - Applied Calculus (3 cr)
OR
MATH 175 - Pre-Calculus (3 cr)
OR
MATH 211 - Calculus I (4 cr)

Select one:

MATH 333 - Geometry (3 cr)
OR
MATH 400 - History of Math (3 cr)
OR
MATH 317 - Statistics II (3 cr)

Select one:

MATH 117 - Applied Statistics (3 cr) **
OR
MATH 217 - Statistics I (3 cr) **

Professional Core (36 cr)

TEED 206 - Social Foundations of Middle Level Ed (3 cr)
TEED 261 - Adolescent Development & Learning (3 cr)
SPEE 483 - Assessing Children with Exceptionalities (3 cr)
SPEE 273 - Intro to Exceptionalities (3 cr)
SPEE 423 - Effective Instructional Strategies (3 cr)
READ 232 - Reading in the Elementary School (3 cr)
READ 329 - Reading in the Content Area (3 cr)
READ 405 - Writing in Elementary Classrooms (3 cr)
TEED 251 - Elements of Middle Level Instruction (3 cr)
TEED 342 - Teaching Middle Level Math (3 cr)
TEED 345 - Assessment & Evaluation (3 cr)
READ 413 - Teaching Reading to ELL (3 cr)

Student Teaching Requirement (15 cr)

EDFN 409 - Seminar Middle Level Student Teaching (3 cr)
EDFN 495 - Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)

SPEE 280 - Best Practices in Collaboration (3 cr)
SPEE 320 - Interventions (3 cr)
SPEE 325 - Interventions (3 cr)
SPEE 330 - Teaching Students with Exceptionalities (3 cr)
SPEE 335 - Interventions (3 cr)
SPEE 447 - Special Education Processes (3 cr)

Graduation Requirements: 120 cr
Free Electives = 8 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Requirements for Elementary/Middle Level Education major with Science & Language Arts Concentration = 77-78 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
__PSYC 101 – General Psychology (3 cr)**

Mathematics Requirements (10-11 cr)
__MATH 205 – Concepts of Middle Level Math (3 cr)
__MATH 225 – Discrete Mathematics (4 cr) **
Select one:
__MATH 117 – Applied Statistics (3 cr) ** OR
__MATH 217 – Statistics I (4 cr) **

Science Concentration (20 cr)
__CHEM 105 – An Observational Approach (3 cr)
__ESSC 110 – Intro to Geology (3 cr)
__PHYS 121 – Physics I Lecture (3 cr) **
PHYS 123 – Physics I Lab (1 cr)
__ESSC 111 – Intro to Atmosphere (3 cr) **
__BIOL 162 – Prin. of Bio: Organismal Diversity (4 cr) **
Select one:
__ESSC 210 – Physical Geography (3 cr) OR
__ESSC 220 – Oceanography (3 cr) OR
__ESSC 355 – Meteorology (3 cr) OR
__ESSC 404 – Applied Meteorology & Climatology (3 cr)

Language Arts Concentration (12 cr)
__ENGL 250 – Literature and Society (3 cr) **
__TEED 303 – Books and Materials (3 cr)
__ENGL 366 – History & Str. of English Language (3 cr)
__ENGL 426 – Adolescent Literature (3 cr)

Professional Core (27 cr)
__TEED 206 – Social Foundations of Middle Level Ed (3 cr)
__TEED 261 – Adolescent Development & Learning (3 cr)
__EECC 483 – Assessing Children with Exceptionalities (3 cr)
__SPEE 273 – Introduction to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__READ 232 – Reading in the Elementary School (3 cr)
__READ 329 – Reading in the Content Area (3 cr)
__READ 405 – Teaching Writing in 4-8 Classrooms (3 cr)
__TEED 322 – Teaching Middle Level Language Arts (3 cr)
__TEED 351 – Elements of Middle Level Instruction (3 cr)
__TEED 345 – Assessment & Evaluation (3 cr)
__TEED 366 – Teaching Science at the Middle Level (3 cr)
__READ 413 – Teaching Reading to ELL (3 cr)

Student Teaching (15 cr)
__EDFN 409 – Seminar Middle Level Student Teaching (3 cr)
__EDFN 495 – Student Teaching & Practicum (12 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, Science & Social Studies Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education major with Science and Social Studies Concentration = 77-78 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
__PSYC 101 – General Psychology (3 cr)**

Mathematics Requirements (10 cr)
__MATH 205 – Conceptual Math for Middle-Level (3 cr)
__MATH 140 – College Algebra (3 cr)
Select one:
__MATH 117 – Applied Statistics (3 cr) ** OR
__MATH 217 – Statistics I (3 cr) **

Science Concentration (31 cr)
__ESSC 110 – Intro to Geology (3 cr) **
__ESSC 111 – Intro to Atmosphere (3 cr) **
__BIOL 162 – Prin. of Biology: Cell Str. & Funct. (4 cr)
__CHEM 105 – An Observational Approach (3 cr)
__PHYS 121 – Physics I lecture (3 cr) **
PHYS 123 – Physics I Lab (3 cr)
Select one:
__BIOL 100 – Basic Biology (3 cr) OR
__BIOL 142 – Intro to Ecology (3 cr) OR
__BIOL 145 – Environmental Biology (3 cr) OR
__ESSC 210 – Physical Geography (3 cr)

Social Studies Requirements (33 cr)
__HIST 105 – Foundations of Global Cultures (3 cr) **
__HIST 106 – Thinking Historically in a Global Age (3 cr) **
__ECON 101 – Principles of Macroeconomics (3 cr) **
__POLI 100 – US Government & Politics (3 cr) **
__GEOG 140 – Human Geography (3 cr) **
__GEOG 101 – World Geography (3 cr) **
__ECON 345 – Economics of Growth and Develop (3 cr)

Professional Core (36 cr)
__TEED 206 – Social Foundations of Middle Level Ed (3 cr)
__TEED 261 – Adolescent Development & Learning (3 cr)
__SPEE 483 – Assessing Children with Exceptionalities (3 cr)
__SPEE 273 – Introduction to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__READ 232 – Reading in the Elementary School (3 cr)
__READ 329 – Reading in the Content Area (3 cr)
__READ 405 – Teaching Writing in 4-8 Classrooms (3 cr)
__TEED 345 – Assessment & Evaluation Strategies (3 cr)
__TEED 348 – Teaching Middle Level Social Studies (3 cr)
__TEED 366 – Teaching Science at the Middle Level (3 cr)
__READ 413 – Teaching Reading to ELL (3 cr)

Student Teaching Requirements (15 cr)
__EDFN 409 – Seminar Middle Level Student Teaching (3 cr)
__EDFN 495 – Student Teaching & Practicum (12 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, Science Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education major with Science concentration = 77-78 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
__PSYC 101 – General Psychology (3 cr) **

Mathematics Requirements (10 cr)
__MATH 205 – Conceptual Mathematics for Middle-Level (3 cr) **
__MATH 225 – Discrete Mathematics (4 cr) **
Select one:
__MATH 117 – Applied Statistics (3 cr) ** OR
__MATH 217 – Statistics I (3 cr) **

Science Concentration (31 cr)
__ESSC 110 – Intro to Geology (3 cr) **
__ESSC 111 – Intro to Atmosphere (3 cr) **
__BIOL 208 – Field Biology (3 cr) **
__BIOL 161 – Prin. of Biology: Organismal Diversity (4 cr)
__BIOL 162 – Prin. of Biology: Cell Str. & Funct. (4 cr)
__CHEM 105 – An Observational Approach (3 cr)
__PHYS 121 – Physics I lecture (3 cr)
PHYS 123 – Physics I Lab (3 cr)
Select one:
__CHEM 121 – Chemical Bonding (3 cr) AND
CHEM 125 – Cehmical Bonding Lab (1 cr)
OR
__PHYS 122 – Physics II Lecture (3 cr) AND
PHYS 125 – Physics II Lab (1 cr)
Select one:
__ESSC 210 – Physical Geography (3 cr) OR
__ESSC 220 – Oceanography (3 cr) OR
__ESSC 355 – Meteorology (3 cr) OR
__ESSC 404 – Applied Meteorology & Climatology (3 cr)

Professional Core (36 cr)
__TEED 206 – Social Foundations of Middle Level Ed (3 cr)
__TEED 261 – Adolescent Development & Learning (3 cr)
__SPEE 483 – Assessing Children with Exceptionalities (3 cr)
__SPEE 273 – Introduction to Exceptionalities (3 cr)
__SPEE 423 – Effective Instructional Strategies (3 cr)
__READ 232 – Reading in the Elementary School (3 cr)
__READ 329 – Reading in the Content Area (3 cr)
__READ 405 – Teaching Writing in 4-8 Classrooms (3 cr)
__TEED 345 – Assessment & Evaluation Strategies (3 cr)
__TEED 251 – Elements of Middle Level Instruction (3 cr)
__TEED 366 – Teaching Science at the Middle Level (3 cr)
__READ 413 – Teaching Reading to ELL (3 cr)

Student Teaching Requirements (15 cr)
__EDFN 409 – Seminar Middle Level Student Teaching (3 cr)
__EDFN 495 – Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)
__SPEE 280 – Best Practices in Collaboration (3 cr)
__SPEE 320 – Interventions (3 cr)
__SPEE 325 – Interventions (3 cr)
__SPEE 330 – Teaching Students with Exceptionalities (3 cr)
__SPEE 335 – Interventions (3 cr)
__SPEE 447 – Special Education Processes (3 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semesters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Elementary/Middle Level Education: Grades 4-8, Social Studies Concentration, B.S.Ed.

Requirements for Elementary/Middle Level Education major with Social Studies concentration = 77-78 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements. See Degree Audit or Elementary/Middle Level Education Planning Sheet on the Department of Teacher Education webpage for General Education requirements.

Required Psychology Course (3 cr)
___PSYC 101 – General Psychology (3 cr)**

Math Requirements (9-10 cr)
___MATH 205 – Concepts of Middle Level Math (3 cr)
___MATH 140 – College Algebra (3 cr)
Select one:
___MATH 117 – Applied Statistics (3 cr) ** OR
___MATH 217 – Statistics I (4 cr) **

Social Studies Requirements (33 cr)
___HIST 105 – Foundations of Global Cultures (3 cr) **
___HIST 106 – Thinking Historically in a Global Age (3 cr) **
___ECON 101 – Principles of Macroeconomics (3 cr) **
___POLI 100 – US Government & Politics (3 cr) **
___GEOG 140 – Human Geography (3 cr) **
___GEOG 101 – World Geography (3 cr)
___ECON 345 – Economics of Growth and Develop (3 cr)
Select one:
___GEOG 305 – Geography of Europe (3 cr) OR
___GEOG 308 – Geography of Latin America (3 cr) OR
___GEOG 313 – Geography of South & Southeast Asia (3 cr) OR
___GEOG 317 – Geography of East Asia (3 cr) OR
___GEOG 415 – Regional Geographic Studies (3 cr) OR
___GEOG 450 – Geography-Geology Field Studies (1-3 cr)
Select one:
___HIST 201 – Early History of the U.S. (3 cr) OR
___HIST 202 – Recent History of the U.S. (3 cr) OR
___HIST 301 – The West in American History (3 cr) OR
___HIST 302 – American Business History (3 cr) OR
___HIST 304 – American Diplomatic History (3 cr) OR
___HIST 305 – The Civil War Era (3 cr) OR
___HIST 309 – History of the American Worker (3 cr) OR
___HIST 314 – History of Jacksonian America (3 cr) OR
___HIST 318 – History of U.S. Women (3 cr) OR
___HIST 338 – Colonial America (3 cr) OR
___HIST 341 – African-American History (3 cr) OR
___HIST 342 – U.S. Immigration and Ethnicity (3 cr) OR
___HIST 345 – Military History of the United States (3 cr) OR
___HIST 402 – Revolutionary America (3 cr) OR
___HIST 413 – Pennsylvania History (3 cr)
Select one:
___POLI 311 – The Legislative Process (3 cr) OR
___POLI 312 – The American Presidency (3 cr) OR
___POLI 313 – The Judicial Process (3 cr) OR
___POLI 342 – American Foreign Policy (3 cr) OR
___POLI 356 – Politics of Developing Regions (3 cr)

Professional Core 36 cr
___TEED 206 – Social Foundations of Middle Level Ed (3 cr)
___TEED 261 – Adolescent Development & Learning (3 cr)
___SPEE 483 – Assessing Children with Exceptionalities (3 cr)
___SPEE 273 – Intro to Exceptionalities (3 cr)
___SPEE 423 – Effective Instructional Strategies (3 cr)
___READ 232 – Reading in the Elementary School (3 cr)
___READ 329 – Reading in the Content Area (3 cr)
___READ 405 – Writing in Elementary Classrooms (3 cr)
___TEED 251 – Elements of Middle Level Instruction (3 cr)
___TEED 345 – Assessment & Evaluation (3 cr)
___TEED 348 – Teaching Middle Level Social Studies (3 cr)
___READ 413 – Teaching Reading to ELL (3 cr)

Student Teaching Requirement (15 cr)
___EDFN 409 – Seminar Middle Lvl Student Teaching (3 cr)
___EDFN 495 – Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)
___SPEE 280 – Best Practices in Collaboration (3 cr)
___SPEE 320 – Interventions (3 cr)
___SPEE 325 – Interventions (3 cr)
___SPEE 330 – Teaching Students with Exceptionalities (3 cr)
___SPEE 335 – Interventions (3 cr)
___SPEE 447 – Special Education Processes (3 cr)

Graduation Requirements: 120 cr
Free Electives = 0 cr
GPA Needed to Declare: 3.0

PAPA examinations: All education majors must pass the first level of the PAPA assessments in reading, math, and writing between 48 and 60 credits of coursework. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

HELPFUL HINTS FOR ADVISING

Semiters I & II General Education & Concentration

Disclaimer: Courses may be subject to change.
Exercise Science – B.S.

Requirements for Exercise Science major = 54 cr

General Education program not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Exercise Science Core (25 cr)
- __EXER 150 – Introduction to Exercise Science (3 cr)
- __EXER 244 – Movement Science & Skill Analysis (3 cr)
- __EXER 260 – Principles of Nutrition (3 cr)
- __EXER 336 – Motor Behavior (3 cr)
- __EXER 340 – Prevention and Care of Athletic Injuries (3 cr)
- __EXER 352 – Psychology of Physical Activity (3 cr)
- __EXER 375 – Exercise Testing and Prescription (3 cr)
- __EXER 453 – Research Design & Statistics (4 cr)

Biology Requirements (8 cr)
- __BIOL 237 – Human Anatomy & Physiology I (4 cr) **
- __BIOL 238 – Human Anatomy & Physiology II (4 cr) **

Chemistry Requirements (3-4 cr)
Select one:
- __CHEM 103 – Chemistry: A Cultural Approach (3 cr) **
  OR
- __CHEM 105 – Chemistry: An Observational Approach (3 cr) **
  OR
- __CHEM 121 – Chemical Bonding (3 cr) ** AND
  __CHEM 125 – Lab IB-Stoichiometry & Reactions (1 cr)

Physics Requirements (3-4 cr)
Select one:
- __PHYS 110 – Physics for Society (3 cr) **
  OR
- __PHYS 121 – Intro Physics I-Lecture (3 cr) ** AND
  __PHYS 123 – Physics I-Lab (1 cr) **

Math Requirement (3-4 cr)
Select one:
- __MATH 117 – Applied Statistics (3 cr) **
  OR
- __MAT 217 – Statistics I (4 cr) **

Psychology Requirement (3 cr)
- __PSYC 101 – General Psychology (3 cr) **

Allied Health Pre-Professional Concentration (25 cr)
- __EXER 278 – Medical Terminology (3 cr)
- __EXER 321 – Exercise Physiology I (4 cr)
- __EXER 333 – Biomechanics (4 cr)
- __EXER 420 – Clinical Exercise Physiology (4 cr)
- __EXER 421 – Exercise Physiology II (4 cr)
- __EXER 395 – Internship (3-12 cr)

Select one:
- __EXER 207 – Stress Management (3 cr) **
  OR
- __EXER 213 – Org & Admin Fit Sport Fac (3 cr) **
  OR
- __EXER 278 – Medical Terminology (3 cr) **
  OR
- __EXER 325 – Sport Psychology (3 cr) **
  OR
- __EXER 333 – Biomechanics (4 cr) **
  OR
- __EXER 360 – Sports Medicine (3 cr) **
  OR
- __EXER 420 – Clinical Exercise Physiology (4 cr) **
  OR
- __EXER 425 – Exercise Metabolism & Weight Control (3 cr) **
  OR
- __EXER 452 – Psychology of Injury & Rehabilitation (3 cr) **
  OR
- __EXER 475 – Exer. Prescription for Special & Athletic Populations (3 cr) **
  OR
- __EXER 387 – Theory & Prac Power & Agility Tr (3 cr) **
  OR
- __EXER 395 – Internship (3-12 cr) **
  OR
- __EXER 425 – Ex Met & Wt Contr (3 cr) **
  OR
- __EXER 452 – Psychology of Injury & Rehabilitation (3 cr) **
  OR
- __EXER 475 – exer. prescription for special & athletic pop. (3 cr)

Human Performance & Fitness Concentration (25 cr)
- __EXER 343 – Foundations of Ex Phys (4 cr)
- __EXER 348 – Group Exercise Tech & Lead (3 cr)
- __EXER 350 – Nutrition Sport/Fit (3 cr)
- __EXER 387 – Theory & Prac Power & Agility Tr (3 cr)
- __EXER 475 – Ex Prescription for Special & Athletic Pop (3 cr)
- __EXER 495 – Internship (3-12 cr)

Select two:
- __EXER 207 – Stress Management (3 cr) **
  OR
- __EXER 213 – Org & Admin Fit Sport Fac (3 cr) **
  OR
- __EXER 278 – Medical Terminology (3 cr) **
  OR
- __EXER 325 – Sport Psychology (3 cr) **
  OR
- __EXER 333 – Biomechanics (4 cr) **
  OR
- __EXER 360 – Sports Medicine (3 cr) **
  OR
- __EXER 420 – Clinical Exercise Physiology (4 cr) **
  OR
- __EXER 425 – Ex Met & Wt Contr (3 cr) **
  OR
- __EXER 452 – Psych of Injury & Rehab (3 cr) **
  OR
- __EXER 495 – Internship (3-12 cr)

Pre-Athletic Training Concentration (3 + 2 Program)
Required courses:
- __EXER 278: Medical Terminology (3 cr)
- __EXER 333: Biomechanics (4 cr)
- __EXER 343: Foundations of Exercise Physiology (4 cr)

Required general education courses:
- __CHEM 121: Chemical Bonding (3 cr)
- __PHYS 121: Introductory Physics I (3 cr)

Elective options (10 credits – varies by graduate program):
- __BIOL 161: Principles of Biology: Cell Structure & Function (4 cr)
- __BIOL 162: Principles of Biology: Organismal Diversity (4 cr)
- __CHEM 125: Laboratory IB – Stoichiometry and Reactions (1 cr)
- __PHYS 123: Physics I Laboratory (1 cr)
- __EXER 200: Lifestyle Management (3 cr)
- __EXER 325: Sport Psychology (3 cr)
- __EXER 348: Group Exercise Techniques & Leadership (3 cr)
- __EXER350: Nutrition for Sport & Fitness (3 cr)
- __EXER 360: Sports Medicine (3 cr)
- __EXER387: Theory & Practice of Power & Agility Training (3 cr)
- __EXER 395: Internship (1 – 12 credits)
- __EXER 420: Clinical Exercise Physiology (4 cr)
- __EXER 425: Exercise Metabolism & Weight Control (3 cr)
- __EXER 452: Psychology of Injury & Rehabilitation (3 cr)
- __EXER 475: Exer. Prescription for Special & Athletic Populations (3 cr)
- __COST 225: Communication and Sport (3 cr)
- __MATH 175: Pre-Calculus (3 cr)

(Continued on next page)

Optional Coaching minor (9 cr)
  __EXER 220 – Fundamentals of Coaching (3 cr)
  __EXER 325 – Sport Psychology (3 cr)
Select one:
  __EXER 213 - Org & Admin Fit Sport Fac (3 cr) OR
  __EXER 445 - Coaching Internship (3 cr) OR
  __COST 225 - Communication & Sport (3 cr) OR
  __SOCI 275 - Sociology of Sport & Leisure (3 cr)

Optional Power, Agility & Group Exercise Certificate Allied Health and
Pre-AT concentrations only (6 cr)
  __EXER 348 - Group Exercise Techniques & Leadership (3 cr)
  __EXER 387 – Theory & Practice of Power & Agility (3 cr)

Graduation Requirements: 120 cr
Free Electives ≈ 19-20
GPA Needed to Declare: 2.0 - 2.5

Transfer students, both internal and external, are selected for
admission based on the following criteria: Academic proficiency in
college or university course work, including a GPA, credits and grades
in select sciences. Selection is competitive and students will be
selected from those who fulfill the above requirements.

It is strongly recommended that students complete (or are scheduled
to complete) BIO 237: Anatomy & Physiology I and BIO 238: Anatomy
& Physiology II (or their equivalents) with a grade of C or higher
before transferring to Exercise Science. Please speak with the Exercise
Science Department Chair if you have questions.

Allied Health Pre-Professional Concentration:
• Completion of at least 15 credits with a QPA of 2.50 or higher
• Completion of BIOL 161, BIOL 162, or BIOL 237 with a grade of C or
  higher

Human Performance & Fitness Concentration
• Completion of at least 15 credits with a QPA of 2.00 or higher
• Completion of a Biology, Chemistry, or Physics course with a grade
  of C or higher

Pre-Athletic Training Concentration
• Completion of at least 15 credits with a QPA of 2.50 or higher
• Completion of BIOL 161, BIOL 162, or BIOL 237 with a grade of C or
  higher

Disclaimer: Courses may be subject to change.
Social Work – B.S.W.

Requirements for Social Work major = 55 cr

General Education requirements not listed here. Courses marked with the double asterisk ** may count as general education requirements.

Social Work Core (55 cr)
- SOWK 102 – Social Work in Social Welfare (3 cr)
- SOWK 150 – Human Relations Lab (3 cr)
- SOWK 250 – Assessing Individuals in Social Enviro. (3 cr)
- SOWK 265 – Understanding Diversity for SW Practice (3 cr)
- SOWK 270 – Social Work Practice with Individuals (3 cr)
- SOWK 375 – Social Work Skills for Working w/ Groups (3 cr)
- SOWK 327 – Social Work Practice with Families (3 cr)
- SOWK 340 – Assessing Orgs. & Communities in Society (3 cr)
- SOWK 360 – Research Techniques for Social Workers (3 cr)
- SOWK 370 – SW Practice with Orgs. & Communities (3 cr)
- SOWK 420 – Gender Issues for Helping Professionals (3 cr)
- SOWK 450 – Social Welfare Policies and Services (3 cr)
- SOWK 388 – Preparation for Practicum (1 cr)
- SOWK 462 – Seminar in Social Work Methods (3 cr)
- SOWK 460 – Field Work in Social Work I (6 cr)
- SOWK 461 – Field Work in Social Work II (6 cr)

Social Work Electives (3 cr)
Select at least one:
- SOWK 262 – Introduction to Child Welfare Practice (3 cr)
- SOWK 347 – Behavioral Health (3 cr)
- SOWK 348 – Substance Abuse (3 cr)
- SOWK 351 – Aging (3 cr)
- SOWK 356 – Intellectual & Develop. Disabilities (3 cr)
- SOWK 357 – Health Care (3 cr)
- SOWK 358 – Schools (3 cr)
- SOWK 359 – Violence in Interpersonal Relationships (3 cr)
- SOWK 383 – Selected Topics in Social Welfare (1-3 cr)
- SOWK 490 – Selected Topics in Social Welfare (1-3 cr)

Allied Field Requirements (15-16 cr)
- MATH 117 – Applied Statistics (3 cr) **
- PSYC 101 – General Psychology (3 cr) **
- BIOL 150 – Human Biology (3 cr) **
- SOCI 101 – Introduction to Sociology (3 cr) **
- POLI 100 – U.S. Government and Politics (3 cr) **

Graduation Requirements: 120 cr

Free Electives = 20-21 cr

GPA Needed to Declare:
- 0-30 credits – 2.0
- 31-60 credits – 2.2
- 60+ credits – 2.3

It is recommended to meet with the department faculty to start Social Work courses if one’s GPA does not meet the above requirements.

HELPFUL HINTS FOR ADVISING

Semester I
- SOWK 102 – Social Work in Social Welfare
- BIOL 150 – Human Biology
- SOCI 101 – Intro. to Soc.
- HIST 105 – Historical Foundations
- ENGL 114 – Academic Writing

Semester II
- SOWK 150 – Human Relations Lab
- PSYC 101 – General Psych.
- COST 100 – Human Comm.

Semester III
- SOWK 250 – Assess. Ind.
- SOWK 265 – Understanding Diversity
- POLI 100 – U. S. Government and Politics
- MATH 117 – Applied Statistics

Semester IV
- SOWK 270 – SW Practice with Individuals
- SOWK 360 – Research Techniques

Disclaimer: Courses may be subject to change.

A minor in Gerontology - 18 credits - is also available.