

NAVIGATING YOUR FUTURE



2023

GUIDEBOOK FOR
UNDERGRADUATE
STUDENTS



SHIPPENSBURG
UNIVERSITY

Department of Academic Engagement
and Exploratory Studies

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USING THIS GUIDEBOOK

There are several uses for the *2023 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. And 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 *2023 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 2022-2023

Fall Term 2022

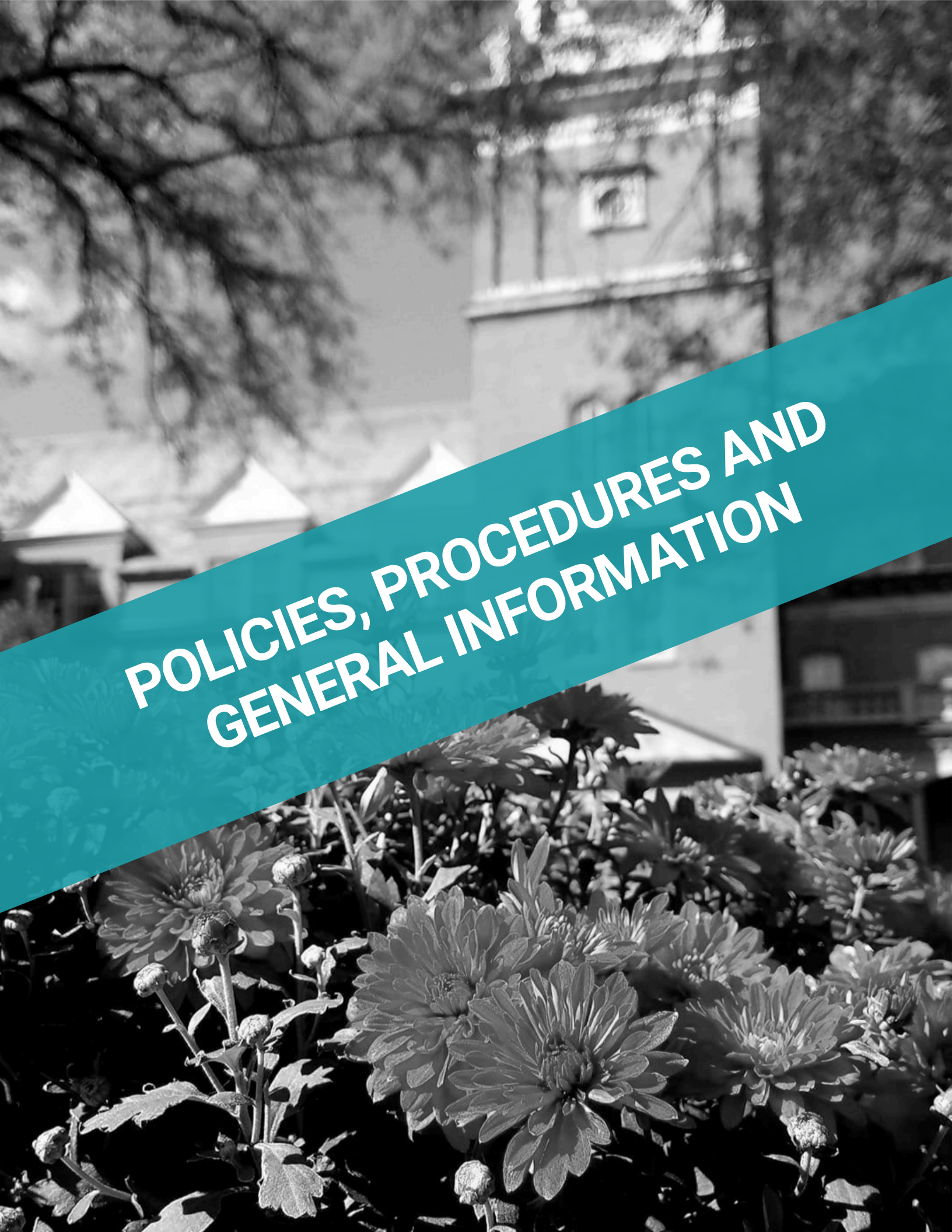
Fall Welcome Week Kick off	Thursday	August 18
Classes Begin	Monday	August 22
Add/Drop Period Ends	Monday	August 29
Fall Break, No Classes	Monday-Tuesday	October 10-11
Withdrawal Period Ends	Monday	October 31
Thanksgiving Break	Wednesday-Friday	November 23-25
Last Day of Classes	Friday	December 2
Final Exam Week	Monday - Friday	December 5-9

Winter Term 2022

Session Opens	Monday	December 12
Session Ends	Friday	January 13

Spring Term 2023

Classes Begin	Tuesday	January 17
Add/Drop Period Ends	Tuesday	January 24
Spring Break	Monday - Friday	March 6-10
Withdrawal Period Ends	Tuesday	March 28
Last Day of Classes	Friday	April 28
Final Exam Week	Monday - Friday	May 1-5



**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 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 PIN. New students (freshmen and transfers) will be 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 there 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. Visit: https://www.ship.edu/paying/financial-aid/writing_a_successful_sap_appeal/ for guidance on the process.

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 course work. 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

painstaking 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.

READING, WRITING AND MATH TESTING AND PLACEMENT INFORMATION

Shippensburg University's General Education Program requires students to take various courses to develop certain skills and competencies. The mission 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 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 required to complete testing.

Reading Placement Process

Students will be placed into AEES191R (renamed to AEES120 starting in Fall 2023) 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 MARSU College Reading Survey. This survey is administered through Slate Platform and the results are updated in Banner and SSC.

AEES191R (AEES120) 21st Century Academic Literacies 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 special topic 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 AEES191R (AEES120) to replace a RDG050 D, F, W grade. A student with a Reading Placement Score of "1" will be required to complete AEES191R (AEES120).

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







The English (Writing) Placement Test is required for first-year students whose English SAT sub-score is ≤ 25 or whose ACT-English Sections are ≤ 18 . Based on writing placement test scores, students will enroll in one of two courses: ENG 113 or ENG 114 (see below).

Students who score at a level 5 may have the option to take ENG 115: Advanced Placement Writing.

For more information about placement testing, visit ship.edu/testing/.

Minimum Placement Score	Course
2	ENG 113: Intro to Academic Writing
3	ENG 114: Academic Writing

MATH PLACEMENT LEVELS

Placement Level	STEM Majors ³	Business Majors	Non-Calculus Majors	SAT Score
1	MAT 117A ¹ Applied Statistics 	MAT 117A ¹ Applied Statistics 	MAT 105 or MAT 117A ¹	Needs Math Placement Test
2			MAT 105 or MAT 107 or MAT 110 or MAT 117A ¹	
3	MAT 140A ² College Algebra	MAT 140A ² College Algebra	MAT 105 Math for Liberal Studies or MAT 107 Math Models Applied to Money	
4	 MAT 140B College Algebra	 MAT 140B College Algebra	or MAT 110 ⁴ Fundamentals I	580-600
5	MAT 175 Precalculus 	MAT 181 Applied Calculus 	or MAT 117B ⁵ Applied Statistics	≥ 610
6	MAT 211 Calculus I			

Advising Notes:

- MAT117A is a 4-credit version of Applied Statistics for Level 1 -2 students that includes review of basic algebra skills. Students should only take one of MAT117A or MAT117B, not both.
- MAT 140A is a 4-credit version of College Algebra for Level 3 students that includes more targeted algebra review. Students should only take one of MAT140A or MAT140B, not both.
- A "STEM major" is any SU major requiring MAT 211 Calculus I.
- MAT 110 Fundamentals of Mathematics I is only available to Education majors.
- Quantitatively-minded students in majors that require Applied Statistics and who place at level 5 or higher

may be encouraged to consider MAT 217 Statistics I instead of MAT117B.

Additional Notes:

- Math requirements for Middle-Level Education majors vary according to their concentration. Contact the Teacher Education department for more information.
- Challenge testing is available for students who wish to demonstrate their knowledge and increase their placement level.
- 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 as a 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.

Years of Same Language Taken in High School	Appropriate College Level (All Languages)
0	101
1	102
2	103
3 or more	BA Requirement satisfied or 200/204 as Category B or Interconnections Course.

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

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 is essential for them to study their language in the 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 upon 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 you are adaptable, globally minded and not afraid to step outside of your 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-advise 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:

Ford, J., *Academic Advising*, 1986-87. Houston Texas: Houston Baptist University, August 1986, 6, 10, 20-21, 50-51, 57-58, 69 (ERIC Document Reproduction Service ED Ford, J. 276 346.)



MAJOR AND MINOR REQUIREMENTS

MINORS

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 catalogue for more information.

MINOR	CREDITS/GPA	CONTACT
Anthropology	18 credits/2.0	kglore@ship.edu
	Required Courses - ANT105, ANT111, ANT121 + 9 credits Anthropology electives at the 200+level. Six of the nine elective credits must be at the 300-400 level	
Art	21 credits/2.0	art@ship.edu
	Required Courses - ART101, ART110, ART215, ART218, ART history elective + 6credits any ART classes **ART215 - fall only, ART218 - spring only	
Biochemistry	24-28 credits/2.0	chem@ship.edu
	Required Courses - CHM301, CHM420/421, CHM496 - CHM496 must be taken concurrently with CHM421 **CHM121/125, CHM122/126, CHM221/225, CHM222/226 (Course with lab component) to declare	
Biology	19 credits/2.0	biology@ship.edu
	Required Courses - BIO162, BIO162 + 11 BIO 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 BIO161 or 162 with "C" or higher to declare	
Business	18 credits/2.0	business@ship.edu
	Required Courses - ACC200, FIN311, MGT305, MKT205 + 6 credits College of Business courses with advisement. Pre-requisite courses: ECO101 or ECO102 or ECO113; MAT140A/B or MAT117 or SAT550 or higher	
Chemistry	23-27 credits/2.0	chem@ship.edu
	Required Courses - 7 additional CHM credits at 300/400 level **CHM121/125, CHM122/126, CHM221/225, CHM222/226 (Course with lab component) to declare	
Coaching	19 credits/2.0	exsci@ship.edu
	Required Courses - ESC220, ESC244, ESC325, ESC340, ESC343 + 1 elective course from the following ESC213, ESC260, ESC387, ESC445, HCS 225 or SOC275. Note: BIO 150, 238, or 350 is a prerequisite for ESC 343; We strongly recommend completing BIO 150 as a General Education course.	
Communication, Journalism & Media	18 credits/2.3	commjour@ship.edu
	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 & the Media, which is a diversity general education course.	

MINOR	CREDITS/GPA	CONTACT
Computer Science	23-24 credits/2.0	compsci@ship.edu
	Required Courses - MAT 225, CSC 110 or SWE 100, CSC 111 or ENGR 120, CSC 310, CMPE 220, and CSC/CMPE/SWE at 300+	
Creative Writing	18 credits/2.0	english@ship.edu
	Required Courses - 12 credit hours from ENG 224, ENG 307, ENG 308, ENG 335, ENG 427, ENG 428, ENG 435; 6 credit hours from any other 300-level English course in Advanced Studies in Literature.	
Criminal Justice	18 credits/2.5	crimjust@ship.edu
	Required Courses - CRJ100, CRJ309 + choose 2 from CRJ221, CRJ41, CRJ261 + 2 CRJ elective 300/400 level	
Data Science	18-21 credits/2.0	math@ship.edu
	Start with a statistics class (MAT 217/MAT 375/SCM 200) and a programming class (CSC 104/CSC 110/ENGR110/ENG120/MIS240/SWE100) before taking MAT 219 - Data Science I (offered in Spring only). The rest of the minor is MAT 317 (Spring only), MAT 319 (Fall only) and one discipline specific Capstone class.	
Disability Studies	18 credits/2.0	disabilitystudies@ship.edu
	Required Courses - DS100, DS400 + 4 interdisciplinary electives from approved list	
Economics	18 credits/2.0	economics@ship.edu
	Required Courses - ECO101/102 OR ECO113 + 12-14 credits Economic electives	
English	18 credits/2.0	english@ship.edu
	Required Courses - ENG130 + 5 additional ENG courses, 2 must be at 300/400 level	
Entrepreneurship	18 credits/2.0	ent@ship.edu
	Required Courses - ACC200, ENT337, ENT433, FIN311, & MKT205 + 1 elective from ENT336, MGT305, MGT370 or MKT370	
Ethnic Studies	18 credits/2.0	ethnic@ship.edu
	Required Courses - ETH100, ETH101, ETH102 + 9 additional credits from approved list	
Exercise Science	19 credits/2.0	exsci@ship.edu
	Required courses: ESC 150, ESC 343 Elective options (pick four): ESC 244, ESC 260, ESC 278, ESC 336, ESC 340, ESC 348, ESC 350, ESC 352, ESC 375, ESC 425 Note: BIO 150, 238, or 350 is a prerequisite for ESC 343; We strongly recommend completing BIO 150 as a General Education course.	
French	18 credits/2.0	french@ship.edu
	Required Courses - FRN202, FRN204, FRN211, FRN309 + two of the following FRN380, FRN392, FRN400, FRN411, FRN490	
French Cultural Studies	18 credits/2.0	french@ship.edu
	Required Courses - FRN 202, FRN 204, FRN 392 + one French course from approved list + two interdisciplinary courses from approved list	

MINOR	CREDITS/GPA	CONTACT
Geography-Earth Science	21 credits/2.0	geog@ship.edu
	Required Courses - 100, 200-300 Level Geo/Earth science courses, 400 level Geo/Earth Science Course + 12 credits ESS or GEO courses by advisement.	
Geographic Information Systems	18 credits/2.0	geog@ship.edu
	Required Courses - GEO 202, GEO 363, GEO 420 + three courses from approved list	
German Studies	18 credits/2.0	german@ship.edu
	Required Courses - GER150 or 151, GER203 or 204, GER309 or 320, GER312 or 313 + two additional 200-400 level electives courses	
Gerontology	18 credits/2.0	dpbourassa@ship.edu
	Required Courses - GRN 100, GRN 301 or GRN 303 + 6 additional courses from approved interdisciplinary list	
History	18 credits/2.0	history@ship.edu
	Required Courses - HIS105, HIS106, HIS201 OR 202 + 3 additional courses; 1 300-level European History, 1 300-level US History & 1 300-level Africa/Asia/Latin American or Middle East course	
Human Communication Studies	18 credits/2.0	kalask@ship.edu
	Required Courses - HCS200, HCS210 + 4 additional courses from approved list	
International Development	21 credits/2.0	ism@ship.edu
	Required Courses: INT 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.	
International Studies	21 credits/2.0	ism@ship.edu
	Required Courses - INT200, INT300 + 2 of the following ANT111, GEO101, HIS106, PLS141, MGT370 + 3 additional courses from approved list	
Marketing	18 credits/2.0	mkt@ship.edu
	Admission Requirements: ECO 102 or ECO 113 and MAT 117 or SCM 200 Required Courses: MKT 205, MKT 206, MKT 430. Elective Options (Pick 3): MKT 310, MKT 315, MKT 325, MKT 335, MKT 340, MKT 342, MKT 352, MKT 360, MKT 365, MKT 370, MKT 380, MKT 390, MKT 490.	
Mathematics	18-21 credits /2.0	math@ship.edu
	Required Courses - 6 MAT courses MAT 211 or above, exceptions can be made for MAT 117A/MAT 117B in place of MAT 217 or MAT 181 in place of MAT 211	
Military Science	18-21 credits/2.0	rotc@ship.edu
	Required Courses - MIL131, MIL132, MIL231, & MIL232 + 10-12 credits of specific HIS, MIL, & PLS courses	

MINOR	CREDITS/GPA	CONTACT
Music	18 credits/2.0	music@ship.edu
	Required Courses - MUS140 MUS212, MUS320 + 3 additional classes at 300/400 level from approved list **MUS121 must be taken before declaring or within the first 2 semesters after declaring music minor	
Philosophy	18 credits/2.0	history@ship.edu
	Required Courses - 2 of the following PHL248, PHL340 + 4 additional courses, which include 1 at 200-level and 1 at 300-level	
Physics	24-26 credits/2.0	physics@ship.edu
	Required Courses - PHY221, PHY222, PHY301, PHY321, PHY331 **Please note math pre-requisites to these classes	
Political Science	18 credits/2.0	polisci@ship.edu
	Required Courses - PLS100, PLS141, PLS300 + 3 additional courses from approved list	
Psychology	18 credits/2.0	psych@ship.edu
	Required Courses - 3 courses from the following PSY235, PSY240, PSY265, PSY270, PSY320, PSY323, PSY325, PSY330, PSY352, PSY355, PSY383 + 1-2 courses from the following PSY311, PSY335, PSY361, PSY432, PSY435, PSY475, PSY485 + 1-2 courses from the following PSY315, PSY350, PSY365, PSY410, PSY420, PSY447, PSY470 **For specific General education goal requirements, please see department.	
Public Service	18 credits/2.0	polisci@ship.edu
	Required Courses - PLS100, PLS271, PLS300 + 2 from the follow PLS231, PLS371, PLS372, PLS373, PLS374 + 1 public administration/political science course	
Sociology	18 credits/2.0	socant@ship.edu
	Required Courses - SOC101, SOC380 + any 4 elective Sociology courses from 200, 300 and 400 level offerings **At least 6 credits of this minor must be at 300-400 level	
Spanish	18 credits/2.0	spanish@ship.edu
	Required Courses - SPN202, SPN204, SPN211, SPN312 + 2 additional Spanish Courses at the 300 & 400 level	
Sustainability	21 credits/2.0	geog@ship.edu
	Required Courses - ESS108 and GEO427. Plus 18 credits of approved electives from ESS, GEO, BIO, PSY, SOC, ECO, MGT, MIS, SCM, ENG, HCS, & HIS.	
Technical/Professional Comm.	18 credits/2.0	ctkung@ship.edu
	Required Courses - 2 of the following CSC103, CSC110, MIS142, ENG238 (one from writing, one from computer science) + 4 additional courses from approved list **Upon completion of 12 credits toward this minor, students may apply for optional internship (up to 3 credits)	

MINOR	CREDITS/GPA	CONTACT
Theater	18 credits/2.0	music@ship.edu
	Pre-requisite: THE121. Required Courses - 15 credits from four category areas (Theatre Praxis; History, Theory and Literature; Design Management and Technical Theatre, and Performance). See catalog for listing.	
Women's and Gender Studies	18 credits/2.0	wst@ship.edu
	Required Courses - WST100 and WST300. 12 credits of approved electives from ANT, COM, CRJ, ECO, ENG, HCS, HIS, MAT, PLS, PSY, SOC, SWK, and WST. See catalog for listing.	

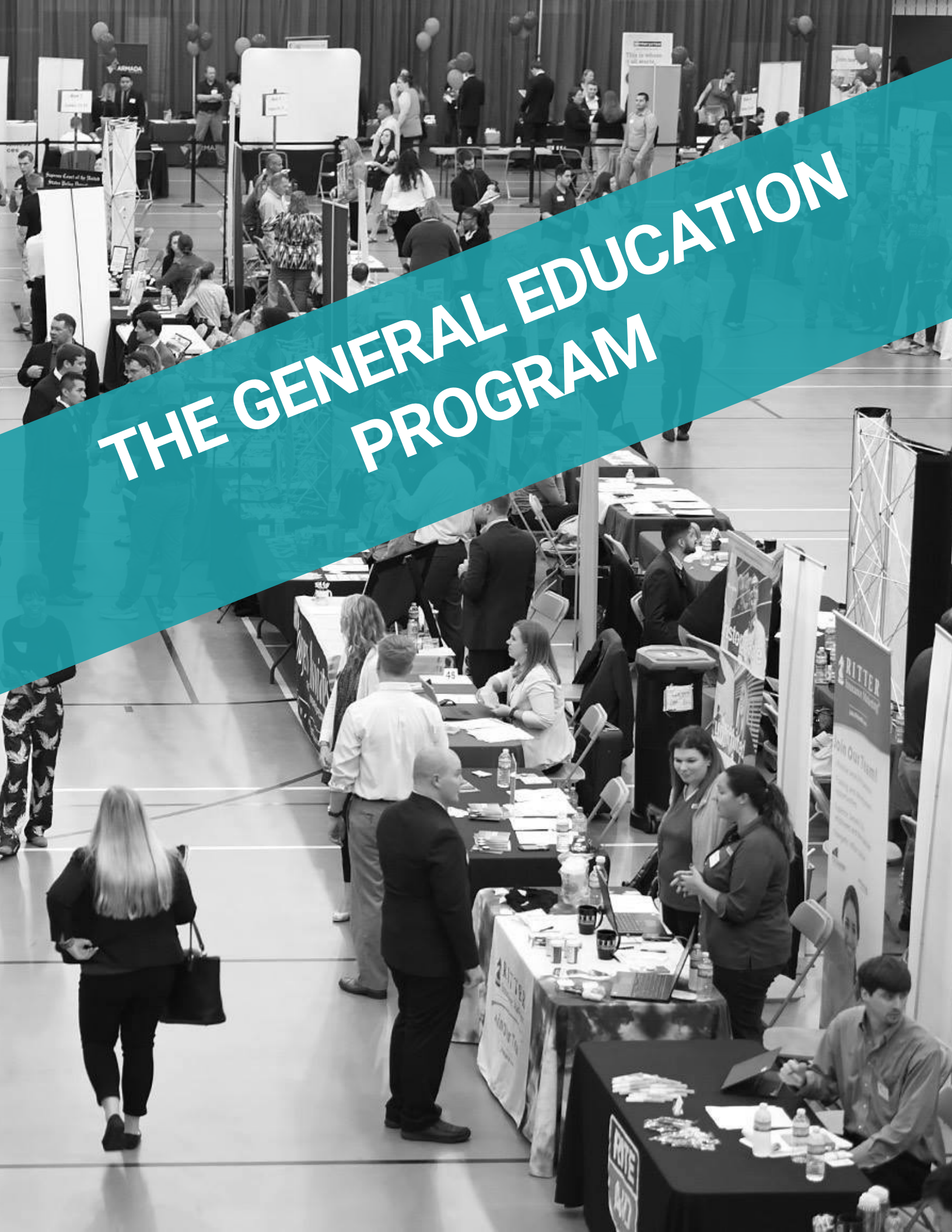
MAJORS

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.

MAJOR	REQUIRED GPA	REQUIREMENTS/NOTES
Art B.A. Education (K-12)	2.0 3.0	
Biology B.S. Biology/Biotechnology/Pre-Forensic Sci. Biology/Clinical Sciences Biology/Health Professions Biology/ Ecology and Environmental	2.5 2.5 2.5 2.8 2.5	Admission to this major is competitive and selective. Students must have earned at least 15 credits and have grades of "C" or better in Principles of Biology I/II (BIO161/162) AND one of the following; Chemical Bonding OR successfully completed Pre-calculus or Calculus I with a "C" or better.
Business B.S.B.A. Accounting Entrepreneurship Finance Personal Financial Planning Management Human Resources Management International Management Management Information Systems Marketing Marketing Management Digital Marketing and Analytics Supply Chain Management Logistics Management	2.0	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.
Chemistry B.S. Biochemistry B.S. Chemistry/Pre-Pharmacy B.S. Chemistry/Forensic Science B.S. Chemistry/Medical Science B.S. Secondary Education Certification	2.0 2.0 2.8 2.0 3.2	CHM 121 is required. Prerequisites: MAT 175: Pre-Calculus or MAT 117: Statistics (either may be taken concurrently with CHM 121) or math placement at Level 5 and one year of high school chemistry or CHM 105 with a grade of "C" or better.
Civil Engineering	2.0	Students must be ready to start MAT211: Calculus upon declaring (Math level 6). Students who are not ready to start MAT211 are placed into the Computer Science & Engineering General category

MAJOR	REQUIRED GPA	REQUIREMENTS/NOTES
Communication, Journalism and Media B.S. Broadcast Media Production Journalism Public Relations Visual Media	2.3	
Communication Studies	2.0	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.
Computer Engineering B.S.	2.0	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.
Computer Science B.S. Computer Graphics Artificial Intelligence Embedded Systems Computer Science Application Computer Science with Secondary Field	2.0	Students need to be at math level 4 (MAT 140B) or higher to declare the major. Students who are not at math level 4 are placed into the Computer Science & Software Engineering General category.
Criminal Justice B.S.	2.6	
Economics B.S.	2.0	
Electrical Engineering B.S.	2.0	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.
English B.A. Literary Studies Professional and Creative Writing Secondary Education Certification	2.0 3.0	Students must complete ENG 130 and ENG 213 by end of the second year, and ENG 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, ENG 366 and ENG 426, 9 credit hours of literary surveys, and 15 credit hours in advanced literary studies.
Exercise Science B.S. Allied Health Pre-Professional	2.5	Completion of at least 15 credits with a GPA of 2.50 or above and completion of BIO 161, BIO 162, or BIO 237 (or their equivalents) with a grade of C or higher Note: 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
Exercise Science B.S. Human Performance and Fitness	2.0	Completion of at least 15 credits with a GPA of 2.0 or above Completion of any biology, chemistry or physics course: BIO237, BIO238, BIO161, BIO162, CHM103, CHM105, CHM121+125, PHY 110 or PHY 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) 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
Exercise Science B.S. Pre-Athletic Training Concentration	2.5	Completion of at least 15 credits with a GPA of 2.50 or above and completion of BIO 161, BIO 162, or BIO 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.

MAJOR	REQUIRED GPA	REQUIREMENTS/NOTES
French B.A. Secondary Education Certification	2.0 3.0	
Geoenvironmental Science	2.0	
Geography B.S. Geographic Information System	2.0	
History B.A Public History Secondary Education B.S.Ed. (Social Studies)	2.0	Secondary Education students are encouraged to declare as soon as possible if considering this major, due to the state certification requirements.
Interdisciplinary Arts Program	2.0	
International Studies	2.0	
Mathematics B.S. Applied Mathematics Statistics Secondary Education Certification* Dual Certification in Mathematics and Special Education* Custom Concentration	2.0/3.0	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 Students are required to complete a minor or advanced coursework in an associated discipline (Allied Electives) for the Applied, Statistics, and Custom Concentrations.
Mechanical Engineering	2.0	Students must be ready to start MAT211 upon declaring (Math level 6). Students who are not ready to start MAT211 are placed into the Computer Science & Engineering General category
Political Science B.A.	2.0	
Psychology B.A.	2.0	
Public Service B.S.	2.0	A student who has between 60 and 74 credits should have completed PLS 100 U.S. Government and Politics.
Social Work B.S.W	2.0 (0-30 credits) 2.2 (31-59 credits) 2.3 (60+ credits)	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.
Sociology B.A.	2.0	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.
Software Engineering B.S	2.0	Math Level 4 is required to declare major.
Spanish B.A. Secondary Education Certification	2.0 3.0	
Sustainability B.S	2.0	
Teacher Education B.S.Ed. Early Childhood/Elementary Education Elementary/Middle School Level Special Education/Early Childhood Dual	3.0	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.



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 a 2.0 ("C") in the total program of courses.
- A cumulative grade point average of at least a 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, to explore unfamiliar territory, and to 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 ENG 114 to satisfy a Foundations course and then takes ENG 250 for Literature followed by ENG 224 for Creative, ENG 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 toward the General Education Program but not both.

GENERAL EDUCATION PROGRAM OFFERINGS

Foundations (5 courses/15 credits)

UNIV101 SU First Year Seminar, or
HON 113 Writing Intensive First Year Seminar
ENG114 Academic Writing, or
ENG 115 Advanced Academic Writing, or
HON 106 Honors Academic Writing

HIS105 Historical Foundations of Global Cultures, or
HON 122 Historical Foundations of Global Cultures
HCS100 Introduction to Human Communication, or
HON 100 Introduction to Human Communication

Quantitative Reasoning Options (choose 1):

MAT105 Mathematics for Liberal Studies
MAT107 Mathematics Models Applied to Money
MAT111 Fundamentals of Mathematics II
MAT117A Applied Statistics with Co-requisite Support
MAT117B Applied Statistics B

MAT181 Applied Calculus
MAT211 Calculus I
MAT217 Statistics I

**See your advisor to figure out which course is right for you and your major*

Interconnections (3 courses/9 credits)

Diversity (at least one course from this group):

COM245 Diversity and the Media
DS100 Introduction to Disability Studies
EEC273 Intro. to Exceptionalities
ETH100 Introduction to Ethnic Studies
ETH101 Introduction to African American Studies
ETH102 Introduction to Latino Studies
FRN150 French Civilization
GEO103 Geography of the United States and Canada
HON 102 Honors: Introduction to Women's Studies
HON 140 Honors: Geo. of the United States and Canada
HON 151 Honors: General Psychology
INT252 Costa Rica: Politics, Economy and Society
PSY101 General Psychology
SPN150 Spanish Civilization & Culture
SWK 265 Understanding Human Diversity for SW
WST100 Introduction to Women's & Gender Studies

HON 141 Honors: World Geography
HON 160 Honors: Cultural Anthropology
HON 165 Honors: Principles of Macroeconomics
HON 274 Honors: Intro. to International Politics
PLS141 World Politics
SPN153 Latino Pop Culture
SPN204 Ideas & Cultures From Spanish-Speaking World
SPN385 Aspectos De La Civiacion Hispana

Foreign Language

ASL101 American Sign Language
ASL102 American Sign Language
CHN101 Beginner's Chinese
CHN102 Beginner's Chinese II
CHN103 Intermediate Chinese
FRN101 Beginning French I
FRN102 Beginning French II
FRN103 Intermediate French
FRN202 Intermediate Conversation Through the Media
FRN320 French for the Professions
GER101 Beginning German I
GER102 Beginning German II
GER103 Intermediate German
GER203 Intermediate German Communication
GER215 German for the Professions
SPN101 Beginning Spanish I
SPN102 Beginning Spanish II
SPN103 Intermediate Spanish
SPN202 Intermediate Conversation
SPN330 Spanish for the Professions

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

ANT105 Great Discoveries in Archaeology
ANT111 Cultural Anthropology
ECO101 Principles of Macroeconomics
FRN 204 Ideas & Cultures From French-Speaking World
GEO101 World Geography
GER150 German Civilization & Culture
GER204 Contemporary German Culture
HIS106 Modern World History
HON 123 Honors: Modern World History

Citizenship and Responsibility (2 courses from 2 categories/6 credits)

Critical Reasoning

AEES122 Academic Literacies for the 21st Century
AEES210 Writing Tutoring Theory and Praxis
ECO113 Principles of Economics
ENGR110 Modeling and Simulation
ESC207 Stress Management
FIN101 Personal Finance
GEO140 Human Geography
GRN100 Introduction to Gerontology
HCS125 Survey of Communication Studies
HON130 Honors: Intro. To Philosophy
HON161 Honors: Intro to Sociology
MAT225 Discrete Mathematics
PHL101 Introduction to Philosophy

PHL102 Critical Thinking
SOC101 Introduction to Sociology

Ethical Reasoning

HON105 Honors: Ethical Theories and Problems
PHL105 Ethical Theories and Problems

Citizenship

COM111 Media Literacy
ESS108 Introduction to Environmental Sustainability
HIS201 Early History of the United States
HON279 Honors: U.S. Government and Politics
PLS100 U.S. Government and Politics

Natural World and Technology (3 courses/9 credits)

Natural World (at least two courses)

ANT121 Physical Anthropology
BIO100 Basic Biology
BIO145 Environmental Biology
BIO150 Human Biology
BIO161 Principles of Biology: Cell Structure and Function
BIO162 Principles of Biology: Organismal Diversity
BIO208 Field Biology
BIO237 Human Anatomy and Physiology I
CHM103 Chemistry: A Cultural Approach
CHM105 Chemistry: An Observational Approach
CHM121 Chemical Bonding
ESS110 Introduction to Geology
ESS111 Introduction to Weather and Climate
ESS210 Physical Geology
HON108 Honors: Astronomy
HON142 Honors: Intro to the Atmosphere
HON145 Honors: Environmental Biology
HON159 Honors: Physical Anthropology
HON180 Honors: Physics for Society

HON186 Honors: Human Biology
HON196 Honors: A Cultural Approach
HON244 Honors: Introduction to Geology
PHY108 Astronomy
PHY110 Physics for Society
PHY121 Introduction to Physics I
PHY122 Introduction to Physics II
PHY205 Intermediate Physics I
PHY221 Fundamentals of Physics I

Technology

CSC103 Overview of Computer Science
CSC104 Programming in Python
CSC120 Intro to Computer Science and Metacognition
CSC180 Microcomputer Basic
ECO102 Principles of Microeconomics
ENGR120 - Programming for Engineers
HON166 Honors: Principles of Microeconomics
HON182 Honors: Overview of Computer Science
MAT219 Data Science I
MIS300 Information Technology and Business Operations

Creativity and Expression (2 courses/6 credits)

Literature (at least one) :

ENG243 The Art of the Film
ENG250 Literature and Society
FRN330 Masterpieces of French Literature
FRN331 Masterpieces of Francophone Literature
GER151 German Cinema
HON101 Honors: Introduction to the Theatre
HON224 Honors: The Art of the Film
HON249 Honors: Intro to Literature
SPN152 Latino Literature
SPN360 Masterpieces of Spanish Literature
SPN361 Masterpieces of Spanish-American Literature
THE121 Introduction to Theatre

Creative

ENG224 Introduction to Creative Writing
MECH100 Engineering Graphics

Arts

ART101 Art Appreciation
ART231 Art History I
ART232 Art History II
ART233 Art History III
ART339 History of American Art
HON111 Honors: Intro. to Interdisciplinary Arts
HON135 Honors: Art History III
HON208 Honors: Opera and Music There
HON210 Honors: Introduction to Music
HON261 Honors: World Music
IAP111 Intro. to Interdisciplinary Arts
MUS121 Introduction to Music
MUS129 American Popular Music
MUS216 Music and Film
MUS227 Opera & Music Theatre
MUS261 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 course- work 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 300, 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)^F
- __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) ^S
- __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)

- __GEO 103 – Geography of the U.S. & Canada (3 cr) **
- __PSY 101 – General Psychology (3 cr) **
- __ENG 190, ENG 243, ENG 248, OR ENG 250 (3 cr) **
- __MAT _____ (MAT 117 recommended) **
- __MAT _____ (MAT 105 recommended) **

Select one or both:

- __BIO 145 – Environmental Biology (3 cr) **
- __ESS 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)
- __TCH 207 – Org. & Psych. Foundations (3 cr)
- __EEC 273 – Introduction to Exceptionalities (3 cr)
- __EEC 423 – Effective Instructional Strategies (3cr)
- __RDG 413 – Teaching Reading to ELL (3 cr)
- __EEC 483 – Assessing Children with Exceptionalities (3 cr)
- __EDU 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 232 – Art History II ^F
 ART 210 – Drawing II
 ART 218 – Three-Dimensional Design ^S

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)

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

Physiology Elective (4 cr)

Select one:

- __BIO 350 - Human Physiology (4 cr)
- OR
- __BIO 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.

- __BIO _____
- __BIO _____
- __BIO _____
- __BIO _____
- __BIO _____

Chemistry (16 cr)

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

Select one:

- __CHM 227 - Introduction to Biochemistry (4 cr)
- OR
- __CHM 222 - Organic Chemistry II (3 cr)

AND

- __CHM 226 - Lab IVB-Experiment. Org. Studies (1 cr)

Physics (8 cr)

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

Mathematics (7-8 cr)

- __MAT 211 - Calculus I (4 cr) **
- AND
- __MAT 117A/B - Applied Statistics (3-4 cr) **
- OR
- __MAT 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 BIO 161/BIO 162 and CHM 121, MAT 175, or MAT 211.

HELPFUL HINTS FOR ADVISING:

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

Semester I

BIO 161- Principles of Bio I
CHM 121 - Chemical Bonding
CHM 125 - Chem Lab IB

Semester II

BIO 162 - Principles of Bio II
CHM 122 - Chemical Dynamics
CHM 126 - Chem Lab IIB

Notes: Physics is normally taken in the junior year

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

- __BIO 161 - Principles of Bio.: Cell Structure and Function **
- __BIO 162 - Principles of Bio.: Organismal Diversity (4 cr)
- __BIO 220 - Microbiology (4 cr)
- __BIO 260 - Genetics (4 cr)
- __BIO 385 - Cell Biology (3 cr)
- __BIO 418 - Molecular Biology (3 cr)
- __BIO 461 - Techniques in Biotechnology (3 cr)
- __BIO 499 - Capstone Seminar in Biology (1 cr)

Physiology Elective (4 cr)

Select one:

- __BIO 350 - Human Physiology (4 cr)
- OR
- __BIO 351 - Animal Physiology (4 cr)

Experiential Elective (3 cr)

Select one:

- __BIO 397 - Intro to Research (3 cr)
- OR
- __BIO 391 - Internship (3 cr)

Additional Biology Electives (3 cr)

Biology credits should total at least 41.

- __BIO _____
- __BIO _____
- __BIO _____

Recommended Electives:

- __BIO 230 - Botany (3 cr)
- __BIO 324 - Pathogenic Microbiology (3 cr)
- __BIO 408 - Virology (3 cr)
- __BIO 409 - Immunology (3 cr)

Chemistry (19-20 cr)

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

Select one:

- __CHM 227 - Introduction to Biochemistry (4 cr)

OR

- __CHM 222 - Organic Chemistry II (3 cr)

AND

- __CHM 226 - Lab IVB-Experiment. Org. Studies (1 cr)

Physics (5 cr)

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

Mathematics (3-4 cr)

- __MAT 211 - Calculus I **

AND:

- __MAT 117A/B - Applied Statistics (3 cr)

OR

- __MAT 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 BIO 161/BIO 162 and CHM 121, MAT 175, or MAT 211.

HELPFUL HINTS FOR ADVISING:

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

Semester I BIO 161- Principles of Bio
 CHM 121 - Chemical Bonding
 CHM 125 - Chem Lab IB

Semester II BIO 162 - Principles of Bio
 CHM 122 - Chemical Dynamics
 CHM 126 - Chem Lab IIB

Notes: Physics is normally taken in the junior year

Students lacking strong chemistry/math backgrounds should consider taking CHM 105 - Chemistry: An Observational Approach before CHM 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)

- __BIO 161 - Principles of Bio.: Cell Structure and Function **
- __BIO 162 - Principles of Bio.: Organismal Diversity (4 cr)
- __BIO 220 - Microbiology (4 cr)
- __BIO 260 - Genetics (4 cr)
- __BIO 350 - Human Physiology (4 cr)
- __BIO 385 - Cell Biology (3 cr)
- __BIO 499 - Capstone Seminar in Biology (1 cr)

Additional Biology Electives (7 cr)

- __BIO _____
- __BIO _____
- __BIO _____
- __BIO _____

Medical Technology Concentration (8+ cr):

- __BIO 409 - Immunology (3 cr)
- __BIO 324 - Pathogenic Microbiology (3 cr)
- __BIO 374 - Hematology (2 cr)

Recommended:

- __BIO 317 - Parasitology (3 cr)
- __BIO 418 - Molecular Biology (3 cr)

Cytotechnology Concentration (7 cr):

Strongly recommended:

- __BIO 371 - Human Anatomy (4 cr)
- __BIO 418 - Molecular Biology (3 cr)

Histotechnology Concentration (7 cr):

- __BIO 371 - Human Anatomy (4 cr)
- __BIO 375 - Histology (3 cr)

Respiratory Therapy Concentration (7 cr):

- __BIO 371 - Human Anatomy (4 cr)
- __BIO 409 - Immunology (3 cr)

Recommended:

- __ENG 238 - Technical/Professional Writing I (3 cr)

Chemistry (19-20 cr)

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

Select one:

- __CHM 227 - Introduction to Biochemistry (4 cr)

OR

- __CHM 222 - Organic Chemistry II (3 cr)

AND

- __CHM 226 - Lab IVB-Experiment. Org. Studies (1 cr)

Physics Requirements (5 cr)

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

Mathematics Requirements (3-4 cr)

- __MAT 211 - Calculus I **

Select one:

- __MAT 117A/B - Applied Statistics (3-4 cr)

OR

- __MAT 217 - Statistics I (4 cr)

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 BIO 161/BIO 162 and CHM 121, MAT 175, or MAT 211.

HELPFUL HINTS FOR ADVISING:

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

Semester I	BIO 161 - Principles of Bio CHM 121 - Chemical Bonding CHM 125 - Chem Lab IB
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Semester II	BIO 162 - Principles of Bio CHM 122 - Chemical Dynamics CHM 126 - Chem Lab IIB
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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)

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

Cellular Elective (4 cr)

Select one:

- __BIO 220 - Microbiology (4 cr)
- OR
- __BIO 385 - Cell Biology (3 cr)*****

Physiology Elective (4 cr)

Select one:

- __BIO 350 - Human Physiology (4 cr)
- OR
- __BIO 351 - Animal Physiology (4 cr)***

Conservation and Management Elective (3 cr)

Select any one:

- __BIO 444 - Conservation Biology (3 cr)
- OR
- __BIO 483 - Wildlife and Fisheries Management (3 cr)

Ecology Electives (9 cr)

Select any three:

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

Additional Biology Electives (6 cr) ****

- __BIO _____
- __BIO _____

Mathematics Requirements (7-8 cr)

- __MAT 211 - Calculus I **

Select one:

- __MAT 117A/B - Applied Statistics (3-4 cr)
- OR
- __MAT 217 - Statistics I (4 cr)

Chemistry (13 cr)

- __CHM 121 - Chemical Bonding **
- __CHM 125 - Lab IB (1 cr)
- __CHM 122 - Chemical Dynamics (3 cr)

- __CHM 126 - Lab IIB (1 cr)
- __CHM 221 - Organic Chemistry (3 cr)
- __CHM 225 - Lab IIIB (1 cr)

Select one:

- __CHM 227 - Introduction to Biochemistry (4 cr)

OR

- __CHM 222 - Organic Chemistry II (3 cr)

AND

- __CHM 226 - Lab IVB-Experiment. Org. Studies (1 cr)

Physics**** (1 cr)

- __PHY 121 - Introductory Physics I - Lecture **
- __PHY 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.

***BIO 351 is recommended

****One of the following Geography/Earth Science courses may be substituted for a biology course (3 credits):

- ESS 110 - Intro. to Geology (3)
- ESS 210 - Physical Geology (3)
- ESS 220 - Oceanography (3)
- GEO 202 - Introduction to GIS (3)
- GEO 224 - Soils (3)
- GEO 226 - Hydrology (3)
- GEO 244 - Land Use
- GEO 405 - Environmental Conservation and Management in PA
- GEO 421 - Environmental Law
- GEO 444 - Environmental Land-Use Planning

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

*****BIO 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 BIO 161/BIO 162 and CHM 121, MAT 175, or MAT 211.

HELPFUL HINTS FOR ADVISING:

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

Semester I	BIO 161- Principles of Bio
	CHM 121 - Chemical Bonding
	CHM 125 - Chem Lab IB

Semester II	BIO 162 - Principles of Bio
	CHM 122 - Chemical Dynamics
	CHM 126 - Chem Lab IIB

Notes: 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, 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)

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

Physiology Elective (4 cr)

Select one:

- __BIO 350 - Human Physiology (4 cr)
- __BIO 351 - Animal Physiology (4 cr)

Anatomy Elective (3-4 cr)

Select one:

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

Cellular Elective (3 cr)

Select one:

- __BIO 385 - Cell Biology (3 cr)
- __BIO 418 - Molecular Biology (3 cr)

Breadth Elective (3 cr)

Select one:

- __BIO 208 - Field Biology (3 cr)
- __BIO 210 - Field Zoology (3 cr)
- __BIO 230 - Botany (3 cr)
- __BIO 242 - Ecology (3 cr)
- __BIO 330 - Animal Behavior (3 cr)
- __BIO 362 - Invertebrate Zoology (3 cr)
- __BIO 363 - Vertebrate Zoology (3 cr)
- __BIO 406 - Mammology (3 cr)
- __BIO 412 - Ichthyology (3 cr)
- __BIO 417 - Herpetology (3 cr)
- __BIO 419 - Ornithology (3 cr)
- __BIO 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.

- __BIO _____
- __BIO _____
- __BIO _____

Chemistry Requirements (16-19 cr)

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

__CHM 221 - Organic Chemistry (3 cr)

__CHM 225 - Lab IIIB (1 cr)

Select one:

__CHM 227 - Intro to Biochemistry (4 cr)

OR

__CHM 222 - Modern Organic Chem II (3 cr) AND

__CHM 226 - Lab IVB (1 cr) AND

__CHM 301 - Biochemistry I (3 cr)

Physics Requirements (5 cr)

__PHY 121 - Introductory Physics I**

__PHY 123 - Physics I Lab (1 cr)

__PHY 122 - Introductory Physics II (3 cr)

__PHY 125 - Physics II Lab (1 cr)

Mathematics Requirements (3-4 cr)

__MAT 211 - Calculus I **

Select one:

__MAT 117A/B - Applied Statistics (3-4 cr) ** OR

__MAT 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 CHM 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 BIO 161/BIO 162 and CHM 121, MAT 175, or MAT 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 BIO 161- Principles of Bio
 CHM 121 - Chemical Bonding
 CHM 125 - Chem Lab IB

Semester II BIO 162 - Principles of Bio
 CHM 122 - Chemical Dynamics
 CHM 126 - Chem Lab IIB

Notes: 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, 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)

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

Physiology Elective (4 cr)

Select one:

- __BIO 350 - Human Physiology (4 cr) OR
- __BIO 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.

- __BIO _____
- __BIO _____
- __BIO _____

Chemistry (13 cr)

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

Recommended:

- __CHM 227 - Introduction to Biochemistry (4 cr)

Physics Requirements (1 cr)

- __PHY 121 - Introductory Physics I - Lecture **
- PHY 123 - Physics I Lab (1 cr)

Recommended:

- __PHY 122 - Introductory Physics II - Lecture (3 cr)
- PHY 125 - Physics II Lab (1 cr)

Mathematics Requirements (3-4 cr)

- __MAT 211 - Calculus I **

Select one:

- __MAT 117A/B - Applied Statistics (3-4 cr) **
- OR
- __MAT 217 - Statistics I (4 cr) **

College of Education and Human Services (33 cr)

- __TCH 207 - Org. & Psych. Foundations (3 cr)
- __EEC 273 - Introduction to Exceptionalities **
- __EEC 423 - Effective Instructional Strategies (3 cr)
- __EEC 483 - Assessing for Curriculum Decision Making (3 cr)
- __EDU 440 - Teaching Science in Secondary Schools (3 cr)
- __EDU 441 - Curriculum & Evaluation in Secondary Sci (3 cr)
- __RDG 413 - Teaching Reading to ELL (3 cr)
- __EDU 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 BIO 161/BIO 162 and CHM 121, MAT 175, or MAT 211.

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.

Semester I	BIO 161- Principles of Bio CHM 121 - Chemical Bonding CHM 125 - Chem Lab IB
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Semester II	BIO 162 - Principles of Bio CHM 122 - Chemical Dynamics CHM 126 - Chem Lab IIB
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Notes: 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

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)

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

Select one:

- __CHM 420 - Biochemistry II (3 cr)
- OR
- __CHM 490 - Special Topics (3 cr)

Mathematics Requirements (8 cr)

- __MAT 211 - Calculus I (4 cr) **
- __MAT 212 - Calculus II (4 cr)

Physics Requirements (8 cr)

- __PHY 205 - Intermediate Physics I (3 cr) **
- PHY 124 - Physics IB Lab (1 cr)
- __PHY 206 - Intermediate Physics II (3 cr)
- PHY 126 - Physics IIB Lab (1 cr)

Biology Requirements (4 cr)

- __BIO 161 - Prin. of Bio: Cell Str. & Funct. (4 cr) **

Computer Science Requirements (4 cr)

- __CSC 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	CHM 121 - Chemical Bonding CHM 123 - Lab IA MAT 211 - Calculus I
Semester II	CHM 122 - Chemical Dynamics CHM 124 - Lab IIA MAT 212 - Calculus II BIO 161 - Prin of Bio: Cell Structure & Function
Semester III	PHY 205 - Intermediate Physics I PHY 123 - Lab I CHM 221 - Modern Organic Chem I CHM 223 - Lab IIIA
Semester IV	PHY 206 - Intermediate Physics II PHY 125 - Lab II CHM 222 - Mod Organic Chem II CHM 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)

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

Mathematics Requirements (8 cr)

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

Physics Requirements (8 cr)

- __PHY 205 – Intermediate Physics I (3 cr) **
- PHY 124 – Physics IB Lab (1 cr)
- __PHY 206 – Intermediate Physics II (3 cr)
- PHY 126 – Physics IIB Lab (1 cr)

Biology Requirements (14 cr)

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

Restricted Elective (3-4 cr)

Select one:

- __CHM 481 – Advanced Inorganic Chemistry (4 cr)
- OR
- __BIO 220 – Microbiology (4 cr)
- OR
- __BIO 408 – Virology (3 cr)
- OR
- __BIO 409 – Immunology (3 cr)

Recommended Electives:

- __CSC 110 Computer Science I (4 cr) **
- __CHM 490 Special Topics (3 cr)
- __BIO 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	CHM 121 – Chemical Bonding CHM 123 – Lab IA MAT 211 – Calculus I
Semester II	CHM 122 – Chemical Dynamics CHM 124 – Lab IIA MAT 212 – Calculus II BIO 161 – Prin. of Bio: Cell Structure & Function
Semester III	PHY 205 – Intermediate Physics I PHY 123 – Lab I CHM 221 – Modern Organic Chem I CHM 223 – Lab IIIA BIO 260 – Genetics
Semester IV	PHY 206 – Intermediate Physics II PHY 125 – Lab II CHM 222 – Mod Organic Chem II CHM 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)

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

Mathematics Requirements (8 cr)

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

Physics Requirements (8 cr)

- __PHY 205 – Intermediate Physics I (3 cr) **
- PHY 124 – Physics IB Lab (1 cr)
- __PHY 206 – Intermediate Physics II (3 cr)
- PHY 126 – Physics IIB Lab (1 cr)

Biology Requirements (8 cr)

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

Criminal Justice Requirements (12 cr)

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

Recommended Electives (9 cr)

- __BIO 418 – Molecular Biology (3 cr)
- __BIO 461 – Techniques in Biotechnology (3 cr)
- __CRJ 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	CHM 121 – Chemical Bonding CHM 123 – Lab IA MAT 211 – Calculus I
Semester II	CHM 122 – Chemical Dynamics CHM 124 – Lab IIA MAT 212 – Calculus II BIO 161 – Prin. of Bio: Cell Structure & Function
Semester III	PHY 205 – Intermediate Physics I PHY 123 – Lab I CHM 221 – Modern Organic Chem I CHM 223 – Lab IIIA BIO 260 – Genetics
Semester IV	PHY 206 – Intermediate Physics II PHY 125 – Lab II CHM 222 – Mod Organic Chem II CHM 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)

- __CHM 110 – The Chemistry Experience (1 cr)
- __CHM 121 – Chemical Bonding (3 cr) **
- __CHM 123 – Lab IA-Chemical Systems (1 cr)
- __CHM 122 – Chemical Dynamics (3 cr)
- __CHM 124 – Lab IIA-Experimental Quant. Analysis (3 cr)
- __CHM 221 – Modern Organic Chemistry I (3 cr)
- __CHM 223 – Lab IIIA-Experimental Org. Techniques (1 cr)
- __CHM 222 – Modern Organic Chemistry II (3 cr)
- __CHM 224 – Lab IVA-Qualitative Organic Analysis (3 cr)
- __CHM 301 – Biochemistry I (3 cr)
- __CHM 313 – Chemistry Seminar (1 cr)
- __CHM 363 – Physical Chemistry I (4 cr)
- __CHM 381 – Intermediate Inorganic Chemistry (3 cr)
- __CHM 420 – Biochemistry II (3 cr)

Select one:

- __CHM 497 – Introduction to Research II (2 cr)

Mathematics Requirements (8 cr)

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

Biology Requirements (18 cr)

- __BIO 161 – Prin. of Bio: Cell Str. & Funct. (4 cr) **
- __BIO 162 – Prin. of Bio: Organismal Diversity (4 cr)
- __BIO 260 – Genetics (3 cr)
- __BIO 385 – Cell Biology (3 cr)

Select one:

- __BIO 350 – Human Physiology (4 cr)
- OR
- __BIO 351 – Animal Physiology (4 cr)

Physics Requirements (8 cr)

- __PHY 205 – Intermediate Physics I (3 cr) **
- PHY 124 – Physics IB Lab (1 cr)
- __PHY 206 – Intermediate Physics II (3 cr)
- PHY 126 – Physics IIB Lab (1 cr)

Restricted Electives (3-8 cr)

Select one or two:

- __BIO 220 – Microbiology (4 cr) OR
- __BIO 375 – Histology (3 cr) OR
- __BIO 408 – Principles of Virology (3 cr) OR
- __BIO 418 – Molecular Biology (3 cr) OR
- __BIO 461 – Techniques in Biotechnology (3 cr) OR
- __CHM 364 – Physical Chemistry II (4 cr) OR
- __CHM 371 – Analytical Chemistry (4 cr) OR

- __CHM 421 – Biochemistry Lab (1 cr)

Sociology and Psychology Requirements (6 cr)

- __SOC 101 – Introduction to Sociology (3 cr) **
- __PSY 101 – General Psychology (3 cr) **

Recommended Electives

- __BIO 409 – Immunology (3 cr)
- __CHM 324 – Advanced Organic Chemistry Lab (1 cr)
- __CHM 481 – Advanced Inorganic Chemistry (4 cr)
- __CHM 490 – Selected Topics in Chemistry (1-3 cr)
- __CSC 110 – Computer Science I – Lecture & Lab (4 cr)
- __SOC 369 – Medical Sociology (3 cr)

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 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.

Students that 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	CHM 121 – Chemical Bonding CHM 123 – Lab IA MAT 211 – Calculus I
Semester II	CHM 122 – Chemical Dynamics CHM 124 – Lab IIA MAT 212 – Calculus II BIO 161 – Prin. of Bio: Cell Structure & Function
Semester III	PHY 205 – Intermediate Physics I PHY 123 – Lab I CHM 221 – Modern Organic Chem I CHM 223 – Lab IIIA BIO 162 – Prin. of Bio: Organismal Diversity
Semester IV	PHY 206 – Intermediate Physics II PHY 125 – Lab II CHM 222 – Mod Organic Chem II CHM 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)

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

Mathematics Requirements (11 cr)

- __MAT 117 – Applied Statistics (3 cr) **
- __MAT 211 – Calculus I (4 cr) **
- __MAT 212 – Calculus II (4 cr)

Physics Requirements (8 cr)

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

Biology Requirements (16 cr)

- __BIO 161 – Prin. of Bio: Cell Str. & Funct. (4 cr)**
- __BIO 162 – Prin. of Bio: Organismal Diversity (4 cr)
- __BIO 220 – Microbiology (4 cr)

Select one:

- __BIO 350 – Human Physiology (4 cr)
- OR
- __BIO 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	CHM 121 – Chemical Bonding CHM 123 – Lab IA MAT 211 – Calculus I
Semester II	CHM 122 – Chemical Dynamics CHM 124 – Lab IIA MAT 212 – Calculus II BIO 161 – Prin. of Bio: Cell Structure & Function
Semester III	PHY 205 – Intermediate Physics I PHY 123 – Lab I CHM 221 – Modern Organic Chem I CHM 223 – Lab IIIA BIO 162 – Prin. of Bio: Organismal Diversity
Semester IV	PHY 206 – Intermediate Physics II PHY 125 – Lab II CHM 222 – Mod Organic Chem II CHM 224 – Lab IVA

Disclaimer: Courses may be subject to change.

Chemistry, Secondary Education Certification – B.S.

Requirements for Chemistry major with Secondary Education 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)

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

Mathematics (8 cr)

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

Physics Requirements (8 cr)

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

Biology (4 cr)

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

Psychology Requirement (3 cr)

- __PSY 101 – General Psychology (3 cr) **

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

- __TCH 207 – Org. & Psych. Foundations (3 cr)
- __EEC 273 – Introduction to Exceptionalities (3 cr)
- __EEC 423 – Effective Instructional Strategies (3cr)
- __EDU 440 – Teaching of Science in Secondary Schools (3 cr)
- __EDU 441 – Curriculum & Evaluation in Secondary Sci (3 cr)
- __RDG 413 – Teaching Reading to ELL (3 cr)
- __EEC 483 – Assessing Children with Exceptionalities (3 cr)
- __EDU 495 – Student Teaching & Practicum (12-15 cr)

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.

Semester I	CHM 121 – Chemical Bonding CHM 123 – Lab IA MAT 211 – Calculus I
Semester II	CHM 122 – Chemical Dynamics CHM 124 – Lab IIA MAT 212 – Calculus II PSY 101 – General Psychology
Semester III	PHY 205 – Intermediate Physics I PHY 123 – Lab I CHM 221 – Modern Organic Chem I CHM 223 – Lab IIIA BIO 161 – Prin. of Bio: Cell Structure & Function
Semester IV	PHY 206 – Intermediate Physics II PHY 125 – Lab II CHM 222 – Mod Organic Chem II CHM 224 – Lab IVA

Disclaimer: Courses may be subject to change.

Civil Engineering, B.S.

Requirements for Civil Engineering major \approx 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)

- __MAT 211 - Calculus I (4 cr) **
- __MAT 212 - Calculus II (4 cr) **
- __MAT 213 - Calculus III (4 cr)
- __MAT 322 - Differential Equations (3 cr)
- __MAT 375 - Probability and Stats for Engineers (4 cr)

Physical Science Requirements (11 cr)

- __PHY 205 - Intermediate Physics I Lecture (3 cr) **
- __PHY 124 - Intermediate Physics I Lab (1 cr)
- __PHY 206 - Intermediate Physics II Lecture (3 cr)
- __PHY 126 - Intermediate Physics II Lab (1 cr)
- __ESS 210 - Physical Geology (3 cr) **
- __CHM 121 - Chemical Bonding (3 cr) **
- __CHM 125 - LabB-Chemical Systems (1 cr)

Civil and Mechanical Engineering Requirements (50 cr)

- __MECH 200 - Statics (3 cr)
- __MECH 210 - Dynamics (4 cr)
- __MECH 220 - Fluids (4 cr)
- __CIVE110 - Measurements and CAD (3 cr)
- __CIVE200 - Mechanics of Materials (4 cr)
- __CIVE300 - Structural Analysis (3 cr)
- __CIVE320 - Construction Methods and Materials (3 cr)
- __CIVE330 - Environmental Engineering (3 cr)
- __CIVE331 - Hydraulic Engineering (4 cr)
- __CIVE340 - Design of Concrete Structures (3 cr)
- __CIVE350 - Soil Mechanics (4 cr)
- __CIVE410 - Foundation Engineering (3 cr)
- __CIVE420 - Transportation Engineering (3 cr)
- __CIVE460 - Highway Engineering and Design (3 cr)
- __CIVE499 - Civil Engineering Capstone (3 cr)

No Concentration (9 cr)

- __CIVE310 - Design of Steel Structures (3 cr)
- __CIVE400 - Construction Project Management (3 cr)
- __CIVEXXX - Civil Engineering Elective (3 cr)

Optional Environmental Concentration (12 cr)

- __CIVE436 - Engineering Hydrology (3 cr)
- __CIVE440 - Water and Wastewater Treatment (3 cr)
- __CIVE450 - Waste Management (3 cr)
- __CIVEXXX - Civil or GEO/ESS Elective (related to Environmental Concentration) (3 cr)

Graduation Requirements: 120+ cr

Free Electives \approx 0 cr

GPA Needed to Declare: 2.0

HELPFUL HINTS FOR ADVISING:

Semester I	MAT 211 - Calculus I PHY 205/124- Intermediate Physics I ENGR 100 - Seminar I ENGR 110 - Modeling & Simulation
Semester II	MAT 212 - Calculus II PHY 206/126 - Intermediate Physics II ENGR 120 - Programming for Engineers

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 MAT 117 Applied Statistics (3 credits) or MAT 217 Statistics I (4 credits).

Prescribed General Education Courses (all concentrations; 6 credits):

COM 111 Media Literacy (majors/minors must achieve a “C” grade or better before taking any other COM courses)

COM 245 Diversity & the Media

Global Languages Requirement:

All students must be proficient at the intermediate level. Intermediate level is level 103.

Theory and Writing Core (all concentrations; 5 courses, 15 credits):

COM 112 Media Writing (majors/minors must achieve a “C” grade or better before taking any other COM courses)

COM 284 Basic Media Production

COM 294 Social Media Strategy

COM 345 Media Law (Jr. standing)

COM 445 Media Ethics & Professionalism (Senior standing)

COM 445 and Professional Practicum

In preparation for COM 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 COM 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 COM 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 COM 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

COM 224 Media Scriptwriting

COM 251 Media Studio Production (COM 284)

COM 351 Media Field Production (COM 284)

COM 424 Media Producing & Performance (COM 224 or COM 285;

COM 284) (Sr. only)

Journalism Concentration

COM 285 Basic News Reporting

COM 293 News Editing & Design (COM 285)

COM 375 Advanced News Reporting (COM 285)

COM 478 Digital Journalism (COM 285; COM 293) (Sr. only)

Public Relations Concentration

COM 201 Principles of Public Relations

COM 241 Public Relations Writing I

COM 342 Public Relations Writing II (COM 241)

COM 432 Public Relations Research & Campaigns (COM 201; COM 241) (Sr. only)

Visual Media Concentration

COM 260 Visual Literacy

COM 360 Basic Digital Photography

COM 362 Photojournalism or COM 476 Magazine Media & Design

COM 470 Advanced Digital Photography or COM 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.

COM 252 Digital Media Tools

COM 290 Advertising Copywriting

COM 305 Sports Journalism

COM 335 Media Advertising & Sales

COM 381 Promotional Media Design

COM 395 Internship I (external from the department)

COM 396 Internship II (external from the department)

COM 401 Film in the Contemporary World

COM 405 Brand Journalism

COM 410 Women & the Media

COM 425 Feature Writing

COM 460 Case Studies in Public Relations

COM 465 Documentary Storytelling

COM 482 Internet Communication

COM 483 Issues in Media Management

COM 484 Media Programming

COM 490, COM 491 and COM 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 COM 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: 2.0

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)
- __ELEC 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, ELEC or SWE _____ (4 cr)
- __ENGR, CMPE, ELEC or SWE _____ (4 cr)

Mathematics Requirements (19 cr)

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

Physics Requirements (12 cr)

- __PHY 205 - Intermediate Physics I (3 cr)**
- PHY 123 - Physics I Lab (1 cr)
- __PHY 206 - Intermediate Physics II (3 cr)
- PHY 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
 MAT 211 - Calculus I
 PHY 205 - Intermediate Physics I
 PHY 123 - Physics I Lab

Semester II ENGR 210 - Prog. for Engineers
 MAT 212 - Calculus II
 PHY 206 - Intern. Physics II
 PHY 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)

- __MAT 211 - Calculus I (4 cr) **
- __MAT 225 - Discrete Mathematics (4 cr)
- __MAT 318 - Elementary Linear Algebra (3 cr)

Select one:

- __MAT 217 - Statistics I (4 cr)

OR

- __MAT 375 - Probability & Stats for Engineers (4 cr)

Computer Science Core (32 cr)

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

Science Requirement (7-8 cr)

Select any two:

- __BIO 161 - Prin. of Bio: Cell Str. and Funct. (4 cr) ** OR
- __BIO 162 - Prin. of Bio: Organismal Diversity (4 cr) ** OR
- __CHM 121 - Chemical Bonding (3 cr) **
- __CHM 125 - Lab IB-Stoichiometry & Reactions (1 cr) OR
- __CHM 122 - Chemical Dynamics (3 cr) **
- __CHM 126 - Lab IIB-Equilibrium & Instr (1 cr) OR
- __ESS 110 - Intro to Geology (3 cr) OR
- __PHY 205 - Intermediate Physics I (3 cr)
- __PHY 124 - Physics I Lab (1 cr) ** OR
- __PHY 206 - Intermediate Physics II (3 cr)
- __PHY 126 - Physics II Lab (1 cr) **

Artificial Intelligence Concentration (18-19 cr)

- __CSC 462 - Artificial Intelligence (4 cr)
- __CSC 402 - Big Data Analytics (4 cr)
- __CSC 403 - Machine Learning (4 cr)
- __CSC, SWE, CMPE, or ELEC 4xx (3-4 cr)

Select one:

- __MAT 326 - Mathematic Modeling (3 cr) OR
- __PSY 325 - Psychology of Human Cognition (3 cr)

Computer Science Applications Concentration (18-20 cr)

- __CSC 371 - Database Management Systems (4 cr)
- __CSC 431 - Computer Networks (4 cr)
- __CSC 462 - Artificial Intelligence (4 cr)
- __CSC, SWE, CMPE, or ELEC 3xx or 4xx (3-4 cr)

Select one:

- __MIL 231 - Self/Team Dev (2 cr) AND
- __MIL 232 - Indiv/Team Mil Tact (2 cr) OR
- __MIS 344 - Bus Syst Analy Des (3 cr) OR

- __MIS 399 - Intro Corp Cybersecurity (3 cr) OR
- __MIS 442 - E-Commerce Tech Intg (3 cr) OR
- __MAT 326 - Mathematic Modeling (3 cr) OR
- __MAT 219 - Data Science I (3 cr) OR
- __GEO 202 - GIS I: Intro to GIS (3 cr) OR
- __GEO 339 - Remote Sensing (3 cr) OR
- __ECO 333 - Res & Analysis Econ (3 cr)

Computer Graphics Concentration (18-19 cr)

- __CSC 350 - Introduction to Computer Graphics (4 cr)
- __CSC 361 - Video Game Programming (4 cr)
- __CSC 451 - Computer Graphics Algorithms (4 cr)
- __CSC, SWE, CMPE, ELEC 3xx or 4xx (3-4 cr)

Select one:

- __ART 217 - Computer Design I (3 cr) OR
- __GEO 202 - GIS I: Intro to Geographic Info Systems (3 cr) OR
- __GEO 339 - Remote Sensing (3 cr)

CS w/ Secondary Field Concentration

- __major or minor in other discipline
- __CSC, SWE, CMPE, ELEC 3xx or 4xx (4 cr)
- __CSC, SWE, CMPE, ELEC 3xx or 4xx (4 cr)

Select one:

- __CSC 361 - Video Game Programming (4 cr)
- __CSC 371 - Database Mgt Systems (4 cr)
- __CSC 403 - Machine Learning (4 cr)
- __CSC 434 - Web Programming (4 cr)
- __CSC 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	CSC 110 - Computer Science I-Lecture MAT 211 - Calculus I
Semester II	CSC 111 - Computer Science II MAT 225 - Discrete Mathematics
Semester III	SWE 200 - Design Patterns CMPE 220 - Computer Organization BIO 161, CHM 121/123, ESS 110, or PHY 205/123
Semester IV	CSC 310 - Design & Analysis of Algorithms CMPE 320 - Operating Systems BIO 162, CHM 122/124, ESS 110 or PHY 206/125

A computer science minor is available - 20-21 cr

Disclaimer: Courses may be subject to change.

Economics – B.S.

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)

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

Business Concentration (24-26 cr)

Courses below fulfill requirements for business minor.

- ACC 200 – Fundamentals of Financial Accounting (3 cr)
- FIN 311 – Financial Management (3 cr)
- MGT 305 – Organization Behavior (3 cr)
- MKT 305 – Principles of Marketing (3 cr)
- FIN or ACC _____ (3 cr)
- Select 1 course from the College of Business (3 cr)

Select one:

- MAT 181 – Applied Calculus (3 cr) ** OR
- MAT 211 – Calculus (4 cr) **

Select one:

- MAT 117 – Applied Statistics (3 cr) ** OR
- MAT 217 – Statistics I (4 cr) ** OR
- SCM 200 – Statistical Applications in Bus. (3 cr) OR

Data Science Concentration (23-27 cr)

- MAT 217 – Statistics I (4 cr) **
- MAT 219 – Data Science I (3 cr)
- MAT 317 – Statistics II (3 cr)
- MAT 319 – Data Science II (3 cr)
- ECO 333 – Research & Analysis in Economics (3 cr)

Select one:

- MAT 181 – Applied Calculus (3 cr) ** OR
- MAT 211 – Calculus I (4 cr) **

Select one:

- CSC 104 – Programming in Python (3 cr) ** OR
- CSC 110 – Computer Science I – Lecture (4 cr) ** OR
- MIS 240 – Introduction to Programming Concepts (3 cr)

Mathematics Concentration (20-23 cr)

- ECO _____ (300+ level)
- MAT 211 – Calculus I (4 cr) **
- MAT 212 – Calculus II (4 cr) **
- MAT 217 – Statistics I (3 cr)

Select 3 of the following, 2 must be 300+:

- MAT 213 – Calculus III (4 cr)
- MAT 225 – Discrete Mathematics (4 cr) **
- MAT 317 – Statistics II (3 cr)
- MAT 318 – Elementary Linear Algebra (3 cr)
- MAT 322 – Differential Equations (3 cr)
- MAT 425 – Advanced Algebraic Structures (3 cr)

Political Science Concentration (24-28 cr)

- PLS 100 – U.S. Government & Politics (3 cr) **
- PLS 201 – Foundations of Political Science (3 cr)
- PLS 300 – Advanced American Government (3 cr)
- PLS _____ (300+ level)
- PLS _____ (300+ level)

Select one:

- PLS 301 – Political Science Research Methods (3 cr) OR
- PLS 302 – Public Policy Analysis (3 cr)

Select one:

- MAT 181 – Applied Calculus (3 cr) ** OR
- MAT 211 – Calculus I (4 cr) **

Select one:

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

To fulfill the Political Science minor, also take the following:

- PLS 141 – World Politics (3 cr) **

Public Administration Concentration (24-26 cr)

- PLS 100 – U.S. Government & Politics (3 cr) **
- PLS 271 – Introduction to Public Administration (3 cr)
- PLS 300 – Advanced American Government (3 cr)
- PLS _____ (3 cr)

Select one:

- PLS 371 – Public Management (3 cr) OR
- PLS 373 – Public Financial Administration (3 cr)

Select one:

- MAT 181 – Applied Calculus (3 cr) ** OR
- MAT 211 – Calculus I (4 cr) **

Select one:

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

Select one:

- PLS 231 – State & Local Government (3 cr) OR
- PLS 371 – Public Management (3 cr) OR
- PLS 372 – Public Personnel Administration (3 cr) OR
- PLS 374 – Public Service Ethics (3 cr)

Social Science Concentration (24-28 cr)

- PLS 100 – U.S. Government & Politics (3 cr) **
- PLS _____ (300+ level)
- SOC 241 – Contemporary Social Problems (3 cr)
- SOC _____ (300+ level)
- GEO 230 – Economic Geography (3 cr)
- GEO _____ (300+ level)

Select one:

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

Select one:

- MAT 181 – Applied Calculus (3 cr) ** OR
- MAT 211 – Calculus I (4 cr) **

Graduation Requirements: 120 cr

GPA Needed to Declare: 2.0

Free Electives ≈ 20-34

Economics minor available – 18-19 cr

Disclaimer: Courses may be subject to change.

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)

- __ELEC 220 - Linear Circuit Analysis (4 cr)
- __ELEC 300 - Foundations of Electronic Systems (4 cr)
- __ELEC 310 - Signals & Systems (4 cr)
- __ELEC 360 - Communications Systems (4 cr)
- __ELEC, CMPE, ENGR, SWE _____ (300+ level)

Math Requirements (23 cr)

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

Physics Requirements (20 cr)

- __PHY 205 - Intermediate Physics I (3 cr)**
- PHY 123 - Physics I Lab (1 cr)
- __PHY 206 - Intermediate Physics II (3 cr)
- PHY 125 - Physics II Lab (1 cr)**
- __PHY 311 - Quantum I (3 cr)
- __PHY 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 ELEC 100 - Engineering Seminar I MAT 211 - Calculus I PHY 123 - Physics I Lab PHY 205 - Intermediate Physics I
Semester II	ENGR 210 - Programming for Engineers MAT 212 - Calculus II (4 cr) PHY 125 - Physics II Lab (1 cr) PHY 206 - Intermediate Physics II (3 cr)

Disclaimer: Courses may be subject to change.

English, Literary Studies – B.A.

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)

- ENG 130 - Literary Studies for Eng. Major & Minor (3 cr)
- ENG 213 - Writing & Research About Literature (3 cr)
- ENG 460 - Senior Seminar (3 cr)

Required Survey Courses (9 cr)

Select one:

- ENG 233 - American Literature I (3 cr) OR
- ENG 236 - British Literature I (3 cr)

Select one:

- ENG 234 - American Literature II (3 cr) OR
- ENG 237 - British Literature II (3 cr)

Select one:

- ENG 240 - Global Literature (3 cr) OR
- ENG 239 - Postcolonial Literature (3 cr)

Advanced Studies - Writing (3 cr)

Select at least one:

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

Advanced Studies - Genres (3 cr)

Select at least one:

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

Advanced Studies - History and Movements (3 cr)

Select at least one:

- ENG 318 - Studies in Eng. Renaissance (3 cr)
- ENG 330 - Shakespeare (3 cr)
- ENG 337 - Romanticism (3 cr)
- ENG 344 - Studies in Single Author (3 cr)
- ENG 349 - Victorian Literature (3 cr)
- ENG 363 - Modernism (3 cr)

- ENG 364 - Postmodernism (3 cr)
- ENG 366 - History & Structure of Eng Language (3 cr)
- ENG 376 - Studies in Medieval Literature (3 cr)
- ENG 377 - The Long 18th Century (3 cr)
- ENG 380 - 19th Century Literature (3 cr)
- ENG 383 - Literature After 1900 (3 cr)
- ENG 430 - Special Topics in Lit History & Movements (3 cr)

Advanced Studies - Identities (3 cr)

Select at least one:

- ENG 445 - Special Topics in Identities (3 cr)
- ENG 385 - Studies in Postcolonial Literature (3 cr)
- ENG 370 - Queer Studies (3 cr)
- ENG 375 - African American Literature (3 cr)
- ENG 345 - Women's Literature (3 cr)
- ENG 358 - Ethnic Literature (3 cr)
- ENG 359 - Native American Literature (3 cr)
- ENG 362 - Disability in Literature (3 cr)

Advanced Studies Electives (12 cr)

Choose 4 courses in Advanced Studies:

- ENG _____
- ENG _____
- ENG _____
- ENG _____

##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 ENG 130 - Literary Studies for English

Semester II ENG 213 - Writing & Research

An English minor is available - 18 cr

English, Professional & Creative Writing – B.A.

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)

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

Required Survey Courses (9 cr)

Select one:

- ENG 233 – American Literature I (3 cr) OR
- ENG 236 – British Literature I (3 cr)

Select one:

- ENG 234 – American Literature II (3 cr) OR
- ENG 237 – British Literature II (3 cr)

Select one:

- ENG 240 – Global Literature (3 cr) OR
- ENG 239 – Postcolonial Literature (3 cr)

Writing (12 cr)

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

Advanced Studies – Genres (3 cr)

Select at least one:

- ENG 304 – Literary Criticism (3 cr)
- ENG 333 – Cultural Studies (3 cr)
- ENG 336 – Theories and Approaches (3 cr)
- ENG 342 – Mythology (3 cr)
- ENG 360 – Popular Genres (3 cr)
- ENG 367 – Studies in Drama (3 cr)
- ENG 368 – Studies in Fiction (3 cr)
- ENG 369 – Studies in Poetry (3 cr)
- ENG 373 – Studies in Creative Nonfiction (3 cr)
- ENG 440 – Special Topics in Genre (3 cr)

Advanced Studies – History and Movements (3 cr)

Select at least one:

- ENG 318 – Studies in Eng. Renaissance (3 cr)
- ENG 330 – Shakespeare (3 cr)
- ENG 337 – Romanticism (3 cr)
- ENG 344 – Studies in Single Author (3 cr)
- ENG 349 – Victorian Literature (3 cr)
- ENG 363 – Modernism (3 cr)
- ENG 364 – Postmodernism (3 cr)

- ENG 366 – History & Structure of Eng Language (3 cr)
- ENG 376 – Studies in Medieval Literature (3 cr)
- ENG 377 – The Long 18th Century (3 cr)
- ENG 380 – 19th Century Literature (3 cr)
- ENG 383 – Literature After 1900 (3 cr)
- ENG 430 – Special Topics in Lit History & Movements (3 cr)

Advanced Studies – Identities (3 cr)

Select at least one:

- ENG 445 – Special Topics in Identities (3 cr)
- ENG 385 – Studies in Postcolonial Literature (3 cr)
- ENG 370 – Queer Studies (3 cr)
- ENG 375 – African American Literature (3 cr)
- ENG 345 – Women’s Literature (3 cr)
- ENG 358 – Ethnic Literature (3 cr)
- ENG 359 – Native American Literature (3 cr)
- ENG 362 – Disability in Literature (3 cr)

English Elective (3 cr)

Choose 1 course in Advanced Studies:

- ENG _____ (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	ENG 130 – Literary Studies for English
Semester II	ENG 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)

__PSY 101 - General Psychology (3 cr) **

Math Requirements (6 cr)

__MAT except 185 (3 cr) [MAT 105, 107 & 117, recommended] **

__MAT except 185 (3 cr) [MAT 105, 107 & 117, recommended] **

English Core (15 cr)

__ENG 130 - Literary Studies for Eng. Major & Minor (3 cr)

__ENG 213 - Writing & Research About Literature (3 cr)

__ENG 366 - History & Structure of English Language (3 cr)

__ENG 426 - Teaching Adolescent Literature (3 cr)

__ENG 460 - Senior Seminar (3 cr)

Required Survey Courses (9 cr)

Select one:

__ENG 233 - American Literature I (3 cr) OR

__ENG 236 - British Literature I (3 cr)

Select one:

__ENG 234 - American Literature II (3 cr) OR

__ENG 237 - British Literature II (3 cr)

Select one:

__ENG 240 - Global Literature (3 cr) OR

__ENG 239 - Postcolonial Literature (3 cr)

Advanced Studies - Writing (3 cr)

Select at least one:

__ENG 224 - Introduction to Creative Writing (3 cr)

__ENG 229 - Advanced Composition (3 cr)

__ENG 238 - Technical/Professional Writing I (3 cr)

__ENG 307 - Poetry Writing (3 cr)

__ENG 308 - Fiction Writing (3 cr)

__ENG 323 - Reviewing the Arts for Publication (3 cr)

__ENG 335 - Creative Nonfiction Writing (3 cr)

__ENG 420 - Selected Topics in Writing (3 cr)

__ENG 427 - Advanced Poetry Workshop (3 cr)

__ENG 428 - Advanced Fiction Workshop (3 cr)

__ENG 435 - Advanced Creative Nonfiction (3 cr)

__ENG 438 - Technical Professional Writing II (3 cr)

Advanced Studies - Genres (3 cr)

Select at least one:

__ENG 304 - Literary Criticism (3 cr)

__ENG 333 - Cultural Studies (3 cr)

__ENG 336 - Theories and Approaches (3 cr)

__ENG 342 - Mythology (3 cr)

__ENG 360 - Popular Genres (3 cr)

__ENG 367 - Studies in Drama (3 cr)

__ENG 368 - Studies in Fiction (3 cr)

__ENG 369 - Studies in Poetry (3 cr)

__ENG 373 - Studies in Creative Nonfiction (3 cr)

__ENG 440 - Special Topics in Genre (3 cr)

Advanced Studies - History and Movements (3 cr)

Select at least one:

__ENG 318 - Studies in Eng. Renaissance (3 cr)

__ENG 330 - Shakespeare (3 cr)

__ENG 337 - Romanticism (3 cr)

__ENG 344 - Studies in Single Author (3 cr)

__ENG 349 - Victorian Literature (3 cr)

__ENG 363 - Modernism (3 cr)

__ENG 364 - Postmodernism (3 cr)

__ENG 366 - History & Structure of Eng Language (3 cr)

__ENG 376 - Studies in Medieval Literature (3 cr)

__ENG 377 - The Long 18th Century (3 cr)

__ENG 380 - 19th Century Literature (3 cr)

__ENG 383 - Literature After 1900 (3 cr)

__ENG 430 - Special Topics in Lit History & Movements (3 cr)

Advanced Studies - Identities (3 cr)

Select at least one:

__ENG 445 - Special Topics in Identities (3 cr)

__ENG 385 - Studies in Postcolonial Literature (3 cr)

__ENG 370 - Queer Studies (3 cr)

__ENG 375 - African American Literature (3 cr)

__ENG 345 - Women's Literature (3 cr)

__ENG 358 - Ethnic Literature (3 cr)

__ENG 359 - Native American Literature (3 cr)

__ENG 362 - Disability in Literature (3 cr)

Advanced Studies Elective (3 cr)

Select one additional course in Advanced Studies:

__ENG _____ (3 cr)

Professional Education Requirements (33-36)

__TCH 207 - Org. & Psych. Foundations (3 cr)

__EEC 273 - Introduction to Exceptionalities (3 cr)

__EEC 290 - Introduction to English/Language Arts Ed (3 cr)

__EEC 423 - Effective Instructional Strategies (3cr)

__RDG 413 - Teaching Reading to ELL (3 cr)

__EDU 422 - Methods of Teaching Eng in Secondary Ed (3 cr)

__EEC 483 - Assessing Children with Exceptionalities (3 cr)

__EDU 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 ENG 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)

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

French Electives (6 cr)

Select two, at least one at the 400-level:

- FRN 380 - Aspects De La Civilisation Française (3 cr)
- FRN 392 - French Cultural Studies Immersion (3 cr)
- FRN 400 - Seminar: Advanced Studies in French (3 cr)
- FRN 411 - Theory and Practice of Translation (3 cr)
- FRN 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

- TCH 207 - Organizational and Psych Foundations (3 cr)
- TCH 251 - Elements of Middle Level Instruction (3 cr)
- EEC 273 - Introduction to Exceptionalities (3 cr)
- EEC 423 - Effective Instructional Strategies (3 cr)
- EEC 483 - Assessing Children with Exceptionalities (3 cr)
- EDU 426 - Methods of Teaching Foreign Languages (3 cr)
- EDU 495 - Student Teaching & Professional Practicum (3 cr)

Math requirement:

- MAT _____ (except MAT 185)
- MAT _____ (except MAT 185)

Literature requirement:

- ENG 190, ENG 243, ENG 248, OR ENG 250 (3 cr)

Optional Translation Specialization Courses

- FRN 320 - French for the Professions (3 cr)
- FRN 380 - Aspects de la Civilisation Française (3 cr)
- FRN 411 - Theory & Practice of Translation (3 cr)

Select one:

- FRN 400 - Special Topics in French OR
- FRN _____ (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

- __ESS 111 – Intro to Weather and Climate (3 cr)
- __ESS 110 – Intro to Geology (3 cr)
- __GEO 202 – GIS I: Intro to GIS (3 cr)
- __GEO 226 – Hydrology (3 cr)
- __GEO 391 – Geography Seminar (3 cr)

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

Geography Electives (3+ cr)

- __GEO 244 – Land Use (3 cr)
- __GEO 305 – Geography of Europe (3 cr)
- __GEO 308 – Geography of Latin America (3 cr)
- __GEO 310 – Transportation Geography (3 cr)
- __GEO 313 – Geography of South and Southeast Asia (3 cr)
- __GEO 317 – Geography of East Asia (3 cr)
- __GEO 320 – Historical Geography (3 cr)
- __GEO 322 – Urban Geography (3 cr)
- __GEO 329 – Economic Geography (3 cr)
- __GEO 415 – Geography of Africa (3 cr)
- __GEO 450 – Geography: Geology Field Studies (1-3 cr)

Geoenvironmental Electives (3+ cr)

- __ESS 212 – Historical Geology (3 cr)
- __ESS 214 – Geology of National Parks (3 cr)
- __ESS 220 – Oceanography (3 cr)
- __GEO 203 – Climate, Energy, and Sustainability (3 cr)
- __GEO 306 – Geomorphology (3 cr)
- __GEO 397 – Introduction to Research (1-3 cr)
- __GEO 450 – Geography-Geology Field Studies (1-3 cr)
- __GEO 490 – Selected Topics in Geography (1-3 cr)
- __Marine Science Consortium Course.

Technique Course Electives (3+cr)

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

Geoenvironmental Complex System Electives (12+ cr)

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

- __GEO 421 – Environmental Law (3 cr)
- __GEO 444 – Environmental Land-Use Planning (3 cr)
- __GEO 446 – Water Resources Management (3 cr)
- __GEO 450 – Geography-Geology Field Studies (1-3 cr)
- __GEO 490 – Selected Topics in Geography (1-3 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.

- __GEO 360 – Internship in Geography I (3 cr)

Allied Sciences (10+ cr)

Biology (3 cr)

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

Chemistry/Physics (7 cr)

- __CHM 105 – Chemistry: An Observational Approach (3 cr)
- __CHM 121 – Chemical Bonding (3 cr)
- __CHM 125 – Lab IB Stoichiometry and Reactions (1 cr)
- __CHM 122 – Chemical Dynamics (3 cr)
- __CHM 126 – Lab IIB Equilibrium and Instruments (1 cr)
- __PHY 121 – Introductory Physics I - Lecture (3 cr) *Recommended*
- PHY 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)

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

Select one:

- __GEO 322 – Urban Geography (3 cr) OR
- __GEO 244 – Land Use (3 cr)

Geographic Information Systems Concentration (24 cr)

- __GEO 339 – Remote Sensing (3 cr)
- __GEO 352 – Cartography (3 cr)
- __GEO 363 – GIS II: Intermediate HIS (3 cr)
- __GEO 420 – GIS III: Advanced GIS (3 cr)

Select two:

- __GEO 425 – Image Processing (3 cr)
- __GEO 440 – Field Techniques (3 cr)
- __GEO 441 – Qualitative Methods (3 cr)
- __GEO 463 – Applied Geophysical Imaging (3 cr)
- __GEO 4_____ (400 level)

Select one:

- __GEO 244 – Land Use (3 cr) ♦ OR
- __GEO 301 – Intro Biogeography (3 cr) OR
- __GEO 310 – Transport Geography (3 cr) OR
- __GEO 322 – Urban Geography (3 cr) ♦ OR
- __GEO 427 – Sustainability (3 cr) OR
- __GEO 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.

- __GEO 360, 361, 390, or 394 – Internship (3 cr)

Social Sciences (12 cr)

- __PLS 100 – U.S. Government & Politics (3 cr)
- __SOC 101 – Intro to Sociology (3 cr)

Select two:

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

Art, Computer Science, Information Systems Electives (12-15 cr)

- __CSC 104 – Programming in Python (3 cr)

Select 3:

- __ART 217 – Computer Design I (3 cr)
- __CSC 110 – Computer Science I - Lecture (4 cr) **
- __CSC 111 – Computer Science II (4 cr)
- __CSC _____ (3-4 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MIS 240 – Introduction to Programming Concepts (3 cr)
- __MIS 300 – Info Technology & Business Operations (3 cr)
- __MIS 355 – Database Applications (3 cr)

Math Requirement (3-4 cr)

Select one:

- __MAT 140A or B – College Algebra (3-4 cr) ** OR
- __MAT 175 – Precalculus (3 cr) ** OR
- __MAT 211 – Calculus I (4 cr) ** OR
- __MAT 225 – Discrete Mathematics (4 cr) **

English Requirement (3 cr)

- __ENG 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)

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

Restricted Electives (12 cr)

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

No Concentration (6 cr)

- HIS _____ (300+ level)
- HIS _____ (300+ level)

European History Requirements (12 cr)

Select 4:

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

American History Requirements (12 cr)

Select 4:

- HIS 301 – The West in American History (3 cr)
- HIS 302 – American Business History (3 cr)
- HIS 304 – American Diplomatic History (3 cr)
- HIS 305 – The Civil War Era (3 cr)
- HIS 307 – Contemporary U. S. History since 1945 (3 cr)
- HIS 309 – History of the American Worker (3 cr)
- HIS 314 – History of Jacksonian America (3 cr)
- HIS 318 – History of U.S. Women (3 cr)
- HIS 319 – Introduction to Public History (3 cr)
- HIS 338 – Colonial America (3 cr)
- HIS 341 – African-American History (3 cr)

- HIS 342 – U.S. Immigration and Ethnicity (3 cr)
- HIS 345 – Military History of the United States (3 cr)
- HIS 352 – The US and Vietnam (3 cr)
- HIS 358 – American Environmental History (3 cr)
- HIS 385, 388, 394, 490, 496 – Selected Topics (3 cr)
- HIS 386 – History Research Seminar (3 cr)
- HIS 387, 389, 391 – History Internship (3 cr)
- HIS 402 – Revolutionary America (3 cr)
- HIS 413 – Pennsylvania History (3 cr)
- HIS 428 – Issues in Gilded Age & Progressive Era (3 cr)
- HIS 430 – U.S. Cultural History (3 cr)
- HIS 433 – Oral History (3 cr)

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

Select 4:

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

Public History Concentration (12 cr)

Public History Methods:

- HIS 319 – Introduction to Public History (3 cr)

Select one:

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

Required Internship:

- HIS 387, 389, 391 – History Internship I (3 cr)
- HIS 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 HIS 105 – Historical Foundations of Global Cultures
 HIS 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)

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

Restricted History Electives (12 cr)

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

History Electives (6 cr)

- HIS _____ (300+ level)
- HIS _____ (300+ level)

Social Science Requirements (27 cr)

- ECO 101 – Principles of Macroeconomics (3 cr) **
- ECO 102 – Principles of Microeconomics (3 cr)
- GEO 101 – World Geography (3 cr) **
- GEO 103 – Geography of the U.S. and Canada (3 cr) **
- PLS 100 – U.S. Government and Politics (3 cr) **
- PLS _____ [recommended 231, 251, or 300]
- PSY 101 – General Psychology (3 cr) **
- SOC 101 – Introduction to Sociology (3 cr) **

Select one:

- ANT 111 – Cultural Anthropology (3 cr) OR
- INT 200 – Intro to International Studies (3 cr) OR
- GEO _____ (200 or 300 level) OR
- PLS _____ (200 or 300 level) OR
- PHL _____

Math Requirement (6-8 cr)

- MAT _____ (except MAT 185) **
- MAT _____ (except MAT 185) **

Recommended:

- MAT 117: Applied Statistics (3 cr) **

Literature Requirement (3 cr)

- ENG 248 OR ENG 250 (3 cr) **

Professional Education Requirements (33 cr)

- TCH 207 – Org. & Psych. Foundations (3 cr)
- EEC 273 – Introduction to Exceptionalities (3 cr)
- EEC 423 – Effective Instructional Strategies (3cr)
- RDG 413 – Teaching Reading to ELL (3 cr)
- EEC 483 – Assessing Children with Exceptionalities (3 cr)
- EDU 412 – Teaching of Social Studies I (3 cr)
- EDU 413 – Teaching of Social Studies II (3 cr)
- EDU 495 – Student Teaching & Practicum (12 cr)

Note: TCH 207 must be completed before EDU 412 and EDU 413.
EDU 412 and EDU 413 must be taken simultaneously. A cumulative

GPA of 3.0 is required to enroll in EDU 412 and EDU 413. EEC 483 must be taken with EDU 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 HIS 105 – Historical Foundations of Global Cultures
 HIS 106 – Thinking Historically in a Global Age
 GEO 103- Geography of U.S. and Canada

All ANT, ECO, GEO, INT, PLS, PHL courses must be passed with a grade of C or above.

Disclaimer: Courses may be subject to change.

Human 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 Human Communications Offerings

- HCS 100 – Intro to Human Communications (3 cr) **
- HCS 125 – Survey of Human Communications (3 cr) **

Human Communications Core (15 cr)

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

Rhetoric and Symbolism (3 cr)

Select at least one:

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

Organizational Communication (3 cr)

Select at least one:

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

Cultural Perspectives (3 cr)

Select at least one:

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

Interpersonal Communication (3 cr)

Select at least one:

- HCS 220 – Nonverbal Communication (3 cr)
- HCS 225 – Communication and Sport (3 cr)
- HCS 250 – Interpersonal Communication (3 cr)
- HCS 265 – Interviewing (3 cr)
- HCS 333 – Communicating Identity (3 cr)
- HCS 349 – Communication and Humor (3 cr)
- HCS 349 – Special Topics in Interpersonal Comm. (3 cr)
- HCS 385 – Resolving Conflict through Communication (3 cr)
- HCS 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:

- HCS _____
- HCS _____
- HCS _____

Recommended Internship

Department permission required

- HCS 391 – Internship I (3 cr)
- HCS 392 – Internship II (3 cr)
- HCS 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 HCS 100 – Intro to Human Communication Studies
 HCS 125 – Survey of Human Communication Studies
 (prerequisite for HCS 200)

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

Human 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

__IAP 111 – Introduction to Interdisciplinary Arts (3 cr) **

Select three (one to satisfy each Arts Concentration):

__ART 101 – Art Appreciation (3 cr) **

__COM 111 – Intro to Mass Communication (3 cr)

__ENG 243, 248, or 350 – English Literature (3 cr) **

__MUS 121 – Intro to Music (3 cr) **

__THE 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)

__IAP 449 – Interdisciplinary Arts Senior Thesis (3 cr) OR

__IAP 451 – Interdisciplinary Arts Showcase (3 cr) OR

__IAP 452 – Interdisciplinary Arts Internship (3 cr) OR

__IAP 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)

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

Requirements for Fall 2018 General Education (12 cr)

- HIS 105 - Historical Foundation of Global Cultures (3 cr) **
- HIS 106 - Modern World History (3 cr) **
- PLS 141 - World Politics (3 cr) **
- GEO 140 Human Geography OR
- ECO 113 Principles of Economics ** (ECO 113 required for Global Business Concentration)

Select one:

- ANT 111 - Cultural Anthropology (3 cr) OR
- GEO 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)

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

OR

- __MAT 430 Complex Analysis (Spring/3 cr)

Required Computer Science (3-4 cr)

Select one:

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

Applied Mathematics Concentration

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

Either complete a minor, complete a second major, or choose three allied electives numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE:

- __ _____ (300+ level)
- __ _____ (300+ level)
- __ _____ (300+ level)

Statistics Concentration

- __MAT 317 - Statistics II (3 cr)
- __MAT 476 - Probability (3 cr)
- __MAT 486 - Mathematical Statistics (3 cr)
- __MAT _____ (300+ level)
- __MAT _____ (300+ level)

Either complete a minor, complete a second major, or choose three allied electives numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE:

- __ _____ (300+ level)
- __ _____ (300+ level)
- __ _____ (300+ level)

Custom Concentration (with advisement)

- __MAT _____ (300+ level)

- __MAT _____ (300+ level)
- __MAT _____ (300+ level)
- __MAT _____ (400 level)
- __MAT _____ (400 level)

Either complete a minor, complete a second major, or choose three allied electives numbered 300 or above from ACC, BIO, CHM, CSC, CMPE, ECO, ESS, FIN, MAT, MIS, PHY, SCM, or SWE:

- __ _____ (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 MAT 211 - Calculus I

Semester II MAT 185 - First Year Math Seminar
 MAT 212 - Calculus II
 MAT 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)

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

Required Computer Science (3-4 cr)

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

Secondary Education Concentration

- MAT 326 - Mathematical Modeling (3 cr)
- MAT 333 - Geometry (3 cr) ^{F, odd}
- MAT 400 - History of Mathematics (3 cr) ^{F, even}
- MAT _____ (400 level)

Professional Education Requirements (36 cr)

- TCH 207 - Org. & Psych. Foundations (3 cr)
- EEC 273 - Introduction to Exceptionalities (3 cr) ** *Dtag*
- EEC 423 - Effective Instructional Strategies (3cr)
- RDG 413 - Teaching Reading to ELL (3 cr)
- EEC 483 - Assessing Children with Exceptionalities (3 cr)
- EDU 371 - Technology in the Mathematics Classroom (3 cr)
- EDU 434 - Teaching of Mathematics I (Spring/3 cr)
- EDU 435 - Teaching of Mathematics II (Fall/3 cr)
- EDU 495 - Student Teaching & Practicum (12 cr)

Optional Mathematics and Special Education Certification (21 cr)

Take the following in addition to the courses above:

- EEC 280 - Best Practices in Collaboration (3 cr)
- EEC 320 - Interventions for Comm. Impairments (3 cr)
- EEC 325 - Interventions for Social, Emotional, Behav. (3 cr)
- EEC 330 - Teaching Students with Exceptionalities (3 cr)
- EEC 335 - Interventions for Cognitive or Physical (3 cr)
- EEC 447 - Special Education Processes (3 cr)
- EEC 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 MAT 211 - Calculus I

Semester II MAT 185 - First Year Mathematics Seminar
 MAT 212 - Calculus II
 MAT 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.)

- MAT 211 - Calculus I (4 cr) **
- MAT 212 - Calculus II (4 cr) **
- MAT 318 - Elementary Linear Algebra (3 cr)
- MAT 375 - Probability & Statistics for Engineers (3 cr)
- MAT 322 - Differential Equations (3 cr)

Science Requirements (20 cr)

- CHM 121 - Chemical Bonding (3 cr) **
- CHM 125 - Lab IB-Stoichiometry & Reactions (1 cr)
- CHM 122 - Chemical Dynamics (3 cr)
- CHM 126 - Lab IIB-Equilibrium & Instrumentation (1 cr)
- PHY 205 - Intermediate Physics I Lecture (3 cr) **
- PHY 123 - Physics I Lab (1 cr)
- PHY 206 - Intermediate Physics II Lecture (3 cr) **
- PHY 125 - Physics II Lab (1 cr)
- PHY 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)
- ELEC 220 - Linear Circuit Analysis (3 cr)
- MECH 200 - Statics (4 cr)
- MECH 210 - Dynamics (4 cr)
- MECH 220 - Fluids (4 cr)
- MECH 230 - Mechanics of Materials (4 cr)
- MECH 300 - Engineering Materials (4 cr)
- MECH 310 - Manufacturing Processes (4 cr)
- MECH 320 - Machine Dynamics (4 cr)
- MECH 410 - Mechanics of Thermodynamics (4 cr)
- MECH 420 - Machine Design (4 cr)
- MECH 450 - Thermal System Design (4 cr)

Engineering Elective (3-4 cr)

Select one:

- CIV, COMPE, ELEC, ENGR, MECH _____ (200+ level)
- MAT 213 - Calculus III (4 cr)
- MAT 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 MAT 211 - Calculus I
 PHY 205/123 - Physics I Lecture & Lab
 ENGR 100 - Seminar I
 ENGR 110 - Modeling & Simulation

Semester II MAT 212 - Calculus II
 PHY 206/125 - Physics II Lecture & Lab
 ENGR 120 - Programming for Engineers

Disclaimer: Courses may be subject to change.

Physics – B.S.

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)

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

Math Requirements (15 cr)

- __MAT 211 - Calculus I (4 cr) **
- __MAT 212 - Calculus II (4 cr) **
- __MAT 213 - Calculus III (4 cr)
- __MAT 322 - Differential Equations (3 cr)

Chemistry Requirement (4 cr)

- __CHM 121 - Chemical Bonding (3 cr) **
- CHM 125 - Lab IB-Stoichiometry & Reactions (1 cr)

Computer Science/Engineering Requirement (3-4 cr)

Select one:

- __CSC 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):

- __PHY _____ (300+ level)
- __PHY _____ (300+ level)
- __PHY _____ (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)

- __CHM 122 - Chemical Dynamics (3 cr)
- CHM 126 - Laboratory IIB (1 cr)
- __PHY 411 - Quantum II (3 cr)
- __PHY 421 - Electricity & Magnetism II (3 cr)
- __PHY 431 - Mechanics II (3 cr)
- __PHY _____ (300+ level)
- __PHY _____ (300+ level)
- __PHY _____ (300+ level)
- __PHY _____ (300+ level)

Select one:

- __PHY 397 - Intro to Research (3 cr) OR
- __PHY 389 - Research II (3 cr)

Computational Physics Concentration (25-26 cr)

- __MAT 318 - Elementary Linear Algebra (3 cr)
- __MAT 410 - Numerical Analysis (3 cr)
- __CSC 111 - Computer Science II (4 cr)
- __CMPE 322 - Microcontrollers & Interfaces (4 cr)
- __PHY 471 - Computational Physics (4 cr)
- __PHY _____ (300+ level)
- __PHY _____ (300+ level)

Select one:

- __CMPE 220 - Computer Organization (4 cr) OR
- __CSC 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 MAT 211 - Calculus I
 PHY 107 - Seminar for Physics Majors

Semester II MAT 212 - Calculus II
 PHY 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:

- __MAT 117 – Applied Statistics (3 cr) **
- __SOC 101 – Introduction to Sociology ** (3 cr)

Select one:

- __ECO 101 – Principles of Macroeconomics (3 cr) ** OR
- __ECO 102 – Principles of Microeconomics (3 cr) ** OR
- __ECO 113 – Principles of Economics (4 cr) **

Select one:

- __GEO 101 – World Geography (3 cr) ** OR
- __GEO 103 – Geography of the U.S. & Canada ** (3 cr)

Political Science Core (21 cr)

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

Experiential Learning (6 cr)

Select two:

- __PLS 251 – Introduction to Comparative Politics (3 cr)
- __PLS 252 – Costa Rica: Politics, Economy & Society (3 cr)
- __PLS 307 – Applied Research in Political Science (1-3 cr)
- __PLS 323 – Campaigns, Elections & Political Parties (3 cr)
- __PLS 333 – Applications in State & Local Public Policy (3 cr)
- __PLS 347 – Applied Diplomacy (3 cr)
- __PLS 348 – Applied Diplomacy (3 cr)
- __PLS 357 – Comparative Revolutions (3 cr)
- __PLS 358 – European Political Economy & Security (3 cr)
- __PLS 359 – European Political Integration & Identity (3 cr)
- __PLS 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:

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

Written Communication (3 cr):

Select at least one:

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

Problem Solving (3 cr):

Select at least one:

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

- __MAT 117 – Applied Statistics (3 cr) **
- __SOC 101 – Introduction to Sociology ** (3 cr)

Select one:

- __ECO 101 – Principles of Macroeconomics (3 cr) ** OR
- __ECO 102 – Principles of Microeconomics (3 cr) ** OR
- __ECO 113 – Principles of Economics (4 cr) **

Select one:

- __GEO 101 – World Geography (3 cr) ** OR
- __GEO 103 – Geography of the U.S. & Canada ** (3 cr)

Political Science Core (21 cr)

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

Experiential Learning (6 cr)

Select two:

- __PLS 252 – Costa Rica: Politics, Economy & Society (3 cr)
- __PLS 307 – Applied Research in Political Science (1-3 cr)
- __PLS 323 – Campaigns, Elections & Political Parties (3 cr)
- __PLS 333 – Applications in State & Local Public Policy (3 cr)
- __PLS 347 – Applied Diplomacy (3 cr)
- __PLS 348 – Applied Diplomacy (3 cr)
- __PLS 357 – Comparative Revolutions (3 cr)
- __PLS 358 – European Political Economy & Security (3 cr)
- __PLS 359 – European Political Integration & Identity (3 cr)
- __PLS 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:

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

Written Communication (3 cr):

Select at least one:

- __PLS 231 – State and Local Government (3 cr)
- __PLS 307 – Applied Research in Political Science (1-3 cr)

- __PLS 312 – The American Presidency (3 cr)
- __PLS 321 – Public Opinion and Political Media (3 cr)
- __PLS 322 – Interest Groups in American Society (3 cr)
- __PLS 324 – Women in American Politics (3 cr)
- __PLS 325 – African American Politics (3 cr)
- __PLS 341 – International Law & Organization (3 cr)
- __PLS 351 – European Politics (3 cr)
- __PLS 356 – Politics of Developing Regions (3 cr)
- __PLS 363 – American Political Thought (3 cr)
- __PLS 365 – The Federal System (3 cr)
- __PLS 366 – First Amendment Freedoms (3 cr)
- __PLS 367 – Criminal Law & Equal Protections (3 cr)
- __PLS 371 – Public Management (3 cr)
- __PLS 372 – Public Personnel Administration (3 cr)
- __PLS 381 – Principles of Labor Relations (3 cr)

Problem Solving (3 cr):

Select at least one:

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

International Concentration Electives (12 cr)

Select four:

- __PLS 252 – Costa Rica: Politics, Economy & Society (3 cr)
- __PLS 307 – Applied Research in Political Science (1-3 cr)
- __PLS 342 – American Foreign Policy (3 cr)
- __PLS 343 – Global Economic & Political Conflict (3 cr)
- __PLS 347 – Applied Diplomacy (3 cr)
- __PLS 348 – Applied Diplomacy (3 cr)
- __PLS 351 – European Politics (3 cr)
- __PLS 356 – Politics of Developing Regions (3 cr)
- __PLS 357 – Comparative Revolutions (3 cr)
- __PLS 358 – European Political Economy & Security (3 cr)
- __PLS 359 – European Political Integration & Identity (3 cr)
- __PLS 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)

__PSY 101 – General Psychology (3 cr) **

Psychology Core (27 cr)

Scientific Methods:

__PSY 105 – Research Design & Statistics I (3 cr)
__PSY 205 – Research Design & Statistics II (3 cr)
__PSY 301 – Experimental Psychology (3 cr)

Select one from each category below:

Developmental:

__PSY 265 – Childhood & Adolescence (3 cr) OR
__PSY 352 – Psychology of Adulthood & Aging (3 cr)

Social/Personality:

__PSY 240 – Psychology of Personality (3 cr) OR
__PSY 270 – Social Psychology (3 cr)

Abnormal:

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

Neuroscience:

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

Cognition/S&P:

__PSY 323 – Sensation and Perception (3 cr) OR
__PSY 325 – Psychology of Human Cognition (3 cr)

Learning/Behavioral:

__PSY 235 – Conditioning and Learning (3 cr) OR
__PSY 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:

__PSY 315 – Psych of Prejudice & Minority Experience (3 cr)
__PSY 350 – Psychology of Sustainability (3 cr)
__PSY 365 – Multicultural Psychology (3 cr)
__PSY 410 – Psychology and Women (3 cr)
__PSY 420 – Health Psychology (3 cr)
__PSY 470 – Forensic and Legal Psychology (3 cr)

Professional Development:

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

Psychology Capstone (3 cr)

Select one:

__PSY 374 or 375 – Advanced Research in Psychology (3 cr)
__PSY 379 – Capstone Seminar in Psychology (3 cr)

__PSY 385 – Internship in Psychology I (1-4 cr)
__PSY 386 – Internship in Psychology II (1-4 cr)
__PSY 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 PSY 101 – General Psychology
 PSY 105 – Research Design & Statistics I
Year II PSY 205 – Research Design & Statistics II
 Begin Foundation Courses
Year III PSY 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)

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

Public Service Electives (6 cr)

Select 2 of the following:

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

Political Science Elective (3 cr)

- PLS _____
- PLS _____ (300+ level)

Sociology Requirements (6 cr)

- SOC 101 – Introduction to Sociology (3 cr) **

Select one:

- SOC 241 – Contemporary Social Problems (3 cr)
- SOC 243 – Minority Groups (3 cr)
- SOC 258 – Women's Roles and Status (3 cr)
- SOC 346 – City and Community (3 cr)
- SOC 351 – Race Relations (3 cr)
- SOC 354 – Social Movements & Social Change (3 cr)
- SOC 363 – Population Problems (3 cr)
- SOC 365 – Elites in Society (3 cr)
- SOC 425 – Sociology of Law (3 cr)

Graduation Requirements: 120 cr

Free Electives ≈ 33 cr

GPA Needed to Declare: 2.0

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: PLS 100, PLS 201, PLS 231, PLS 271, PLS 300, and PLS 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)

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

Sociology Electives (15 cr)

- __SOC _____
- __SOC _____
- __SOC _____
- __SOC _____
- __SOC _____

Allied Fields Requirements (6-7 cr)

- __ANT 111 - Cultural Anthropology (3 cr) **
- OR
- __ANT 105 - Great Discoveries in Archeology (3 cr)
- AND
- __MAT 117A/B - Applied Statistics (3-4 cr) **

Possible special interest areas:

Cross Cultural Anthropology

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

Anthropology and Archaeology

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

Social Inequality & Diversity

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

Culture and Social Change

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

Gender, Sexuality & Family

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

Deviance

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

Disability, Aging & Health

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

Social Institutions/Organizations

- __SOC 257 - Family in Modern Society (3 cr)
- __SOC 275 - Sociology of Religion (3 cr)
- __SOC 346 - City & Community (3 cr)
- __SOC 369 - Medical Sociology (3 cr)
- __SOC 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 SOC 101 - Introduction to Sociology
 MAT 117A/B - Applied Statistics
 ANT 111 - Cultural Anthropology

Year II SOC 201 - Thinking Sociologically
 SOC 220 - Social Inequality

Year III SOC 380 - Classical Social Theory
 SOC 385 - Introduction to Social Research

Year IV SOC 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)

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

Computer Science (12 cr)

- __CSC 110 - Computer Science I (4 cr)
- __CSC 310 - Design & Analysis of Algorithms (4 cr)
- __CSC 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)

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

Natural Science (8 cr)

Select two:

- __BIO 161 - Prin. of Bio: Cell Str. and Funct. (4 cr) **
- OR
- __CHM 121 - Chemical Bonding (3 cr) **
- __CHM 125 - Lab IB-Stoichiometry & Reactions (1 cr)
- OR
- __PHY 205 - Intermediate Physics I (3 cr)
- __PHY 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:

- __BIO 161 - Prin. of Bio: Cell Str. and Funct. (4 cr) **
- __BIO 162 - Prin. of Bio: Organismal Diversity (4 cr) **
- __CHM 121 - Chemical Bonding (3 cr) ** AND
- __CHM 125 - Lab IB-Stoichiometry & Reactions (1 cr)
- __CHM 122 - Chemical Dynamics (3 cr) ** AND
- __CHM 126 - Lab IIB-Equilibrium & Instrumentation (1 cr)
- __PHY 205 - Intermediate Physics I (3 cr) AND
- __PHY 123 - Physics I Lab (1 cr) **
- __PHY 206 - Intermediate Physics II (3 cr) AND
- __PHY 125 - Physics II Lab (1 cr) **
- __MAT 219 - Data Science I (3 cr)
- __MAT 317 - Statistics I (4 cr)
- __MAT 318 - Elementary Linear Algebra (4 cr)
- __MAT 319 - Data Science II (3 cr)
- __MAT 320 - Intro to Abstract Algebra (3 cr)
- __MAT 326 - Mathematical Modeling (3 cr)
- __MAT 410 - Numerical Analysis (3 cr)
- __MAT 421 - Number Theory and Cryptography (3 cr)
- __MAT 450 - Combinatorics (3 cr)

Elective (4 cr)

- __CSC, CMPE, or SWE _____ (300+ level)
- __CSC, CMPE, or SWE _____ (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 CSC 110 Computer Science I and be at a minimum math placement level of 4.

HELPFUL HINTS FOR ADVISING:

Semester I SWE 100 - Intro to Software Engineering I (4 cr)
 MAT 211 - Calculus I (4 cr)

Semester II ENGR 120 - Programming (4 cr)
 MAT 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)

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

Spanish Electives (6 cr)

- __SPN _____ (300+ level)
- __SPN _____ (400 level)

Secondary Education Certification (33 cr)

- __TCH 207 - Organizational & Psych Foundations (3 cr)
- __TCH 251 - Elements of Middle Level Instruction (3 cr)
- __EEC 273 - Introduction to Exceptionalities (3 cr)
- __EEC 423 - Effective Instructional Strategies (3 cr)
- __EEC 483 - Assessing Children with Exceptionalities (3 cr)
- __EDU 426 - Methods of Teaching Foreign Languages (3 cr)
- __EDU 495 - Student Teaching & Practicum (12 cr)

Math requirement:

- __MAT _____ (except MAT 185) **
- __MAT _____ (except MAT 185) **

Literature requirement:

- __ENG 243, ENG 248, OR ENG 250 (3 cr) **

Environmental requirement:

- __ _____

Optional Translation Specialization

- __SPN 330 - Spanish for the Professions (3 cr)
- __SPN 420 - Theory and Practice of Translation (3 cr)
- __SPN 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)

- __ESS 108 - Introduction to Environmental Sustainability (3 cr) **
- OR
- __BIO 145 - Environmental Biology (3 cr)
- __GEO 427 - Sustainability (3 cr)

Concentration Core (9 cr)

- __GEO 202 - GIS I: Intro to GIS (3 cr)
- __GEO 329 - Economic Geography (3 cr)
- __GEO 391 - Geography Seminar (3 cr)

Sustainable Systems Requirements (9 cr)

Select three:

- __GEO 203 - Climate, Energy, & Sustainability (3 cr)
- __ESS 214 - Geology of National Parks (3 cr)
- __GEO 301 - Intro to Biogeography (3 cr)
- __ESS 404 - Applied Human-Climate Interactions (3 cr)
- __ESS 413 - Rock and Mineral Resources (3 cr)
- __ESS 442 - Environmental Geology (3 cr)
- __ESS 451 - Coastal Environmental Oceanography (3 cr)
- __GEO 406 - Sustainable Food Systems (3 cr)
- __GEO 444 - Environmental Land Use Planning (3 cr)
- __GEO 446 - Water Resources Management (3 cr)
- __GEO 450 - Geography-Geology Field Studies (1-3 cr)
Recommended

Human Sustainability Requirements (6 cr)

Select two:

- __GEO 140 - Human Geography (3 cr) **
- __GEO 244 - Land Use (3 cr)
- __GEO 310 - Transportation Geography (3 cr)
- __GEO 322 - Urban Geography (3 cr)

Technique Course Requirements (6 cr)

Select two:

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

Biology Requirements (6 cr)

- __BIO 162 - Principles of Bio: Organismal Diversity (4 cr) **

Select one:

- __BIO 205 - Marine Biology (3 cr)
- __BIO 208 - Field Biology (3 cr)
- __BIO 210 - Field Zoology (3 cr)
- __BIO 230 - Botany (3 cr)
- __BIO 242 - Ecology (3 cr) *Recommended*
- __BIO 245 - Marine Ecology (3 cr)
- __BIO 442 - Aquatic Ecology (3 cr)
- __BIO 444 - Conservation Biology (3 cr)

Psychology and Sociology Requirements (9 cr)

Select one:

- __PSY 101 - General Psychology (3 cr) ** OR
- __SOC 101 - Intro to Sociology (3 cr) **

Select two:

- __PSY 350 - Psych of Sustainability (3 cr) *Recommended*
- __SOC 265 - Global Society (3 cr)
- __SOC 346 - City and Community (3 cr)
- __SOC 354 - Social Movements and Social Change (3 cr)
- __SOC 363 - Population Problems (3 cr)
- __SOC 404 - Global Leadership for Global Society (3 cr)

Economics and Business Requirements (6 cr)

- __ECO 102 - Principles of Microeconomics (3 cr)

Select one:

- __ECO 345 - The Economics of Growth & Development (3 cr)
- __ECO 355 - Environmental Economics (3 cr) *Recommended*
- __MGT 447 - Business and Society (3 cr)
- __MIS 142 - Business Computer Systems (3 cr)
- __MIS 242 - Design & Development of User Info Syst. (3 cr)
- __SCM 420 - Global Logistics Systems (3 cr)

English, History, and Communication Requirements (6 cr)

Select two:

- __ENG 238 - Technical Writing (3 cr)
- __ENG 359 - Native American Literature (3 cr)
- __ENG 438 - Technical Professional Writing II (3 cr)
- __HCS 345 - Environmental Comm. (3 cr) *Recommended*
- __HIS 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.



JOHN L. GROVE COLLEGE OF BUSINESS

JOHN L. GROVE
COLLEGE OF BUSINESS

GROVE COLLEGE OF BUSINESS DEGREE PROGRAMS

B.S.B.A.

Accounting

Entrepreneurship

Finance

- Personal Financial Planning Management

Management

- Human Resource Management

- International Management

Management Information Systems

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 (A/B)
General Education Elective
Business Computer Systems*
Foundations of Business Administration (2cr.)*

Spring Semester

Human Comm Studies*
Historical Foundation of Global Cultures*
Applied Calculus I
General Education Elective*
Principles of Economics (4 crs.)*
or a General Education Elective

SOPHOMORE YEAR

Fall Semester

Fund. of Financial Accounting
Principles of Economics (4 crs.)
or a General Education Elective
American Legal Environment*
Principles of Marketing*
General Education Elective

Spring Semester

Managerial Accounting
Managerial Economics
Statistical Applications in Business*
General Education Elective
General Education Elective

JUNIOR YEAR

Fall Semester

Financial Management*
Organizational Behavior*
General Education Elective
Supply Chain Operations Mgt*
or Gen. Ed. Elec.
Major Course
or Gen. Ed. Elec.

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, MIS & PFP Majors)

Spring Semester

Strategic Management*
Major Course
Major Course
Free Elective/General Education Requirement
Free Elective

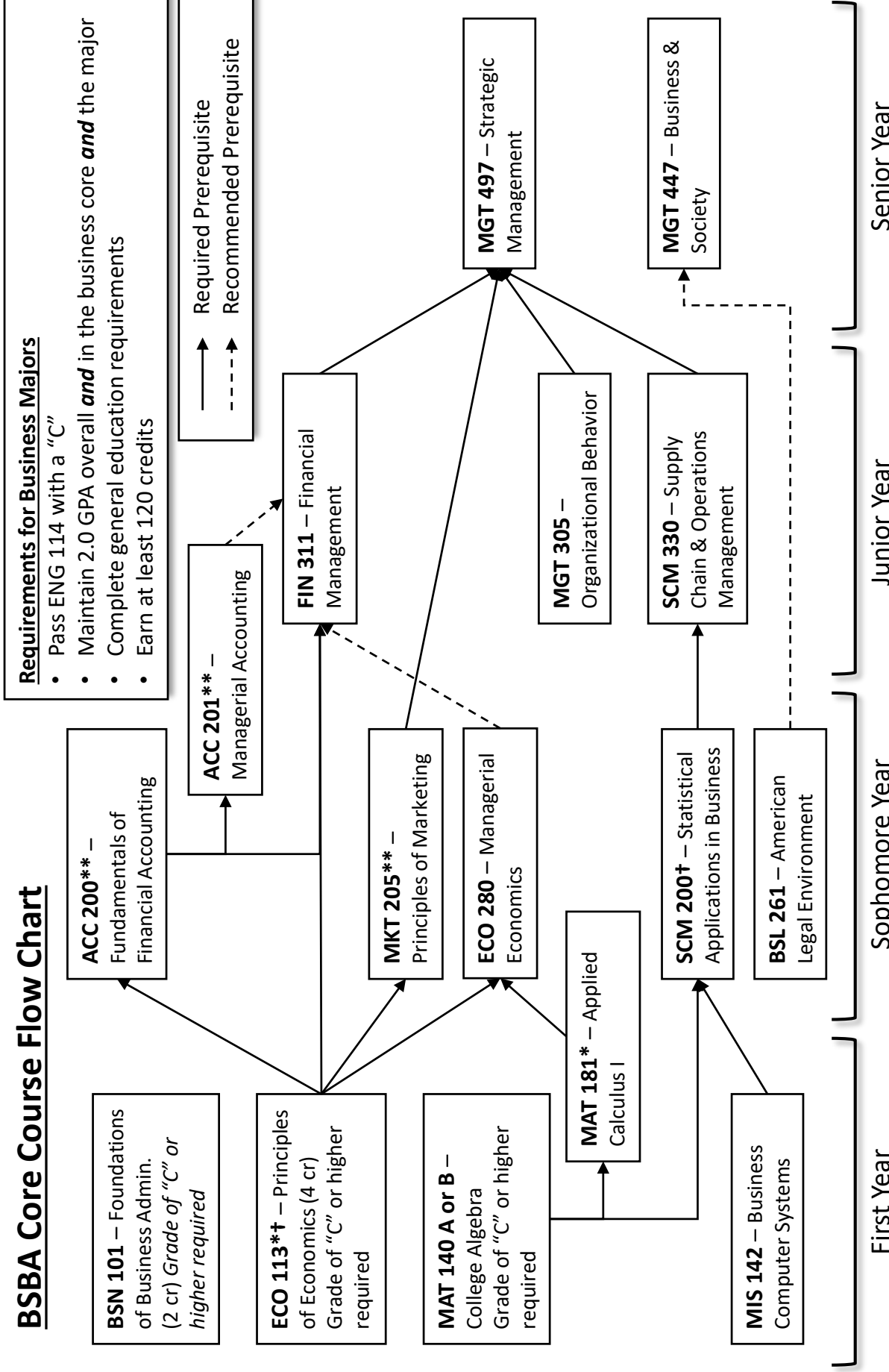
****These courses can be interchanged between semesters within the specified year.***

Courses in bold are part of the business core curriculum as shown in a prerequisite flow chart on the next page.

Please note that sequencing of courses may vary depending upon the specific requirements within a particular major. For example, Accounting, Management Information Systems, 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 ENG 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



* This course is a general education course that is required for the BSBA core.

† Both ECO 101 and ECO 102 must be completed with a "C" grade or higher to replace ECO 113. MAT 117B if taken at SHIP, before declaring as a business student will replace SCM 200.

** Accounting majors should take ACC 200 as first-semester sophomores and ACC 201 as second-semester sophomores. Accounting and Personal Financial Planning majors must earn a "C" grade or higher in ACC 200 and ACC 201. Marketing majors must earn a "C" grade or higher in MKT 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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr) **
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr) **
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr)
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 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 MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113, and completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

Accounting Core (18 cr)

- __ACC 306 – Tax Accounting (3 cr)
- __ACC 310 – Intermediate Accounting I (3 cr)
- __ACC 311 – Intermediate Accounting II (3 cr)
- __ACC 312 – Cost Determination and Analysis (3 cr)
- __ACC 404 – Auditing (3 cr)
- __MIS 300 – Info Technology & Business Operations (3 cr)
[Students who double major in ACC and MIS take MIS 355 instead of MIS 300]

Accounting Electives (3 cr)

Choose one:

- __ACC 401 – Advanced Accounting (3 cr) OR
- __ACC 406 – Advanced Tax Accounting (3 cr) OR
- __ACC 412 – Advanced Cost Analysis and Control (3 cr) OR
- __ACC 490 – Selected Topics in Accounting (3 cr)

Graduation Requirements: 120 cr

Free Electives ≈ 13 cr

GPA Needed to Declare: 2.0

Declare Accounting: Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. Freshmen must wait until the second semester to declare a Business major. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

F=Fall only

S=Spring only

HELPFUL HINTS FOR ADVISING:

Semester I	BSN 101 – Foundations of Business MAT 140 – College Algebra MIS 142 – Business Computer Systems
Semester II	MAT 181 – Applied Calculus I ECO 113 – Principles of Economics
Semester III	ACC 200 – Fundamentals of Accounting BSL 261 – American Legal Environment MKT 205 – Principles of Marketing
Semester IV	ACC 201 – Managerial Accounting ECO 280 – Managerial Economics SCM 200 – Statistical Applications

Notes: MAT 140 is recommended before taking ECO 113.

MIS 142 Business Computer Systems is a prerequisite for SCM 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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr)
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr) **
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr)
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 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 MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113. Completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

Entrepreneurship Requirements (15 cr)

- __ENT 336 – Product Design & Development (3 cr) ^F
- __ENT 337 – Issues in Entrepreneurship (3 cr) ^S
- __ENT 431 – Corporate Entrepreneurship (3 cr)
- __ENT 432 – Entrepreneurship (3 cr) ^S
- __ENT 433 – Small Business Management (3 cr) ^F

Marketing and Management elective (3 cr)

Select one:

- __MGT 340 – Human Resource Management
- __MGT 342 – Labor Relations & Collective Bargaining (3 cr)
- __MGT 370 – International Business (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __MGT 470 – International Management (3 cr)
- __MGT 490 – Selected Topics in Management (3 cr)
- __MGT 498 – Strategy Implementation (3 cr)
- __MKT 370 – Services Marketing (3 cr)
- __MKT 430 – Marketing Research (3 cr)

Graduation Requirements: 120 cr

Free Electives ≈ 16 cr

GPA Needed to Declare: 2.0

Declare Entrepreneurship: Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. Freshmen must wait until the second semester to declare a Business major. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

F=Fall only

S=Spring only

HELPFUL HINTS FOR ADVISING:

Semester I BSN 101 – Foundations of Business
 MAT 140 – College Algebra
 MIS 142 – Business Computer Systems

Semester II MAT 181 – Applied Calculus I
 ECO 113 – Principles of Economics
 MKT 205 – Principles of Marketing

Semester III ACC 200 – Fundamentals of Accounting
 BSL 261 – American Legal Environment

Semester IV ACC 201 – Managerial Accounting
 ECO 280 – Managerial Economics
 SCM 200 – Statistical Applications

Notes: MAT 140 is recommended before taking ECO 113.

MIS 142 – Business Computer Systems is a prerequisite for SCM 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.

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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr)
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr)**
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr)
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 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 MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113, and completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

Finance Concentration (21 cr)

- __FIN 312 – Investments (3 cr) ^F
- __FIN 313 – Advanced Financial Management (3 cr) ^S
- __FIN 314 – Financial Institutions (3 cr) ^F
- __FIN 333 – Applied Company & Security Analysis (3 cr) ^S

Select three of the following:

- __FIN 320 – Risk Management and Insurance (3 cr)
- __FIN 322 – Estate Planning (3 cr)
- __FIN 324 – Retirement Planning and Employee Benefits (3 cr)
- __FIN 340 – Principles of Real Estate (3 cr)
- __FIN 393 – Selected Topics in Finance (1-3 cr)
- __FIN 405 – Real Estate Appraisal & Investment Analysis (3 cr)
- __FIN 414 – Bank Management (3 cr)
- __FIN 421 – Personal Financial Planning (3 cr)
- __FIN 425 – Global Financial Management (3 cr)
- __FIN 434 – Investment Management Program (1-3 cr)
- __FIN 435 – Investment Management Program (1-3 cr)
- __FIN 442 – Derivatives Markets (3 cr)
- __FIN 490 – Selected Topics in Finance (1-3 cr)

Personal Financial Planning Concentration (21 cr)

- __FIN 312 – Investments (3 cr) ^F
- __FIN 320 – Risk Management & Insurance (3 cr) ^S
- __FIN 322 – Estate Planning (3 cr) ^F
- __FIN 324 – Retirement Planning & Employee Benefits (3 cr) ^S
- __FIN 333 – Applied Company & Security Analysis (3 cr) ^S
- __FIN 421 – Personal Financial Planning Capstone (3 cr) ^S

__ACC 306 – Tax Accounting (3 cr) ^S

Graduation Requirements: 120 cr

Free Electives ≈ 12 cr

GPA Needed to Declare: 2.0

Declare Finance: Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. Freshmen must wait until the second semester to declare a Business major. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

HELPFUL HINTS FOR ADVISING:

Semester I	BSN 101 – Foundations of Business MAT 140 – College Algebra MIS 142 – Business Computer Systems
Semester II	MAT 181 – Applied Calculus I ECO 113 – Principles of Economics
Semester III	ACC 200 – Fundamentals of Accounting BSL 261 – American Legal Environment MKT 205 – Principles of Marketing
Semester IV	ACC 201 – Managerial Accounting ECO 280 – Managerial Economics SCM 200 – Statistical Applications

Notes: MAT 140 is recommended before taking ECO 113.

MIS 142 – Business Computer Systems is a prerequisite for SCM 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.

Management – B.S.B.A.

Requirements for 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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr) **
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr) **
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr) **
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 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 MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113, and completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

Management Concentration (18 cr)

- __ENT 431 – Corporate Entrepreneurship (3 cr)
- __MGT 340 – Human Resources Management (3 cr)
- __MGT 370 – International Business (3 cr)
- __MGT 394 – Leadership & Decision-Making (3 cr)
- __MGT 498 – Strategy Implementation (3 cr)

Select one:

- __ENT 337 – Issues in Entrepreneurship (3 cr)
- __ENT 432 – Entrepreneurship (3 cr)
- __ENG 433 – Small Business Management (3 cr)
- __MGT 342 – Labor Relations & Collective Bargaining (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __MGT 470 – International Management (3 cr)
- __MGT 490 – Selected Topics in Management (3 cr)

International Management Concentration (30 cr)

- __MGT 340 – Human Resource Management (3 cr)
- __MGT 370 – International Business (3 cr)
- __MGT 470 – International Management (3 cr) ^F
- __MKT 360 – International Marketing (3 cr) ^F

Select two:

- __ANT 220 – Anthropology for International Studies (3 cr)
- __ECO 321 – International Economics (3 cr)
- __FIN 425 – Global Financial Management (3 cr)
- __GEO 101 – World Geography (3 cr) **
- __MGT 349 – International Human Resource Mgmt (3 cr)
- __MGT 380 or 381 – Global Bus Exploration I or II (3 cr)

- __MGT 491 – Selected Topics in Mgt (3 cr)
- __PLS 141 – World Politics (3 cr) **

Modern Language Requirements (12 cr)

- __FRN, SPN, GER _____ (103+ level)
- __FRN, SPN, GER _____ (103+ level)
- __FRN, SPN, GER _____ (103+ level)

Select one:

- __FRN 320 – French for the Professions (3 cr)
- __SPN 330 – Spanish for the Professions (3 cr)
- __GER 215 – German for the Professions (3 cr)

*Students must also pass ACTFL Oral Proficiency Interview at the intermediate level by mid-senior year. Language requirement does not include FRN 101, FRN 102, SPN 101, SPN 102, GER 101, GER 102, FRN 330, FRN 331, SPN 360, or SPN 361.

Human Resources Management Concentration (18 cr)

- __MGT 340 – Human Resources Management (3 cr)
- __MGT 342 – Labor Relations & Collective Bargaining (3 cr) ^F
- __MGT 346 – Human Resources Management Law (3 cr) ^S
- __MGT 348 – Compensation Administration (3 cr) ^S

Select two:

- __ENT 337 – Issues in Entrepreneurship (3 cr)
- __ENT 431 – Corporate Entrepreneurship (3 cr)
- __ENT 433 – Small Business Management (3 cr)
- __FIN 324 – Retirement Planning & Employee Benefits (3 cr)
- __MGT 349 – International Human Resource Mgmt (3 cr)
- __MGT 370 – International Business (3 cr)
- __MGT 394 – Leadership & Decision-Making (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __MIS 300 – Information Tech & Business Operations (3 cr)

Graduation Requirements: 120 cr

Free Electives ≈ 16 cr

GPA Needed to Declare: 2.0

Declare Management: Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. Freshmen must wait until the second semester to declare a Business major. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

F=Fall only S=Spring only

Notes: MAT 140 is recommended before taking ECO 113. MIS 142 Business Computer Systems is a prerequisite for SCM 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 MIS 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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr) **
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr) **
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr) **
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 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 MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113, and completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

Management Information Systems Requirements (21 cr)

- __MIS 240 – Introduction to Programming Concepts (3 cr) ^F
- __MIS 340 – Business Programming (3 cr) ^S
- __MIS 344 – Business Systems Analysis and Design (3 cr) ^F
- __MIS 355 – Database Applications (3 cr) ^F
- __MIS 420 – Telecomm & Distributed Processing (3 cr) ^S
- __MIS 446 – Applied Project Management (3 cr) ^S

Select one:

- __MIS 242 – Design & Development of User Info Syst. (3 cr) ^S
- __MIS 399 – Introduction to Corporate Cybersecurity (3 cr) ^F
- __MIS 442 – Electronic Commerce & Tech Integration (3 cr) ^S

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

Declare MIS: Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. Freshmen must wait until the second semester to declare a Business major. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

F=Fall only
S=Spring only

HELPFUL HINTS FOR ADVISING:

Semester I BSN 101 – Foundations of Business
 MAT 140 – College Algebra
 MIS 142 – Business Computer Systems

Semester II MAT 181 – Applied Calculus I
 ECO 113 – Principles of Economics

Semester III ACC 200 – Fundamentals of Accounting
 BSL 261 – American Legal Environment
 MKT 205 – Principles of Marketing

Semester IV ACC 201 – Managerial Accounting
 ECO 280 – Managerial Economics
 SCM 200 – Statistical Applications

Notes: MAT 140 is recommended before taking ECO 113.

MIS 142 Business Computer Systems is a prerequisite for SCM 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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr) **
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr) **
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr) **
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 330 – Supply Chain & Operations Management (3 cr)

Marketing Management Concentration (21 cr)

- __MKT 206 – Buyer Behavior (3 cr)^S
- __MKT 325 – Advertising and Promotional Strategy (3 cr)^F
- __MKT 360 – International Marketing (3 cr)^F
- __MKT 370 – Services Marketing (3 cr)^S
- __MKT 430 – Marketing Research (3 cr)^F
- __MKT 495 – Marketing Management (3 cr) ^S

Select one:

- __MKT 335 – Digital Marketing (3 cr)^F
- __MKT 345 – Social Media Marketing (3 cr)^S
- __MKT 352 – Principles of Retailing (3 cr)
- __MKT 365 – Relationship Marketing (3 cr)
- __MKT 380 – Sports Marketing (3 cr)
- __MKT 390 – Selected Topics in Marketing Credits: (3 cr)
- __MKT 490 – Selected Topics in Marketing Credits: (3 cr)
- __ENT 337 – Issues in Entrepreneurship (3 cr)
- __ENT 433 – Small Business Management (3 cr)
- __MIS 300 – Information Tech. And Business Operations (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __FIN 340 – Principles of Real Estate (3 cr)

Digital Marketing and Analytics Concentration (21 cr)

- __MKT 206 – Buyer Behavior (3 cr)^S
- __MKT 330 – Marketing Analysis I (3 cr)^F
- __MKT 335 – Digital Marketing (3 cr)^F
- __MKT 345 – Social Media Marketing (3 cr)^S
- __MKT 430 – Marketing Research (3 cr)^F
- __MKT 495 – Marketing Management (3 cr) ^S

Select one:

- __MKT 325 – Advertising and Promotional Strategy (3 cr)^F
- __MKT 352 – Principles of Retailing (3 cr)
- __MKT 360 – International Marketing (3 cr)^F
- __MKT 365 – Relationship Marketing (3 cr)
- __MKT 370 – Services Marketing (3 cr)^S
- __MKT 380 – Sports Marketing (3 cr)

- __MKT 390 – Selected Topics in Marketing Credits: (3 cr)
- __MKT 490 – Selected Topics in Marketing Credits: (3 cr)
- __ENT 337 – Issues in Entrepreneurship (3 cr)
- __MIS 240 – Introduction to Programming Concepts (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __SCN 380 – Data Mining for Supply Chain Management (3 cr)

Graduation Requirements: 120 cr

Free Electives ≈ 12 cr

GPA Needed to Declare: 2.0

Declare Marketing: Students must have a 2.0 cumulative grade point average at Shippensburg University to declare a B.S.B.A. concentration. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

Mathematical Competency: Students who place at the advanced level in the mathematics placement/competency test are not required to take MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113, and completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

F=Fall only

S=Spring only

HELPFUL HINTS FOR ADVISING:

Semester I BSN 101 – Foundations of Business
 MAT 140 – College Algebra
 MIS 142 – Business Computer Systems

Semester II MAT 181 – Applied Calculus I
 ECO 113 – Principles of Economics

Semester III MKT 205 – Principles of Marketing
 ACC 200 – Fundamentals of Accounting
 BSL 261 – American Legal Environment

Semester IV MKT 206 – Consumer Behavior
 ACC 201 – Managerial Accounting
 ECO 280 – Managerial Economics
 SCM 200 – Statistical Applications

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)

- __MAT 140A or MAT 140B – College Algebra (3-4 cr) **
- __MAT 181 – Applied Calculus (3 cr) **
- __ACC 200 – Fundamentals of Financial Accounting (3 cr)
- __ACC 201 – Managerial Accounting (3 cr)
- __BSL 261 – American Legal Environment (3 cr)
- __BSN 101 – Foundations of Business Administration (2 cr)
- __ECO 113 – Principles of Economics (4 cr) **
- __ECO 280 – Managerial Economics (3 cr)
- __FIN 311 – Financial Management (3 cr)
- __MGT 305 – Organizational Behavior (3 cr) **
- __MGT 447 – Business and Society (3 cr)
- __MGT 497 – Strategic Management (3 cr)
- __MIS 142 – Business Computer Systems (3 cr)
- __MKT 205 – Principles of Marketing (3 cr)
- __SCM 200 – Statistical Applications in Business (3 cr)
- __SCM 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 MAT 140A/B.

Substitutions: Completion of ECO 101 & ECO 102 will satisfy the requirement for ECO 113, and completion of MAT 117A/B if taken at Shippensburg University will satisfy the requirement for SCM 200.

Supply Chain Management Concentration (18 cr)

- __SCM 315 – Strategic Procurement (3 cr)
- __SCM 355 – Managing Quality & Improvement (3 cr)
- __SCM 370 – Integrated Supply Chain Systems (3 cr)
- __SCM 380 – Data Mining for Supply Chain Mgmt (3 cr)
- __SCM 420 – Global Logistics Systems (3 cr)

Select one:

- __ACC 312 – Cost Determination and Analysis (3 cr)
- __ECO 355 – Environmental Economics (3 cr)
- __FIN 320 – Risk Management and Insurance (3 cr)
- __FIN 340 – Principles of Real Estate (3 cr)
- __FIN 405 – Real Estate Appraisal & Investment (3 cr)
- __GEO 202 – GIS I: Intro to Geographic Info Systems (3 cr)
- __MGT 340 – Human Resource Management (3 cr)
- __MGT 342 – Labor Relations and Collective Bargaining (3 cr)
- __MGT 370 – International Business (3 cr)
- __MGT 394 – Leadership and Decision-Making (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __MIS 240 – Introduction to Programming Concepts (3 cr)
- __MIS 242 – Design & Development User Info Systems (3 cr)
- __MIS 300 – Info Technology & Business Operations (3 cr)
- __MIS 446 – Applied Project Management (3 cr)
- __MKT 310 – Personal Selling (3 cr)
- __MKT 342 – B2B Marketing & Analysis (3 cr)
- __MKT 365 – Relationship Marketing (3 cr)
- __MKT 370 – Services Marketing (3 cr)
- __SCM 390 – Strategic Warehouse Management (3 cr)

__SCM 410 – Distribution Systems in Supply Chains (3 cr)

Logistics Management Concentration (18 cr)

- __SCM 370 – Integrated Supply Chain Systems (3 cr)
- __SCM 390 – Strategic Warehouse Management (3 cr)^S
- __SCM 410 – Distribution Systems in Supply Chains (3 cr)^S
- __SCM 420 – Global Logistics Systems (3 cr)

Select two:

- __ACC 312 – Cost Determination and Analysis (3 cr)
- __ECO 355 – Environmental Economics (3 cr)
- __FIN 320 – Risk Management and Insurance (3 cr)
- __FIN 340 – Principles of Real Estate (3 cr)
- __FIN 405 – Real Estate Appraisal & Investment (3 cr)
- __GEO 202 – GIS I: Intro to Geographic Info Systems (3 cr)
- __MGT 340 – Human Resource Management (3 cr)
- __MGT 342 – Labor Relations & Collective Bargaining (3 cr)
- __MGT 370 – International Business (3 cr)
- __MGT 394 – Leadership & Decision-Making (3 cr)
- __MGT 450 – Negotiation (3 cr)
- __MIS 240 – Introduction to Programming Concepts (3 cr)
- __MIS 242 – Design & Development User Info Systems (3 cr)
- __MIS 300 – Info Technology & Business Operations (3 cr)
- __MIS 446 – Applied Project Management (3 cr)
- __MKT 310 – Personal Selling (3 cr)
- __MKT 342 – B2B Marketing & Analysis (3 cr)
- __MKT 365 – Relationship Marketing (3 cr)
- __MKT 370 – Services Marketing (3 cr)
- __SCM 315 – Strategic Procurement (3 cr)
- __SCM 355 – Managing Quality & Improvement (3 cr)
- __SCM 380 – Data Mining for Supply Chain Mgmt (3 cr)

Graduation Requirements: 120 cr

Free Electives ≈ 16 cr

GPA Needed to Declare: 2.0

Declare Supply Chain Management: Students must have a 2.0 cumulative grade point average in all of the 100/200 level business core courses they have completed. Freshmen must wait until the second semester to declare a Business major. EXCEPTION: Those students with MSAT of 605+ or those testing at the advanced level in mathematics on the placement test.

F=Fall only S=Spring only

Notes: MAT 140 is recommended before taking ECO 113.

MIS 142 Business Computer Systems is a prerequisite for SCM 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**

SHIPPEN
HALL

1962

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 qualifying 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 examine 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.

Last Name

First Name

SU#

Local Address

SU GPA

Local Address (City, State, Zip)

Current Major

Local Phone Number

Proposed Major

If Mid-Level, Proposed Concentration

Email Address

Credits (as of date submitted)

Date Application Submitted

Current Advisor

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 477-1487 if you have questions regarding secondary education programs.

Criminal Justice – B.S.

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)

- PLS 100 – U.S. Government & Politics (3 cr) **
- PSY 101 – General Psychology (3 cr) **
- SOC 101 – Introduction to Sociology (3 cr) **

Required Core (21 cr)

- CRJ 100 – Intro to Criminal Justice (3 cr)
- CRJ 221 – Policing a Democracy (3 cr)
- CRJ 241 – Survey of Corrections (3 cr)
- CRJ 261 – Criminal Law & Procedures (3 cr)
- CRJ 309 – Theories of Crime & Crime Control (3 cr)
- CRJ 310 – Research Methods (3 cr)
- CRJ 452 – Race, Ethnicity & Crime (3 cr)

Capstone Course (3 cr)

- CRJ 454 – Policy, Professionalism, and Ethics (3 cr)

Criminal Justice Electives (21 cr)

Select 7 of the following:

- CRJ 321 – Criminal Investigation (3 cr)
- CRJ 326 – Victimology: The Victim and the Law (3 cr)
- CRJ 336 – Introduction to Forensic Science (3 cr)
- CRJ 342 – Crime Prevention (3 cr)
- CRJ 345 – Organization & Mgmt of CRJ Agencies (3 cr)
- CRJ 351 – Juvenile Justice (3 cr)
- CRJ 356 – Organized Crime (3 cr)
- CRJ 363 – Intimate Partner Violence (3 cr)
- CRJ 365 – White Collar Crime (3 cr)
- CRJ 370 – Mock Trial (3 cr)
- CRJ 377 – Hate Crime (3 cr)
- CRJ 381 – Mental Health and the Criminal Justice System (3 cr)
- CRJ 396 – Selected Topics in Criminal Justice (3 cr)
- CRJ 397 – Selected Topics in Criminal Justice (3 cr)
- CRJ 398 – Selected Topics in Victimology (3 cr)
- CRJ 411 – Terrorism (3 cr)
- CRJ 433 – Evidence Law (3 cr)
- CRJ 440 – Community Corrections (3 cr)
- CRJ 456 – Forensic Science: Evidence Analysis (3 cr)
- CRJ 461 – Social Construction of Homicide (3 cr)
- CRJ 463 – Comparative Criminal Justice (3 cr)
- CRJ 464 – Popular Culture, Crime and Justice (3 cr)
- CRJ 466 – Women and Criminal Justice (3 cr)
- CRJ 469 – Victim Treatment and Services (3 cr)
- CRJ 471 – Internship in Criminal Justice I (3 cr)
- CRJ 472 – Internship in Criminal Justice II (3 cr)
- CRJ 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)
- _____ (at least 200 level)

Graduation Requirements: 120 cr

Free Electives ≈ 15 cr

GPA Needed to Declare: 2.6

Criminal Justice majors are limited to 45 credits of CRJ courses. CRJ 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.

Early Childhood/Elementary Education: PK-4 – B.S.Ed.

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)

- MAT 110 - Fundamentals of Math I (3 cr) **
- MAT 111 - Fundamentals of Math II (3 cr)

Professional Core (60 cr)

- ECH 210 - The Early Childhood Profession (3 cr)
- ECO 220 - Developmental Sci: Physical, Motor, Health(3 cr)
- ECH 260 - Developmental Sci: Cognitive & Language (3 cr)
- ECH 320 - Developmental Sci: Social & Emotional (3 cr)
- ECH 333 - Social Studies Methods for PK-4th Grade (3 cr)
- ECH 343 - Mathematics Methods I for Pre-K & K (3 cr)
- ECH 370 - Assessing Young Children (3 cr)
- ECH 373 - Science and Technology Methods in PK-4 (3 cr)
- ECH 393 - Mathematics Methods II, Grades 2-4 (2 cr)
- ECH 394 - Technology Instruction (1 cr)
- ECH 415 - Professional Practicum in PK-4 (3 cr)
- ECH 440 - Building Family & Community Partner (3 cr)
- ECH 453 - Integrated Curriculum Pre K-4 (3 cr)
- ECH 480 - Early Childhood Professional Seminar (3 cr)
- EEC 273 - Introduction to Exceptionalities (3 cr)
- EEC 423 - Effective Instructional Strategies (3 cr)
- EEC 483 - Assessing Children with Exceptionalities (3 cr)
- RDG 323 - Processes of Word/Text/Comprehension (3 cr)
- RDG 363 - Reading and Writing in PK-4 (3 cr)
- RDG 383 - English Language Learners in PK-4 (2 cr)
- RDG 443 - Reading Measures & Interventions in PK-4 (4 cr)

Student Teaching (12 cr)

- ECH 489 - Early Childhood Student Teaching (12 cr)

Optional Reading Minor (15 cr)

- RDG 334 - Classroom Literacy Assessment (Winter Online)
- RDG 330 - Content Area Reading (Summer Online)
- RDG 345 - Teaching Language Arts (Summer F-to-F)
- RDG 340 - Seminar in Literacy Tutoring (Summer F-to-F)
- RDG 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.

Early Childhood & Special Education – B.S.Ed.

Requirements for Special Education & Early Childhood Education major ≈ 90 cr

Graduation Requirements: 135 cr
Free Electives ≈ 0 cr
GPA Needed to Declare: 3.0

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.**

Disclaimer: Courses may be subject to change.

Mathematics Requirement (6 cr)

- MAT 110 - Fundamentals of Math I (3 cr) **
- MAT 111 - Fundamentals of Math II (3 cr) **

Professional Core (75 cr)

- ECH 210 - The Early Childhood Profession (3 cr)
- ECH 280 - Physical, Language & Cognitive Develop. (3 cr)
- ECH 320 - Social & Emotional Basis (3 cr)
- ECH 333 - Social Studies Methods for PK-4th Grade (3 cr)
- ECH 370 - Assessing Young Children (3 cr)
- ECH 373 - Science and Technology Methods in PK-4 (3 cr)
- ECH 393 - Mathematics Methods II, Grades 2-4 (2 cr)
- ECH 394 - Technology Instruction (1 cr)
- ECH 415 - Professional Practicum in PK-4 (3 cr)
- ECH 440 - Building Family & Community Partner (3 cr)
- ECH 453 - Integrated Curriculum Pre K-4 (3 cr)
- ECH 480 - Early Childhood Professional Seminar (3 cr)
- EEC 273 - Introduction to Exceptionalities (3 cr)
- EEC 280 - Best Practices in Collaboration (3 cr)
- EEC 320 - Interventions for Comm. Impairments (3 cr)
- EEC 325 - Interventions for Social/Emotional (3 cr)
- EEC 330 - Teaching Students with Exceptionalities (3 cr)
- EEC 335 - Interventions for Cognitive and/or Physical (3 cr)
- EEC 423 - Effective Instructional Strategies (3 cr)
- EEC 447 - Special Education Processes (3 cr)
- EEC 483 - Assessing Children with Exceptionalities (3 cr)
- RDG 323 - Processes of Word/Text/Comprehension (3 cr)
- RDG 363 - Reading and Writing in PK-4 (3 cr)
- RDG 383 - English Language Learners in PK-4 (2 cr)
- RDG 443 - Reading Measures & Interventions in PK-4 (4 cr)

Student Teaching (12 cr)

- ESC 489 - Student Teaching & Practicum (12 cr)

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)

PSY 101 - General Psychology (3 cr) **

Mathematics Requirements (9 cr)

MAT 205 - Conceptual Mathematics for Middle-Level (3 cr)

MAT 140 A or B - College Algebra (3 cr) **

Select one:

MAT 117 - Applied Stats (3 cr) [math placement 2-4] ** OR

MAT 217 - Statistics I (3 cr) [math placement 5-6] **

Professional Core (36 cr)

TCH 206 - Social Foundations of Middle Level Ed (3 cr)

TCH 261 - Adolescent Development & Learning (3 cr)

EEC 483 - Assessing Children with Exceptionalities (3 cr)

EEC 273 - Intro to Exceptionalities (3 cr)

EEC 423 - Effective Instructional Strategies (3 cr)

RDG 232 - Reading in the Elementary School (3 cr)

RDG 329 - Reading in the Content Area (3 cr)

RDG 405 - Writing in Elementary Classrooms (3 cr)

TCH 251 - Elements of Middle Level Instruction (3 cr)

TCH 322 - Teaching Middle Level Language Arts (3 cr)

TCH 345 - Assessment & Evaluation (3 cr)

RDG 413 - Teaching Reading to ELL (3 cr)

Concentration Area (15 cr)

TCH 303 - Books and Materials (3 cr)

ENG 224 - Intro to Creative Writing (3 cr)

ENG 366 - History and Str of English Language (3 cr)

ENG 426 - Adolescent Literature (3 cr)

Select one:

ENG 234 - American Literature II (3 cr) OR

ENG 236 - British Literature I (3 cr) OR

ENG 237 - British Literature II (3 cr) OR

ENG 239 - Postcolonial Literature (3 cr) OR

ENG 240 - Global Literature (3 cr) OR

ENG 342 - Mythology (3 cr) OR

ENG 345 - Women's Literature (3 cr) OR

ENG 349 - Victorian Literature (3 cr) OR

ENG 358 - Ethnic Literature (3 cr) OR

ENG 359 - Native American Literature (3 cr) OR

ENG 362 - Disability in Literature (3 cr) OR

ENG 375 - African-American Literature (3 cr) OR

ENG 385 - Studies in Postcolonial Literature (3 cr)

Student Teaching Requirement (15 cr)

EDU 409 - Seminar Middle Lvl Student Teaching (3 cr)

EDU 495 - Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)

EEC 280 - Best Practices in Collaboration (3 cr)

EEC 320 - Interventions (3 cr)

EEC 325 - Interventions (3 cr)

EEC 330 - Teaching Students with Exceptionalities (3 cr)

EEC 335 - Interventions (3 cr)

EEC 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 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 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)

PSY 101 - General Psychology (3 cr) **

Mathematics Concentration (19-20 cr)

MAT 105 - Mathematics for Liberal Studies (3 cr)
 MAT 205 - Conceptual Mathematics for Middle-Level (3 cr)
 MAT 225 - Discrete Mathematics (4 cr) **

Select one:

MAT 181 - Applied Calculus (3 cr) ** OR
 MAT 175 - Pre-Calculus (3 cr) ** OR
 MAT 211 - Calculus I (4 cr) **

Select one:

MAT 333 - Geometry (3 cr) OR
 MAT 400 - History of Math (3 cr) OR
 MAT 317 - Statistics II (3 cr)

Select one:

MAT 117 - Applied Statistics (3 cr) ** OR
 MAT 217 - Statistics I (3 cr) **

Language Arts Concentration (12 cr)

ENG 250 - Literature and Society (3 cr) **
 TCH 303 - Books and Materials (3 cr)
 ENG 366 - History & Str. of English Language (3 cr)
 ENG 426 - Adolescent Literature (3 cr)

Professional Core (39 cr)

TCH 206 - Social Foundations of Middle Level Ed (3 cr)
 TCH 261 - Adolescent Development & Learning (3 cr)
 EEC 483 - Assessing Children with Exceptionalities (3 cr)
 EEC 273 - Intro to Exceptionalities (3 cr)
 EEC 423 - Effective Instructional Strategies (3 cr)
 RDG 232 - Reading in the Elementary School (3 cr)
 RDG 329 - Reading in the Content Area (3 cr)
 RDG 405 - Writing in Elementary Classrooms (3 cr)
 TCH 251 - Elements of Middle Level Instruction (3 cr)
 TCH 322 - Teaching Middle Level Language Arts (3 cr)
 TCH 342 - Teaching Middle Level Math (3 cr)
 TCH 345 - Assessment & Evaluation (3 cr)
 RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching Requirement (15 cr)

EDU 409 - Seminar Middle Level Student Teaching (3 cr)
 EDU 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, Math and Science Concentration, B.S.Ed.

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)

PSY 101 - General Psychology (3 cr) **

Mathematics Concentration (19-20 cr)

MAT 105 - Mathematics for Liberal Studies (3 cr)
 MAT 205 - Conceptual Mathematics for Middle-Level (3 cr)
 MAT 225 - Discrete Math (4 cr) **

Select one:

MAT 181 - Applied Calculus (3 cr) ** OR
 MAT 175 - Pre-Calculus (3 cr) ** OR
 MAT 211 - Calculus I (4 cr) **

Select one:

MAT 333 - Geometry (3 cr) OR
 MAT 400 - History of Math (3 cr) OR
 MAT 317 - Statistics II (3 cr)

Select one:

MAT 117 - Applied Statistics (3 cr) ** OR
 MAT 217 - Statistics I (3 cr) **

Science Concentration (20 cr)

CHM 105 - An Observational Approach (3 cr)
 ESS 110 - Intro to Geology (3 cr)
 PHY 121 - Physics I Lecture (3 cr) **
PHY 123 - Physics I Lab (1 cr)
 ESS 111 - Intro to Atmosphere (3 cr) **
 BIO 162 - Prin. of Bio: Organismal Diversity (4 cr) **

Select one:

BIO 100 - Basic Biology (3 cr) OR
 BIO 142 - Intro to Ecology (3 cr) OR
 BIO 145 - Environmental Biology (3 cr) OR
 ESS 210 - Physical Geology (3 cr)

Professional Core (27 cr)

TCH 206 - Social Foundations of Middle Level Ed (3 cr)
 TCH 261 - Adolescent Development & Learning (3 cr)
 EEC 483 - Assessing Children with Exceptionalities (3 cr)
 EEC 273 - Introduction to Exceptionalities (3 cr)
 EEC 423 - Effective Instructional Strategies (3 cr)
 RDG 232 - Reading in the Elementary School (3 cr)
 RDG 329 - Reading in the Content Area (3 cr)
 RDG 405 - Teaching Writing in 4-8 Classrooms (3 cr)
 TCH 345 - Assessment & Evaluation Strategies (3 cr)
 TCH 342 - Teaching Middle Level Math (3 cr)
 TCH 366 - Teaching Science at the Middle Level (3 cr)
 RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching (15 cr)

EDU 409 - Seminar Middle Level Student Teaching (3 cr)
 EDU 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)

PSY 101 - General Psychology (3 cr) **

Mathematics Concentration (19-20 cr)

MAT 105 - Mathematics for Liberal Studies (3 cr)
 MAT 205 - Conceptual Mathematics for Middle-Level (3 cr)
 MAT 225 - Discrete Mathematics (4 cr) **

Select one:

MAT 181 - Applied Calculus (3 cr) ** OR
 MAT 175 - Pre-Calculus (3 cr) ** OR
 MAT 211 - Calculus I (4 cr) **

Select one:

MAT 333 - Geometry (3 cr) OR
 MAT 400 - History of Math (3 cr) OR
 MAT 317 - Statistics II (3 cr)

Select one:

MAT 117 - Applied Statistics (3 cr) ** OR
 MAT 217 - Statistics I (3 cr) **

Social Studies Concentration (18 cr)

GEO 101 - World Geography (3 cr) **
 ECO 101 - Principles of Macroeconomics (3 cr) **
 PLS 100 - U.S. Government and Politics (3 cr) **
 GEO 140 - Cultural Geography (3 cr) **
 HIS 106 - Thinking Historically in a Global Age (3 cr) **

Select one:

ECO 345 - Economics of Growth & Development (3 cr)
 PLS 311 - Legislative Process (3 cr)
 PLS 312 The American Presidency (3 cr)
 PLS 313 - The Judicial Process (3 cr)
 PLS 342 - American Foreign Policy (3 cr)
 PLS 356 - Politics of Developing Regions (3 cr)
 HIS 201 - Early History of the US (3 cr)
 HIS 202 - Recent History of the US (3 cr)
 HIS 301 - The West in American History (3 cr)
 HIS 302 - American Economic History (3 cr)
 HIS 304 - American Diplomatic History (3 cr)
 HIS 305 - The Civil War (3 cr)
 HIS 306 - History of the South (3 cr)
 HIS 309 - History of the American Worker (3 cr)
 HIS 314 - Jacksonian America (3 cr)
 HIS 318 - History of US Women (3 cr)
 HIS 338 - Colonial America (3 cr)
 HIS 341 - African American History (3 cr)
 HIS 342 - US Immigration & Ethnicity (3 cr)
 HIS 345 - Military History of the US (3 cr)
 HIS 402 - Revolutionary America (3 cr)

HIS 413 - Pennsylvania History (3 cr)

Professional Core (39 cr)

TCH 206 - Social Foundations of Middle Level Ed (3 cr)
 TCH 261 - Adolescent Development & Learning (3 cr)
 EEC 483 - Assessing Children with Exceptionalities (3 cr)
 EEC 273 - Intro to Exceptionalities (3 cr)
 EEC 423 - Effective Instructional Strategies (3 cr)
 RDG 232 - Reading in the Elementary School (3 cr)
 RDG 329 - Reading in the Content Area (3 cr)
 RDG 405 - Writing in Elementary Classrooms (3 cr)
 TCH 251 - Elements of Middle Level Instruction (3 cr)
 TCH 342 - Teaching Middle Level Math (3 cr)
 TCH 345 - Assessment & Evaluation (3 cr)
 TCH 348 - Teaching Middle Level Social Studies (3 cr)
 RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching (15 cr)

EDU 409 - Seminar Middle Level Student Teaching (3 cr)
 EDU 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)

PSY 101 - General Psychology (3 cr) **

Mathematics Concentration (22-24 cr)

- MAT 105 - Mathematics for Liberal Studies (3 cr) **
- MAT 205 - Conceptual Mathematics for Middle-Level (3 cr)
- MAT 225 - Discrete Mathematics (4 cr) **
- MAT _____ (200+ level)

Select one:

MAT 181 - Applied Calculus (3 cr)

OR

MAT 175 - Pre-Calculus (3 cr)

OR

MAT 211 - Calculus I (4 cr)

Select one:

MAT 333 - Geometry (3 cr)

OR

MAT 400 - History of Math (3 cr)

OR

MAT 317 - Statistics II (3 cr)

Select one:

MAT 117 - Applied Statistics (3 cr) **

OR

MAT 217 - Statistics I (3 cr) **

Professional Core (36 cr)

- TCH 206 - Social Foundations of Middle Level Ed (3 cr)
- TCH 261 - Adolescent Development & Learning (3 cr)
- EEC 483 - Assessing Children with Exceptionalities (3 cr)
- EEC 273 - Intro to Exceptionalities (3 cr)
- EEC 423 - Effective Instructional Strategies (3 cr)
- RDG 232 - Reading in the Elementary School (3 cr)
- RDG 329 - Reading in the Content Area (3 cr)
- RDG 405 - Writing in Elementary Classrooms (3 cr)
- TCH 251 - Elements of Middle Level Instruction (3 cr)
- TCH 342 - Teaching Middle Level Math (3 cr)
- TCH 345 - Assessment & Evaluation (3 cr)
- RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching Requirement (15 cr)

- EDU 409 - Seminar Middle Level Student Teaching (3 cr)
- EDU 495 - Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)

- EEC 280 - Best Practices in Collaboration (3 cr)
- EEC 320 - Interventions (3 cr)
- EEC 325 - Interventions (3 cr)
- EEC 330 - Teaching Students with Exceptionalities (3 cr)
- EEC 335 - Interventions (3 cr)
- EEC 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.

Elementary/Middle Level Education: Grades 4-8, Science & Language Arts Concentration, B.S.Ed.

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)

PSY 101 - General Psychology (3 cr)**

Mathematics Requirements (10-11 cr)

MAT 205 - Concepts of Middle Level Math (3 cr)

MAT 225 - Discrete Mathematics (4 cr) **

Select one:

MAT 117 - Applied Statistics (3 cr) ** OR

MAT 217 - Statistics I (4 cr) **

Science Concentration (20 cr)

CHM 105 - An Observational Approach (3 cr)

ESS 110 - Intro to Geology (3 cr)

PHY 121 - Physics I Lecture (3 cr) **

PHY 123 - Physics I Lab (1 cr)

ESS 111 - Intro to Atmosphere (3 cr) **

BIO 162 - Prin. of Bio: Organismal Diversity (4 cr) **

Select one:

ESS 210 - Physical Geography (3 cr) OR

ESS 220 - Oceanography (3 cr) OR

ESS 355 - Meteorology (3 cr) OR

ESS 404 - Applied Meteorology & Climatology (3 cr)

Language Arts Concentration (12 cr)

ENG 250 - Literature and Society (3 cr) **

TCH 303 - Books and Materials (3 cr)

ENG 366 - History & Str. of English Language (3 cr)

ENG 426 - Adolescent Literature (3 cr)

Professional Core (27 cr)

TCH 206 - Social Foundations of Middle Level Ed (3 cr)

TCH 261 - Adolescent Development & Learning (3 cr)

EEC 483 - Assessing Children with Exceptionalities (3 cr)

EEC 273 - Introduction to Exceptionalities (3 cr)

EEC 423 - Effective Instructional Strategies (3 cr)

RDG 232 - Reading in the Elementary School (3 cr)

RDG 329 - Reading in the Content Area (3 cr)

RDG 405 - Teaching Writing in 4-8 Classrooms (3 cr)

TCH 322 - Teaching Middle Level Language Arts (3 cr)

TCH 351 - Elements of Middle Level Instruction (3 cr)

TCH 345 - Assessment & Evaluation (3 cr)

TCH 366 - Teaching Science at the Middle Level (3 cr)

RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching (15 cr)

EDU 409 - Seminar Middle Level Student Teaching (3 cr)

EDU 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)

__PSY 101 - General Psychology (3 cr)**

Mathematics Requirements (10 cr)

__MAT 205 - Conceptual Math for Middle-Level (3 cr)

__MAT 140A or B - College Algebra (3-4 cr)

Select one:

__MAT 117 - Applied Statistics (3 cr) ** OR

__MAT 217 - Statistics I (3 cr) **

Science Concentration (31 cr)

__ESS 110 - Intro to Geology (3 cr) **

__ESS 111 - Intro to Atmosphere (3 cr) **

__BIO 162 - Prin. of Biology: Cell Str. & Funct. (4 cr)

__CHM 105 - An Observational Approach (3 cr)

__PHY 121 - Physics I lecture (3 cr) **

PHY 123 - Physics I Lab (3 cr)

Select one:

__BIO 100 - Basic Biology (3 cr) OR

__BIO 142 - Intro to Ecology (3 cr) OR

__BIO 145 - Environmental Biology (3 cr) OR

__ESS 210 - Physical Geography (3 cr)

Social Studies Requirements (33 cr)

__HIS 105 - Foundations of Global Cultures (3 cr) **

__HIS 106 - Thinking Historically in a Global Age (3 cr) **

__ECO 101 - Principles of Macroeconomics (3 cr) **

__PLS 100 - US Government & Politics (3 cr) **

__GEO 140 - Human Geography (3 cr) **

__GEO 101 - World Geography (3 cr) **

__ECO 345 - Economics of Growth and Develop (3 cr)

Professional Core (36 cr)

__TCH 206 - Social Foundations of Middle Level Ed (3 cr)

__TCH 261 - Adolescent Development & Learning (3 cr)

__EEC 483 - Assessing Children with Exceptionalities (3 cr)

__EEC 273 - Introduction to Exceptionalities (3 cr)

__EEC 423 - Effective Instructional Strategies (3 cr)

__RDG 232 - Reading in the Elementary School (3 cr)

__RDG 329 - Reading in the Content Area (3 cr)

__RDG 405 - Teaching Writing in 4-8 Classrooms (3 cr)

__TCH 345 - Assessment & Evaluation Strategies (3 cr)

__TCH 348 - Teaching Middle Level Social Studies (3 cr)

__TCH 366 - Teaching Science at the Middle Level (3 cr)

__RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching Requirements (15 cr)

__EDU 409 - Seminar Middle Level Student Teaching (3 cr)

__EDU 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)

__PSY 101 - General Psychology (3 cr)**

Mathematics Requirements (10 cr)

__MAT 205 - Conceptual Mathematics for Middle-Level (3 cr)

__MAT 225 - Discrete Mathematics (4 cr) **

Select one:

__MAT 117 - Applied Statistics (3 cr) ** OR

__MAT 217 - Statistics I (3 cr) **

Science Concentration (31 cr)

__ESS 110 - Intro to Geology (3 cr) **

__ESS 111 - Intro to Atmosphere (3 cr) **

__BIO 208 - Field Biology (3 cr) **

__BIO 161 - Prin. of Biology: Organismal Diversity (4 cr)

__BIO 162 - Prin. of Biology: Cell Str. & Funct. (4 cr)

__CHM 105 - An Observational Approach (3 cr)

__PHY 121 - Physics I lecture (3 cr)

PHY 123 - Physics I Lab (3 cr)

Select one:

__CHM 121 - Chemical Bonding (3 cr) AND

CHM 125 - Chemical Bonding Lab (1 cr)

OR

__PHY 122 - Physics II Lecture (3 cr) AND

PHY 125 - Physics II Lab (1 cr)

Select one:

__ESS 210 - Physical Geography (3 cr) OR

__ESS 220 - Oceanography (3 cr) OR

__ESS 355 - Meteorology (3 cr) OR

__ESS 404 - Applied Meteorology & Climatology (3 cr)

Professional Core (36 cr)

__TCH 206 - Social Foundations of Middle Level Ed (3 cr)

__TCH 261 - Adolescent Development & Learning (3 cr)

__EEC 483 - Assessing Children with Exceptionalities (3 cr)

__EEC 273 - Introduction to Exceptionalities (3 cr)

__EEC 423 - Effective Instructional Strategies (3 cr)

__RDG 232 - Reading in the Elementary School (3 cr)

__RDG 329 - Reading in the Content Area (3 cr)

__RDG 405 - Teaching Writing in 4-8 Classrooms (3 cr)

__TCH 345 - Assessment & Evaluation Strategies (3 cr)

__TCH 251 - Elements of Middle Level Instruction (3 cr)

__TCH 366 - Teaching Science at the Middle Level (3 cr)

__RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching Requirements (15 cr)

__EDU 409 - Seminar Middle Level Student Teaching (3 cr)

__EDU 495 - Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)

__EEC 280 - Best Practices in Collaboration (3 cr)

__EEC 320 - Interventions (3 cr)

__EEC 325 - Interventions (3 cr)

__EEC 330 - Teaching Students with Exceptionalities (3 cr)

__EEC 335 - Interventions (3 cr)

__EEC 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)

PSY 101 - General Psychology (3 cr)**

Math Requirements (9-10 cr)

MAT 205 - Concepts of Middle Level Math (3 cr)

MAT 140 A/B - College Algebra (3-4 cr)

Select one:

MAT 117 - Applied Statistics (3 cr) ** OR

MAT 217 - Statistics I (4 cr) **

Social Studies Requirements (33 cr)

HIS 105 - Foundations of Global Cultures (3 cr) **

HIS 106 - Thinking Historically in a Global Age (3 cr) **

ECO 101 - Principles of Macroeconomics (3 cr) **

PLS 100 - US Government & Politics (3 cr) **

GEO 140 - Human Geography (3 cr) **

GEO 101 - World Geography (3 cr)

ECO 345 - Economics of Growth and Develop (3 cr)

Select one:

GEO 305 - Geography of Europe (3 cr) OR

GEO 308 - Geography of Latin America (3 cr) OR

GEO 313 - Geography of South & Southeast Asia (3 cr) OR

GEO 317 - Geography of East Asia (3 cr) OR

GEO 415 - Regional Geographic Studies (3 cr) OR

GEO 450 - Geography-Geology Field Studies (1-3 cr)

Select one:

HIS 201 - Early History of the U.S. (3 cr) OR

HIS 202 - Recent History of the U.S. (3 cr) OR

HIS 301 - The West in American History (3 cr) OR

HIS 302 - American Business History (3 cr) OR

HIS 304 - American Diplomatic History (3 cr) OR

HIS 305 - The Civil War Era (3 cr) OR

HIS 309 - History of the American Worker (3 cr) OR

HIS 314 - History of Jacksonian America (3 cr) OR

HIS 318 - History of U.S. Women (3 cr) OR

HIS 338 - Colonial America (3 cr) OR

HIS 341 - African-American History (3 cr) OR

HIS 342 - U.S. Immigration and Ethnicity (3 cr) OR

HIS 345 - Military History of the United States (3 cr) OR

HIS 402 - Revolutionary America (3 cr) OR

HIS 413 - Pennsylvania History (3 cr)

Select one:

PLS 311 - The Legislative Process (3 cr) OR

PLS 312 - The American Presidency (3 cr) OR

PLS 313 - The Judicial Process (3 cr) OR

PLS 342 - American Foreign Policy (3 cr) OR

PLS 356 - Politics of Developing Regions (3 cr)

Professional Core 36 cr)

TCH 206 - Social Foundations of Middle Level Ed (3 cr)

TCH 261 - Adolescent Development & Learning (3 cr)

EEC 483 - Assessing Children with Exceptionalities (3 cr)

EEC 273 - Intro to Exceptionalities (3 cr)

EEC 423 - Effective Instructional Strategies (3 cr)

RDG 232 - Reading in the Elementary School (3 cr)

RDG 329 - Reading in the Content Area (3 cr)

RDG 405 - Writing in Elementary Classrooms (3 cr)

TCH 251 - Elements of Middle Level Instruction (3 cr)

TCH 345 - Assessment & Evaluation (3 cr)

TCH 348 - Teaching Middle Level Social Studies (3 cr)

RDG 413 - Teaching Reading to ELL (3 cr)

Student Teaching Requirement (15 cr)

EDU 409 - Seminar Middle Lvl Student Teaching (3 cr)

EDU 495 - Student Teaching & Practicum (12 cr)

Optional Special Education Concentration (18 cr)

EEC 280 - Best Practices in Collaboration (3 cr)

EEC 320 - Interventions (3 cr)

EEC 325 - Interventions (3 cr)

EEC 330 - Teaching Students with Exceptionalities (3 cr)

EEC 335 - Interventions (3 cr)

EEC 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.

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)

- __ESC 150 - Introduction to Exercise Science (3 cr)
- __ESC 244 - Movement Science & Skill Analysis (3 cr)
- __ESC 260 - Principles of Nutrition (3 cr)
- __ESC 336 - Motor Behavior (3 cr)
- __ESC 340 - Prevention and Care of Athletic Injuries (3 cr)
- __ESC 352 - Psychology of Physical Activity (3 cr)
- __ESC 375 - Exercise Testing and Prescription (3 cr)
- __ESC 453 - Research Design & Statistics (4 cr)

Biology Requirements (8 cr)

- __BIO 237 - Human Anatomy & Physiology I (4 cr) ^F **
- __BIO 238 - Human Anatomy & Physiology II (4 cr) ^S

Chemistry Requirements (3-4 cr)

Select one:

- __CHM 103 - Chemistry: A Cultural Approach (3 cr) **
- OR
- __CHM 105 - Chemistry: An Observational Approach (3 cr) **
- OR
- __CHM 121 - Chemical Bonding (3 cr) ** AND
- CHM 125 - Lab IB-Stoichiometry & Reactions (1 cr)

Physics Requirements (3-4 cr)

Select one:

- __PHY 110 - Physics for Society (3 cr) **
- OR
- __PHY 121 - Intro Physics I-Lecture (3 cr) ^F ** AND
- PHY 123 - Physics I-Lab (1 cr) ^F

Math Requirement (3-4 cr)

Select one:

- __MAT 117A - Applied Statistics (3 cr) **
- OR
- __MAT 117B - Applied Statistics (3 cr) **
- OR
- __MAT 217 - Statistics I (4 cr) **

Psychology Requirement (3 cr)

- __PSY 101 - General Psychology (3 cr) **

Allied Health Pre-Professional Concentration (25 cr)

- __ESC 278 - Medical Terminology (3 cr)
- __ESC 321 - Exercise Physiology I (4 cr)
- __ESC 333 - Biomechanics (4 cr)
- __ESC 420 - Clinical Exercise Physiology (4 cr)
- __ESC 421 - Exercise Physiology II (4 cr)
- __ESC 395 - Internship (3-12 cr)

Select one:

- __ESC 207 - Stress Management (3 cr) OR
- __ESC 213 - Org & Admin Fit Sport Fac (3 cr) OR
- __ESC 325 - Sport Psychology (3 cr) OR
- __ESC 348 - Group Exercise Tech & Lead (3 cr) OR

- __ESC 350 - Nutrition Sport/Fit (3 cr) OR
- __ESC 360 - Sports Medicine (3 cr) OR
- __ESC 387 - Theory & Prac Power & Agility Tr (3 cr) OR
- __ESC 395 - Internship (3-12 cr) OR
- __ESC 425 - Ex Met & Wt Contr (3 cr) OR
- __ESC 452 - Psychology of Injury & Rehabilitation OR
- __ESC 475 - Ex Prescription for Special & Athletic Pop (3 cr)

Human Performance & Fitness Concentration (25 cr)

- __ESC 343 - Foundations of Ex Phys (4 cr)
- __ESC 348 - Group Exercise Tech & Lead (3 cr)
- __ESC 350 - Nutrition Sport/Fit (3 cr)
- __ESC 387 - Theory & Prac Power & Agility Tr (3 cr)
- __ESC 475 - Ex Prescription for Special & Athletic Pop (3 cr)
- __ESC 495 - Internship (3-12 cr)

Select two:

- __ESC 207 - Stress Management (3 cr) OR
- __ESC 213 - Org & Admin Fit Sport Fac (3 cr) OR
- __ESC 278 - Medical Terminology (3 cr) OR
- __ESC 325 - Sport Psychology (3 cr) OR
- __ESC 333 - Biomechanics (4 cr) OR
- __ESC 360 - Sports Medicine (3 cr) OR
- __ESC 425 - Ex Met & Wt Contr (3 cr) OR
- __ESC 452 - Psych of Injury & Rehab OR
- __ESC 495 - Internship (3-12 cr)

Pre-Athletic Training Concentration (3 + 2 Program)

Required courses:

- __ESC 278: Medical Terminology (3 cr)
- __ESC 333: Biomechanics (4 cr)
- __ESC 343: Foundations of Exercise Physiology (4 cr)

Required general education courses:

- __CHM 121: Chemical Bonding (3 cr)
- __PHY 121: Introductory Physics I (3 cr)

Elective options (10 credits - varies by graduate program):

- __BIO 161: Principles of Biology: Cell Structure & Function (4 cr)
- __BIO 162: Principles of Biology: Organismal Diversity (4 cr)
- __CHM 125: Laboratory IB - Stoichiometry and Reactions (1 cr)
- __PHY 123: Physics I Laboratory (1 cr)
- __ESC 200: Lifestyle Management (3 cr)
- __ESC 325: Sport Psychology (3 cr)
- __ESC 348: Group Exercise Techniques & Leadership (3 cr)
- __ESC 350: Nutrition for Sport & Fitness (3 cr)
- __ESC 360: Sports Medicine (3 cr)
- __ESC 387: Theory & Practice of Power & Agility Training (3 cr)
- __ESC 395: Internship (1 - 12 credits)
- __ESC 420: Clinical Exercise Physiology (4 cr)
- __ESC 425: Exercise Metabolism & Weight Control (3 cr)
- __ESC 452: Psychology of Injury & Rehabilitation (3 cr)
- __ESC 475: Exer. Prescription for Special & Athletic Populations (3 cr)
- __HCS 225: Communication and Sport (3 cr)
- __MAT 175: Pre-Calculus (3 cr)

(Continued on next page)

Optional Coaching minor (9 cr)

__ESC 220 - Fundamentals of Coaching (3 cr)

__ESC 325 - Sport Psychology (3 cr)

Select one:

__ESC 213 - Org & Admin Fit Sport Fac (3 cr) OR

__ESC 445 - Coaching Internship (3 cr) OR

__HCS 225 - Communication & Sport (3 cr) OR

__SOC 275 - Sociology of Sport & Leisure (3 cr)

Optional Power, Agility & Group Exercise Certificate *Allied Health and Pre-AT concentrations only* (6 cr)

__ESC 348 - Group Exercise Techniques & Leadership (3 cr)

__ESC 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 BIO 161, BIO 162, or BIO 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 BIO 161, BIO 162, or BIO 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)

- __SWK 102 – Social Work in Social Welfare (3 cr)
- __SWK 150 – Human Relations Lab (3 cr)
- __SWK 250 – Assessing Individuals in Social Enviro. (3 cr)
- __SWK 265 – Understanding Diversity for SW Practice (3 cr)
- __SWK 270 – Social Work Practice with Individuals (3 cr)
- __SWK 375 – Social Work Skills for Working w/ Groups (3 cr)
- __SWK 327 – Social Work Practice with Families (3 cr)
- __SWK 340 – Assessing Orgs. & Communities in Society (3 cr)
- __SWK 360 – Research Techniques for Social Workers (3 cr)
- __SWK 370 – SW Practice with Orgs. & Communities (3 cr)
- __SWK 420 – Gender Issues for Helping Professionals (3 cr)
- __SWK 450 – Social Welfare Policies and Services (3 cr)
- __SWK 388 – Preparation for Practicum (1 cr)
- __SWK 462 – Seminar in Social Work Methods (3 cr)
- __SWK 460 – Field Work in Social Work I (6 cr)
- __SWK 461 – Field Work in Social Work II (6 cr)

Social Work Electives (3 cr)

Select at least one:

- __SWK 262 – Introduction to Child Welfare Practice (3 cr)
- __SWK 347 – Behavioral Health (3 cr)
- __SWK 348 – Substance Abuse (3 cr)
- __SWK 351 – Aging (3 cr)
- __SWK 356 – Intellectual & Develop. Disabilities (3 cr)
- __SWK 357 – Health Care (3 cr)
- __SWK 358 – Schools (3 cr)
- __SWK 359 – Violence in Interpersonal Relationships (3 cr)
- __SWK 383 – Selected Topics in Social Welfare (1-3 cr)
- __SWK 490 – Selected Topics in Social Welfare (1-3 cr)

Allied Field Requirements (15-16 cr)

- __MAT 117A/B – Applied Statistics (3-4 cr) **
- __PSY 101 – General Psychology (3 cr) **
- __BIO 150 – Human Biology (3 cr) **
- __SOC 101 – Introduction to Sociology (3 cr) **
- __PLS 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 SWK 102 – Social Work in Social Welfare
 BIO 150 – Human Biology
 SOC 101 – Intro. to Soc.
 HIS 105 – Historical Foundations
 ENG 114 – Academic Writing

Semester II SWK 150 – Human Relations Lab
 PSY 101 – General Psych.
 HCS 100 – Human Comm.

Semester III SWK 250 – Assess. Ind.
 SWK 265 – Understanding Diversity
 PLS 100 – U. S. Government and Politics
 MAT 117 – Applied Statistics

Semester IV SWK 270 – SW Practice with Individuals
 SWK 360 – Research Techniques

Disclaimer: Courses may be subject to change.

A minor in Gerontology - 18 credits - is also available.

