Charting Your Academic Course

A Guidebook for Undergraduate Students

2015 - 2016
**Academic Calendar 2015 - 2016**

### Fall Semester 2015

- **New faculty orientation**
  - Mon-Tue  Aug 17-19
- **Faculty meetings**
  - Wed  Aug 19
- **New students arrive**
  - Thu  Aug 20
- **Fall welcome week**
  - Thu-Sun  Aug 20-23
- **Regular class schedule begins**
  - Mon  Aug 24
- **Labor Day, University closed**
  - Mon  Sept 7
- **Fall break begins, 4:00 p.m.**
  - Fri  Oct 9
- **Classes resume, 8:00 a.m.**
  - Wed  Oct 14
- **Thanksgiving break begins, 8:00 a.m.**
  - Wed  Nov 25
- **Classes resume, 8:00 a.m.**
  - Mon  Nov 30
- **Last day of classes**
  - Fri  Dec 4
- **Final exams**
  - Mon-Fri  Dec 7-11
- **Graduate Commencement**
  - Fri  Dec 11
- **Undergraduate Commencement**
  - Sat  Dec 12

*The fall semester has one less Monday day/evening class—made up at the discretion of faculty.*

### Approved Winter Term, 2015-16

- **Session opens**
  - Mon  Dec 14
- **Session ends**
  - Fri  Jan 15

### Spring Semester 2016

- **New students arrive**
  - Fri  Jan 15
- **New student orientation**
  - Fri-Sun  Jan 15-17
- **MLK Day, University Closed**
  - Mon  Jan 18
- **Regular class schedule begins**
  - Tue  Jan 19
- **Spring break begins, 4:00 p.m.**
  - Fri  Mar 4
- **Classes resume, 8:00 a.m.**
  - Mon  Mar 14
- **Last day of classes**
  - Fri  Apr 29
- **Final exams**
  - Mon-Fri  May 2-6
- **Graduate Commencement**
  - Fri  May 6
- **Undergraduate Commencement**
  - Sat  May 7

*The spring semester has one less Monday day/evening class—made up at the discretion of faculty.*

### Summer Term 3, 2016

- **Session opens**
  - Mon  May 16
- **Memorial Day, university closed**
  - Mon  May 30
- **Special make-up for Memorial Day**
  - Sat  Jun 4
- **Session ends**
  - Fri  Jun 24

### Summer Term 4, 2016

- **Session opens**
  - Mon  Jun 27
- **July 4th, university closed**
  - Sat  Jul 4
- **Special make-up for July 4th**
  - Sat  Jul 9
- **Session ends**
  - Fri  Aug 5
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I. Academic Policies & Procedures

“Education’s purpose is to replace an empty mind with an open one.” Malcom Forbes
Academic Policies and Procedures

Developmental Courses
Developmental courses do not meet the general education program requirements. They are considered additive credits and do not count toward graduation. The following courses are considered developmental:

- Basic Writing (ENG 050)
- Developmental Mathematics (MAT 050)
- College Reading & Study Skills (RDG 050)

For more information on Placement Testing and Developmental Courses, please see "Understanding Placement Testing", p.12.

First Day Attendance
Failure to attend the initial class session may result in a student being dropped from the course. 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 the intended absence to the instructor, 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 and your place in that class being given to another. 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 the Student Information System. Undeclared students should contact their dean’s office (Horton Hall 112, x1395).

Transfer Courses
If you want a course taken at another school to count towards your degree at Shippensburg University, you must obtain permission from the dean of your college before taking the course. Transfer course credit cannot be guaranteed for students who fail to communicate their intentions to their dean’s office to take the course.

Withdrawal from a Class
First-year students cannot adjust their schedules except through their dean’s office. The schedule adjustment period (at the beginning of the semester) lasts for approximately five (5) days. During this time, a student can withdraw from a course and there will be no record of this course on his/her transcript. Students may withdraw from a class through the tenth week of the semester by initiating a request through their academic dean. In this case, a “W” grade will appear on the transcript. However, withdrawals after the tenth week will result in an “F” grade recorded on the transcript. You should check with your advisor and the Financial Aid Office before withdrawing from a course. It is your responsibility to officially withdraw from any class into which you have been scheduled whether or not you have ever attended the class.

Minimum Academic Standards
You are expected to maintain satisfactory academic standing, which requires a cumulative QPA of 2.0 (“C”) or better in your total program of courses and a minimum of 2.0 (“C”) in the coursework of your major area of specialization. You cannot declare or change majors without at least a 2.0. To avoid dismissal, first-year students should maintain a minimum QPA of 2.0 or above.

Repeating Classes
Students who have “D” or “F” grades and who are on academic probation should repeat the courses with “F” grades as soon as possible. This is the fastest way for students to get off academic probation. Although the initial grade will continue to appear on the transcript, it will no longer be calculated into the grade point average. Per university policy, a “D” or “F” grade earned at Shippensburg University may not be made up or replaced by credits earned at another institution.

Shippensburg University policy allows a student to repeat (and replace) six grades with a newer grade; however, after this option is used six times, any subsequent repeats will include both grades in the grade point average. Always check with Financial Aid, a coach, or advisor before repeating a course.

How many courses do students take in the first year?
It is advisable that most first-year students take five courses (15 credits) each semester of their first year. There are times, however, when a student may be encouraged to take four courses (12 credits). Reduced loads may be desirable for students who participate in one or more sports, students on academic probation, students who have learning difficulties, or students who work. Students can schedule a maximum of 18 credits without incurring additional fees.

When do I register for classes?
Students register for classes at Orientation. For the first semester, students take general education courses necessary for graduation. After the first semester, students continue to register for their own classes via their student portal, once they have consulted with their academic advisors.
Quick Answers to Common Questions

What happens if a student carries only three courses (9 credits)?
A student who carries fewer than 12 credits is a part-time student. This part-time status could reduce the student's financial aid package because financial aid awards are based on an "assumed" full-time enrollment—12 or more credits. In addition, a student must pass 24 credits from one September to the next, attaining a grade point average of no less than 1.7 for first-year students and a 2.0 for sophomores and upperclassmen. The NCAA also follows these guidelines.

What happens if a student becomes ill and cannot complete the semester's coursework?
Students may request a medical withdrawal from the university with a "W" grade in their coursework, or they may request an "I" grade (incomplete). This request is made through the dean's office and is possible if 1) the student was enrolled in the university for the majority of the semester; and 2) the documentation of the medical condition warrants a medical withdrawal.

Is class attendance mandatory?
It depends. Students must understand the attendance policy of each of their instructors, every semester. Some professors don't take attendance and others deduct points for missed classes. Professors will often present material in class that won't be found in textbooks, and it's up to the student to obtain that information. There is a very high correlation between class attendance and academic success.

What if a student is 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. In addition, some professors deduct points for lateness. Good students come to class on time and well prepared.

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

Can students take courses at another university to improve their grade point average?
See Visiting Student Program (11-13 Catalog, pg 25)

No. Only credits, not grades, will be accepted from other institutions. Also, only courses in which a “C” grade or higher was earned will transfer. Approval for transfer credit should be obtained from the academic dean's office prior to enrolling for the course.

If a student gets a “D” or an “F” grade in a course at Shippensburg University, can he/she repeat it at another university?
“D” and “F” grades earned at Shippensburg must be repeated at Shippensburg.

Should students always repeat courses when they have earned “D” or “F” grades?
Not always. It depends on the student's major. However, it is strongly recommended that students who want to improve their grade point average should repeat the course 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 or your advisor before repeating courses.

Do students receive any recognition for outstanding academic performance?
Yes. 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 a student devote to study?
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.

How can students obtain academic advice?
Every student is assigned to an academic advisor either by the department of the student's major or, if the student is undeclared, by the Office of Undeclared Students. Students who do not know their assigned advisor should contact the appropriate department or the Office of Undeclared Students, or should access their myShip portal.
Answers to Questions (continued)

When are undeclared students required to declare a major?

Undeclared students must declare a major early in the third semester of their collegiate career. This will allow students to schedule courses in their majors for the second semester of their sophomore year.

What steps must a student follow to declare a major?

Declaring a major is a simple process. The student must follow these steps:

1. Student must be in good academic standing. In all cases, students need a minimum cumulative GPA of at least 2.0.
2. Student should talk with their advisors about their plans.
3. Students should verify transfer requirements for the major in the Guidebook for Advising Undergraduate Students.
4. If the selected major is among the list of high demand majors (biology, comm./journalism, psychology, and teacher education), students must apply to the department within the first three weeks of each semester. These majors have higher GPA standards. Some departments conduct pre-screenings. They may also require completion of certain courses before students will be considered and accepted as majors.

Please note, although these majors only accept students within the first three weeks of every semester, eligible students may declare other majors any time during the semester (except during registration).

If students meet the major requirements, they need to go to their dean's office to pick up a change of major form. The form should be taken to the department chairperson and new college dean for their signatures. Once signatures have been obtained, the form needs to be returned to the dean's office.

What are minors?

An academic minor is a structured group of courses that can enhance a student's 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.

Who is eligible for the Satisfactory/Unsatisfactory option?

Students who have completed thirty (30) or more credit hours with a minimum overall grade point average of 2.5 may schedule one course (three or four credits) per semester outside of the major or minor field of study under the Satisfactory/Unsatisfactory option. The maximum number of credits a student may schedule under the option is ten (10) credits. To apply for this option, an original copy of the student's class schedule must be presented to the Registrar's Office within the first two weeks of the semester.

Must I take a foreign language?

It depends. Only students who expect to graduate with a B.A. (Bachelor of Arts) degree need to complete three credits of a foreign language at the intermediate level (103 level). B.S. (Bachelor of Science), B.S.B.A. (Bachelor of Science in Business Administration), B.S.Ed. (Bachelor of Science in Education), and B.S.W. (Bachelor of Social Work) students do not need to take a foreign language.

Students who have completed three years of a single language in high school have satisfied the language requirement. You may take a foreign language course to fulfill a Category B Humanities requirement for general education.

Academic Dismissal

If you fail to meet the conditions of academic probation you are subject to dismissal. If your QPA beyond the first semester falls below 1.7, or if your semester QPA is below a 1.0, you are subject to immediate dismissal.
UNDERSTANDING PLACEMENT TESTING

Q. How do I know if I need to take placement testing?

A. Placement Testing is based on your SAT scores: Reading ≥ 425
   Math ≥ 535
   English ≥ 435

Reading:
I have a Verbal SAT score of ≥ 425. **You may require a developmental reading class (RDG 050).**

Q. Can I test out of remediation?

A. If you have a Verbal SAT score of ≥ 425, you will have the opportunity to take the Nelson Denny (ND) Reading Test

- A ND score of 12.0 or above, is passing, and you will not be required to take Developmental Reading (RDG 050).
- A ND score of below 12.0 will require placement into RDG 050
- You will automatically be placed into RDG 050 if you do not complete the ND.

You are encouraged to complete remedial courses prior to arriving at Shippensburg University; otherwise:

- You must take RDG 050 in your first semester at Ship.
- Your first semester schedule will be restricted to 12 credits total (including RDG 050).
- The developmental course will not count towards the credits required for graduation.
- You are not permitted to take HIS 105 or 106 until RDG 050 is successfully completed.

Math:

If you have a Math SAT score of ≥ 535: **You are required to take the Accuplacer Math Placement Test.**

If you have a Math SAT score between 535 and 605: **You automatically place into Level 4 Math.** Students in STEM, Business, and Mid-Education Majors are encouraged to complete the Optional Math Testing to advance their level.

If you have a Math SAT Math score above 605: **You will automatically place into Level 6 math.**

Q. So what Math Course Should I Take?

A. You should always check with your advisor before scheduling math courses, but the table, below, provides a guide.

<table>
<thead>
<tr>
<th>Result</th>
<th>Course</th>
<th>Calculus-Based Majors</th>
<th>All Other Majors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>• Developmental Math - MAT 050</td>
<td></td>
<td>Ask your advisor about the appropriate math course and when to schedule.</td>
</tr>
<tr>
<td></td>
<td>• Remediate prior to arrival at Shippensburg University.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Tutoring and Waiver Exam Option available</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• You will have the opportunity to bypass MAT 050 by taking and passing the final exam on the first day of class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The developmental course will not count towards the credits required for graduation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2</td>
<td>MAT 050</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 3</td>
<td>MAT 140A – College Algebra (4 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>MAT 140B – College Algebra (3 credits)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 5</td>
<td>Science majors: MAT 175 Pre-Calculus Business majors: MAT 181 Applied Calculus Check with your advisor to see if your major requires any further math courses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 6</td>
<td>Eligible to take MAT 211 Calculus I Check with your advisor to see if your major requires any further math courses.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE TO ADVISORS: If the Student’s Math Placement Math Level is 0, the student MUST complete math placement testing.
English:

I have a Writing SAT score of 445 or less. **You will be required to write a placement test essay on D2L.**

<table>
<thead>
<tr>
<th>Result</th>
<th>Course</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>ENG 050</td>
<td>• Basic Writing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• You will have the opportunity to bypass Basic Writing by submitting a portfolio of work for faculty review.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The developmental course will not count towards the credits required for graduation.</td>
</tr>
<tr>
<td>Level 2</td>
<td>ENG 106</td>
<td>Writing Intensive First-Year Seminar</td>
</tr>
<tr>
<td>Level 3</td>
<td>ENG 110</td>
<td>Advanced Placement Writing</td>
</tr>
</tbody>
</table>

Transfer Students:

Q. I am a transfer student. Do I need to complete placement testing?

A. **You will be contacted by the Placement Testing Office if testing is required**; however, as a guide, you will need to take placement tests in math and English under the following conditions:

   Your Math SAT scores are 535, or less, and your English SAT scores are 445, or less.
   Your SAT scores are **older than 2 years**.
   You are **not transferring in a math and/or English course**.
   You did **not successfully pass a math or English developmental course**.
   You do **not have a math or English course “pending” or in “process”**.

For further inquiries please visit: [www.ship.edu/testing](http://www.ship.edu/testing)
2015 – 2016 Mathematics Placement Information

<table>
<thead>
<tr>
<th>Scores</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuplacer</td>
<td>EA ≤ 39</td>
<td>40 ≤ EA ≤ 57</td>
<td>58 ≤ EA ≤ 80</td>
<td>EA ≥ 81 but CLM ≤ 64</td>
<td>65 ≤ CLM ≤ 84</td>
<td>CLM ≥ 85</td>
</tr>
<tr>
<td>SAT</td>
<td></td>
<td></td>
<td>535 ≤ SAT-M ≤ 605</td>
<td></td>
<td></td>
<td>SAT-M ≥ 610</td>
</tr>
<tr>
<td>Math Dept</td>
<td></td>
<td>28 ≤ MD ≤ 40</td>
<td>41 ≤ MD ≤ 54</td>
<td>55 ≤ MD ≤ 74</td>
<td>75 ≤ MD ≤ 80</td>
<td></td>
</tr>
</tbody>
</table>

First Available Math Course by Placement Level

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT050</td>
<td>MAT050</td>
<td>MAT140A</td>
<td>MAT140B</td>
<td>MAT181</td>
<td>MAT211</td>
</tr>
<tr>
<td>MAT117</td>
<td>MAT117</td>
<td>MAT117</td>
<td>MAT175</td>
<td>MAT181</td>
<td></td>
</tr>
<tr>
<td>MAT110</td>
<td>MAT110</td>
<td>MAT110</td>
<td>MAT140B</td>
<td>MAT175</td>
<td></td>
</tr>
<tr>
<td>MAT107</td>
<td>MAT107</td>
<td>MAT107</td>
<td>MAT117</td>
<td>MAT140B</td>
<td></td>
</tr>
<tr>
<td>MAT105</td>
<td>MAT105</td>
<td>MAT105</td>
<td>MAT110</td>
<td>MAT117</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAT107</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MAT105</td>
<td>MAT107</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>MAT105</td>
<td></td>
</tr>
</tbody>
</table>

• Students who eventually have to take a course in the calculus-intending sequence (MAT140AB / MAT175 / MAT181 / MAT211) need to get started with mathematics in the first possible semester.
• Students who are not required to take a course in the calculus-intending sequence should not take MAT050 in their first year. This is especially true of students who do not know what major they want to be.
• If a student is required to take a math class above their initial placement level, they will need to complete the prerequisite courses first. So for example, a Level 2 student who needs to take MAT 211 for their major will first need to complete, in order, MAT 050, MAT 140A and MAT 175.
• Incoming students who want their placement level to be higher can email mcmurphy@ship.edu for information on how to do this.
Modern Language Requirements for B.A. Degree Programs

Shippensburg University believes all students who major in a B.A. (Bachelor of Arts) degree should have some "Novice" foreign language background. This requirement can be satisfied by completing a language class at the 103 (intermediate) level or by completing three years of any one foreign language in high school.

Students who major in B.S.B.A. (business) degree programs, B.S.Ed. (education) degree programs, B.S. (Bachelor of Science) degree program, or B.S.W. (Social Work) degree programs are not required to complete the foreign language competency. Students are encouraged to use the following guidelines when considering study in a foreign language: Students with three or more years of a language, who want to take the same language as a General Education Category B course, will be placed at the 202/204 level, according to their number of high school years in one language.

 LANGUAGE PLACEMENT

Students with no previous knowledge of a foreign language must begin with the introductory level (101) and complete three courses in that language.

Students with one year of a language should be advised to take the 102 level of that language.

Students with two years of a language should be advised to take the 103 level of that language.

The Modern Languages Department has a placement plan designed for students who already have some knowledge of Spanish, French, or German and want to take upper-level courses or to receive credit by examination for certain courses. Please contact the department chair for placement in these courses.

A placement table for all languages is provided below:

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

If you have questions, please contact the chairperson of the Modern Language Department at (717) 477-1635.
Study Abroad at Shippensburg University

By Mary S. Burnett
Director of International Programs
Student Life Center - McLean Hall 113
(717) 477-1279

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, Costa Rica, England, France, Ireland, 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 Denmark, The Netherlands, Mexico, Korea or wherever 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.

When do students study abroad? Study abroad used to mean one semester during your junior year of college. Today, students can choose a timeframe 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 programs are also available. These programs can last for 3, 6 or even 9 weeks.

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.

How do I get started? Please call 477-1279 or stop by the International Programs Office in McLean Hall and schedule an appointment. Information is also online at www.ship.edu/international.

Think in terms of when, where, your budget, and your GPA. We will find programs and courses suitable to your needs. In this ever-changing, interdependent world, there is a growing need for future teachers, employees, and leaders to understand other peoples, languages, and cultures. Check out the challenge and adventure of studying abroad.
The University Honors Program

The University Honors Program involves students of all majors and at all class levels. To earn the University Honors Program designation with their degree, students complete at least 36 Honors credits, maintain a 3.25 QPA overall and in their Honors courses, and fulfill the program's participation requirement. The program's credit requirements may be prorated for students who enter the Honors Program after the first semester of their freshmen year. The 36 Honors credits are distributed as follows:

1. Eight Honors courses in General Education, 24 credits: Honors students are required to complete HON 106: Honors Writing Intensive First-Year Seminar (unless they have earned AP or transfer credit for the course) and at least 7 other Honors General Education courses. The Honors Program offers approximately 6-8 Honors courses in General Education each semester, representing a cross-section of the General Education requirements. Most Honors courses correspond to regularly offered General Education courses. For example, HON 122: Honors World History I is equivalent to HIS 105: Historical Foundation of Global Cultures. Some Honors courses may not correspond to regularly offered General Education courses, yet they can fill General Education requirements. Students usually complete most of their Honors courses in General Education during their freshman and sophomore years.

2. Three 300-level Honors seminars, 9 credits: Students may begin taking Honors seminars during their sophomore year. Honors seminars offerings include:
   a. Interdisciplinary seminars: These seminars focus on interdisciplinary explorations of specific topics, and they emphasize interdisciplinary analysis and problem-solving.
   b. Core seminars: Some core courses for business and education majors are regularly offered as Honors seminars, including EEC 273: Introduction to Exceptionalities and MGT 447: Business and Society.

Undergraduate research beyond the capstone project may be substituted for one or more Honors seminars.

3. One Honors capstone project, 3 credits: The University Honors Program's capstone project is a major independent research, creative, or service-learning project. Students usually complete the Honors capstone project and present the results of their project at the University Honors Symposium during their senior year. To mark their progress, students submit Honors capstone project forms, which are available on the Honors Program web site at http://www.ship.edu/honors. Options for completing the capstone include:
   a. HON 396: University Honors Colloquium: The University Honors Colloquium explores a theme, and students undertake a research and/or service-learning project on the theme.
   b. Independent research, creative, or service learning project: Students register for research or independent study credit and undertake a research, creative, or service-learning project under the direction of a faculty mentor.
   c. Internship with a related research project: Students register for internship credit, and their faculty supervisor oversees their research project.
   d. Student teaching experience with a related research project: Students register for student teaching credit, and their faculty supervisor oversees their research project.

For more information about the University Honors Program, please visit our website, www.ship.edu/honors, or contact the Director of the Honors Program, Dr. Kim Klein, at kmklei@ship.edu or 477-1604.
<table>
<thead>
<tr>
<th>Major</th>
<th>Required GPA</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Physics (Pre-engineering) B.S.</td>
<td>2.5</td>
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<tr>
<td>Art B.A. Education (K-12)</td>
<td>2.0</td>
<td>Students must complete a portfolio for presentation to the Department of Art and Design. Contact department for specifics.</td>
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<tr>
<td>Biology B.S.</td>
<td>2.5</td>
<td>Admission to this major is competitive and selective. Students must have earned at least 15 credits and have grades of ‘C’ or better in Principles of Biology I/II AND one of the following: Chemical Bonding OR successfully completed Pre-calculus or Calculus I with a ‘C’ or better. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.</td>
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<tr>
<td>Biology/Biotechnology/Pre-Forensic Sci. Biology/Clonal Sciences B.S. Biology/Health Professions B.S. Biology/Ecology and Environmental B.S.</td>
<td>2.5 2.5 2.8 2.5</td>
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<tr>
<td>Biology B.S. Secondary Education Certification</td>
<td>3.0</td>
<td>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 (BIO 115) AND Chemical Bonding (CHM121) OR successfully completed Pre-calculus (MAT 175) or higher math. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.</td>
</tr>
<tr>
<td>Business B.S.B.A. Accounting Finance Management General Management Human Resources Management International Management Marketing Supply Chain Operations &amp; Management</td>
<td>2.0</td>
<td>A grade of “C” or better in College Algebra and/or Applied Calculus is required. In addition, 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. EXCEPTION: Those students testing at the advanced level in math on the placement test. All Business programs require a grade of “C” or higher in Eng 101: College Writing or Eng 106: Writing Intensive First Year Seminar.</td>
</tr>
<tr>
<td>Chemistry B.S. Biochemistry B.S. Chemistry/Business B.S. Chemistry/Computational B.S. Chemistry/Pre-Pharmacy B.S. Chemistry/Forensic Science B.S.</td>
<td>2.0 2.0 2.0 2.0 2.8 2.5</td>
<td></td>
</tr>
<tr>
<td>Chemistry B.S. Secondary Education Certification</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Communication/Journalism B.A. Electronic Media Print Media Public Relations</td>
<td>2.3</td>
<td>As part of the COM 112: Media Writing course, a grammar/style proficiency exam is given to all students. This exam must be passed with a score of 70 or better to pass the course and stay in the major/minor. Students are permitted to take the exam no more than two times. This is NOT the same exam as the internal transfer entrance exam noted above. COM 112 must be taken at Shippensburg University.</td>
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<tr>
<td>Major</td>
<td>Required GPA</td>
<td>Comments</td>
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<tr>
<td>Computer Engineering B.S.</td>
<td>2.0</td>
<td>Students must also have completed CSC 110 Computer Science I (4 cr) with a grade of &quot;C&quot; or better. Students pursuing this major should have strong math skills.</td>
</tr>
<tr>
<td>Computer Science B.S.</td>
<td>2.0</td>
<td>Students must also have completed CSC 110 Computer Science I (4 cr) with a grade of &quot;C&quot; or better. Students pursuing this major should have strong math skills. Students pursuing this major should have strong math skills. A computer graphics concentration is now available.</td>
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<tr>
<td>Criminal Justice B.S.</td>
<td>2.75</td>
<td>Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.</td>
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<tr>
<td>Earth Science/Secondary Ed B.S.Ed.</td>
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<tr>
<td>Economics B.S.</td>
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<tr>
<td>Electrical Engineering B.S.</td>
<td>2.0</td>
<td>This is an academically challenging major and requires a significant effort outside the classroom. Students pursuing this major should have strong math skills.</td>
</tr>
<tr>
<td>English B.A.</td>
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<tr>
<td>English/Writing Emphasis B.A.</td>
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<tr>
<td>English B.A.</td>
<td>3.0</td>
<td>Secondary Education Certification</td>
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<tr>
<td>Exercise Science B.S.</td>
<td>2.75</td>
<td>Admission to this major is competitive. Students must have earned a grade of &quot;C&quot; or better in Principles of Biology I/II and must have a 2.75 GPA.</td>
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<td>French B.A.</td>
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<tr>
<td>French B.A.</td>
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<td>Secondary Education Certification</td>
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<tr>
<td>Geoenvironmental Studies B.S.</td>
<td>2.0</td>
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<tr>
<td>Geography B.S.</td>
<td>2.0</td>
<td>Geographic Information System Human Environmental Studies Land Use</td>
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<tr>
<td>Geography/Secondary Education B.S.Ed.</td>
<td>3.0</td>
<td>(Social Studies)</td>
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<tr>
<td>History B.A.</td>
<td>2.0</td>
<td>Public History</td>
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<tr>
<td>History Secondary Education B.S.Ed.</td>
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<td>(Social Studies)</td>
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<td>Human Communication Studies</td>
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<tr>
<td>Major</td>
<td>Required GPA</td>
<td>Comments</td>
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<td>Interdisciplinary Arts Program</td>
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<tr>
<td>International Studies</td>
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<tr>
<td>Mathematics B.S.</td>
<td>2.0</td>
<td>Must have completed Calculus I with &quot;C&quot; or better. Computer Science concentration must have completed Calculus I and *Secondary Education majors must have a 3.0 GPA to declared this major</td>
</tr>
<tr>
<td>Applied</td>
<td></td>
<td>*Secondary Education majors must have a 3.0 GPA to declared this major</td>
</tr>
<tr>
<td>Computer Science</td>
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<td></td>
</tr>
<tr>
<td>Statistics</td>
<td>2.0</td>
<td>Must have completed Calculus I with &quot;C&quot; or better. Computer Science concentration must have completed Calculus I and *Secondary Education majors must have a 3.0 GPA to declared this major</td>
</tr>
<tr>
<td>Secondary Education Certification *</td>
<td>3.0 for Secondary Ed</td>
<td>*Secondary Education majors must have a 3.0 GPA to declared this major</td>
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<tr>
<td>Physics B.S.</td>
<td>2.0</td>
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<tr>
<td>Physics Secondary Education B.S.Ed.</td>
<td>3.0</td>
<td>A student who has between 60 and 74 credits should have completed PLS 100 U.S. Government and Politics. <strong>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.</strong></td>
</tr>
<tr>
<td>Political Science B.A.</td>
<td>2.0</td>
<td>A student who has between 60 and 74 credits should have completed PLS 100 U.S. Government and Politics. <strong>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.</strong></td>
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<tr>
<td>Psychology B.A.</td>
<td>2.3</td>
<td>Admission is competitive and a screening interview is required. Contact the Psychology Department within the first three weeks of each semester to arrange for the interview.</td>
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<tr>
<td>Public Administration B.S.</td>
<td>2.0</td>
<td>A student who has between 60 and 74 credits should have completed PLS 100 U.S. Government and Politics. <strong>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.</strong></td>
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<tr>
<td>Social Work B.S.W.</td>
<td>2.2</td>
<td>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.**</td>
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<tr>
<td>0-30 credits</td>
<td>2.4</td>
<td>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.**</td>
</tr>
<tr>
<td>31-39 credits</td>
<td>2.5</td>
<td>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.**</td>
</tr>
<tr>
<td>60 credits and over</td>
<td></td>
<td>Students must have a 2.5 GPA before they are permitted to assume professional status. Also, 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. Students who meet the admission guidelines must submit a change of major form to the department within the first three weeks of the semester.**</td>
</tr>
<tr>
<td>Sociology B.A.</td>
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<tr>
<td>Spanish B.A.</td>
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<tr>
<td>Software Engineering B.S.</td>
<td>2.0</td>
<td>Students must also have completed CSC 110 Computer Science I (4 cr) with a grade of &quot;C&quot; or better. Students pursuing this major should have strong math skills.</td>
</tr>
<tr>
<td>Spanish B.A.</td>
<td>2.0</td>
<td>Students must also have completed CSC 110 Computer Science I (4 cr) with a grade of &quot;C&quot; or better. Students pursuing this major should have strong math skills.</td>
</tr>
<tr>
<td>Secondary Education Certification</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>Teacher Education B.S.Ed.</td>
<td>3.0</td>
<td>Admission to this major is competitive. Students must submit a letter of application to the department. Students are considered for admission during the first week of each semester. Students who apply are ranked according to a score on a rating form. Enrollment is limited and only top ranked students will be admitted.</td>
</tr>
</tbody>
</table>
6 Mistakes Commonly Made by Students on Academic Probation

Many faculty who work with students on academic probation find that those who are later dismissed for poor academic performance often make common errors in judgement. If those students had made different decisions while on academic probation, they might have stayed in college. Listed below are the most common mistakes by students who are on academic probation:

Cut classes too frequently. Some students cut classes frequently because they think they have things to do that are more important than going to class. But the more they cut class, the more threatening class becomes. It's a self-defeating cycle that results in poor grades and often, academic dismissal. Good students rarely miss class and students who are on academic probation cannot afford to miss any class time.

Avoid repeating courses in which they earn “F” grades. Students tend to think they can put off repeating “F” grade courses until the summer session. Unfortunately, if a student’s grades are poor in the second semester, the opportunity to attend summer school may not be available. Because of this, “F” grade courses should be repeated as soon as possible.

Take courses on the advice of a friend. Friends may have good intentions, but they sometimes misadvise their peers about courses that are easy and appropriate for some, but difficult and inappropriate for others. Thus, the probationary student should place only limited faith in course selections suggested by friends. An academic advisor or departmental faculty member is a far better resource.

Seek academic or personal help too late in the semester. Some students try to succeed on their own and seek help only when the situation becomes particularly grim. Students often fall prey to the myth of self-reliance. Instead, students need to know that there is help available on campus and they can be assured that using these supportive services is not only expected, but also encouraged. It is part of the total academic experience.

Enroll for too many credits. Students on academic probation should take fewer credit hours, not more. Students who attempt to make a quantum leap in their grade point average in one semester usually perform poorly because of the multiplying effects of more quizzes, papers, tests, class, etc. Twelve credit hours should be the maximum for students on probation.

Attempt to drop a course after the deadline for withdrawals. 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 intranet website.

Fail to take AIM. The university has many valuable resources available to you as you make the journey from academic probation to meeting the academic standards of the university. The AIM (Academic IMProvement Plan) has been designed specifically to help students who have encountered academic difficulty. The plan introduces students to all of the campus' resources, as well as provides workshops to help students develop skills that have been deemed necessary for academic success. Topics include study strategies, time management, and academic responsibility. Students are strongly encouraged to participate in this program.

Fail to consult with a librarian. Students taking courses that require research for projects, papers, or speeches often believe that they know how to find the information they need. What they may not realize is that their professors’ expectations may be higher than they have been used to. In addition to providing library instruction sessions in a wide range of courses, librarians are available at various times throughout the week to meet with students for one-on-one consultations, which help students to focus on the skills they need to be successful at college-level research. Asking for help at the beginning of an assignment can save students time that might be required in redoing assignments and help them work toward a better grade.

II. Yourself, Your Major, and Your Career

“Who are you?” said the Caterpillar... Alice replied, rather shyly, “I—I hardly know sir, just at present—at least I know who I was when I got up this morning, but I think I must have been changed several times since then.” Lewis Carroll
## Department Internship Coordinators

Experiential learning is one of the education cornerstones at Shippensburg University. Students are strongly encouraged and, in some programs, required to gain practical work experience directly related to their major. In addition to student teaching internships, practicums, field experiences, and internships are offered by all three colleges. Even though the administration and coordination of experiential learning is decentralized across the University, the requirements and expectations of both students and employers remain fairly consistent.

Students gain professional experience directly related to their major by working part-time or full-time during the fall, spring, or summer semesters. Students earn credit based upon the number of hours worked; they are supervised by both a faculty advisor and an employer. Common components of internship programs across campus include: faculty approval of the internship position; faculty site visit or contact with both employer and student during the internship; and definition of educational goals in written agreements between faculty, employers, and students. Students are expected to complete various academic assignments related to their experience. Evaluations by both students and employers also help determine whether educational goals were met. For more information, please contact the relevant department and see http://www.ship.edu/intern/index.html.

<table>
<thead>
<tr>
<th>Department</th>
<th>Coordinator</th>
<th>Office</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art &amp; Design</td>
<td>Prof. William G. Whiteley</td>
<td>HAC 304, 1162</td>
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<tr>
<td>Biology</td>
<td>Dr. Cindy Elliott</td>
<td>FSC 153, 1504</td>
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<td></td>
<td>Dr. David Long</td>
<td>FSC 154, 1433</td>
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<tr>
<td>College of Business</td>
<td>Mr. Justin English</td>
<td>GRH 317, 1351</td>
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<tr>
<td>Chemistry</td>
<td>Dr. Thomas Frielle</td>
<td>FSC 307, 1573</td>
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<tr>
<td>Communication/Journalism</td>
<td>Prof. Stephanie Witmer</td>
<td>RLH 126, 1525</td>
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<td>Computer Science</td>
<td>Dr. Carol Wellington</td>
<td>MCT 182, 1424</td>
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<td>English</td>
<td>Dr. Deborah Montouri</td>
<td>WRI, 1665</td>
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<tr>
<td>Exercise Science</td>
<td>Dr. Russell Robinson</td>
<td>HG 107A, 1155</td>
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<tr>
<td>Geography/Earth Science</td>
<td>Dr. Joseph Zume</td>
<td>SRH 114, 1548</td>
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<td>Dr. Claire Jantz</td>
<td>SRH 116, 1399</td>
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<tr>
<td>History/Philosophy</td>
<td>Dr. Allen Dieterich-Ward</td>
<td>DHC 217, 1192</td>
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<tr>
<td>Human Communication Studies</td>
<td>Dr. Sharnine Herbert</td>
<td>DHC 313, 1272</td>
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<td>Mathematics</td>
<td>Dr. Kim Presser</td>
<td>MCT 274, 1431</td>
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<tr>
<td>Modern Languages (French/Spanish)</td>
<td>Dr. Agnes Ragone</td>
<td>RLH 120, 1559</td>
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<td>Dr. José Ricardo</td>
<td>RLH 111, 1120</td>
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<tr>
<td>Music/Theatre Arts</td>
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<td>PAC, 1638</td>
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<tr>
<td>Physics</td>
<td>Dr. Michael Cohen</td>
<td>FSC, 1570</td>
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<tr>
<td>Political Science</td>
<td>Dr. Amanda Olejarski</td>
<td>GRH 415, 1715</td>
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<td>Psychology</td>
<td>Dr. Kim Weikel</td>
<td>FSC 115, 1482</td>
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<tr>
<td>Social Work</td>
<td>Dr. Liz Fisher</td>
<td>SPH 337, 1365</td>
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<tr>
<td>Sociology/Anthropology</td>
<td>Dr. Chad Kimmel</td>
<td>GRH 431, 1706</td>
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</tr>
</tbody>
</table>
## 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 department, or the web at [www.ship.edu/academics/programs/ugrad.html](http://www.ship.edu/academics/programs/ugrad.html) for more details. You can also refer to the college catalog for the courses that constitute the minor.

<table>
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<tr>
<th>Minor</th>
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<tr>
<td>Anthropology</td>
<td>18 credits</td>
<td>Sociology Dept., GRH 428</td>
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<tr>
<td>Art and Design</td>
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<td>Art Dept., HAC 210</td>
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<tr>
<td>Biology</td>
<td>19 credits</td>
<td>Biology Dept., FCS 142</td>
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<tr>
<td>Business</td>
<td>18 credits</td>
<td>College of Business, GRH 128</td>
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<tr>
<td>Chemistry</td>
<td>23-27 credits</td>
<td>Chemistry Dept., FSC 327</td>
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<tr>
<td>Coaching</td>
<td>18 credits</td>
<td>Exercise Science Dept., HG 109</td>
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<tr>
<td>Comm/Journalism</td>
<td>18 credits</td>
<td>Communication/Journalism Dept., RLH 108</td>
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<tr>
<td>Computer Science</td>
<td>20-21 credits</td>
<td>Computer Science Dept., MCT 156</td>
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<tr>
<td>Criminal Justice</td>
<td>18 credits</td>
<td>Criminal Justice Dept., SPH 113</td>
</tr>
<tr>
<td>Disability Studies</td>
<td>18 credits</td>
<td>Dr. Alison Carey, GRH 436</td>
</tr>
<tr>
<td>Economics</td>
<td>18 credits</td>
<td>Dr. Brendan Finucane., DHC 127</td>
</tr>
<tr>
<td>English</td>
<td>18 credits</td>
<td>English Dept., DHC 128</td>
</tr>
<tr>
<td>Ethnic Studies</td>
<td>18 credits</td>
<td>Dr. Ana Morana, RLH 115</td>
</tr>
<tr>
<td>Exercise Science</td>
<td>18 credits</td>
<td>Exercise Science Dept., HG 109</td>
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<tr>
<td>French</td>
<td>18 credits</td>
<td>Modern Languages Dept. RLH 109</td>
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<tr>
<td>Geography/Earth Science</td>
<td>21 credits</td>
<td>Geography/Earth Sci Dept., SHR 104</td>
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<tr>
<td>Geographic Information Systems</td>
<td>18 credits</td>
<td>Geography/Earth Sci Dept., SHR 104</td>
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<tr>
<td>German Studies</td>
<td>18 credits</td>
<td>Modern Languages Dept., RLH 109</td>
</tr>
<tr>
<td>Gerontology</td>
<td>18 credits</td>
<td>Dr. Dana Bergel-Bourassa, SPH 325</td>
</tr>
<tr>
<td>History</td>
<td>18 credits</td>
<td>History Dept., DHC 122</td>
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<tr>
<td>Human Communication Studies</td>
<td>18 credits</td>
<td>Human Communications Dept., DHC 112</td>
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<tr>
<td>International Studies</td>
<td>21 credits</td>
<td>Dr. Jonathon Skaff, CUB 221B, DHC 215</td>
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<tr>
<td>Mathematics</td>
<td>18-21 credits</td>
<td>Mathematics Dept., MCT 250</td>
</tr>
<tr>
<td>Music</td>
<td>18 credits</td>
<td>Music/Theatre Arts Dept., PAC 220</td>
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<tr>
<td>Philosophy</td>
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<td>History/Philosophy Dept., DHC 122</td>
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<tr>
<td>Physics</td>
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<tr>
<td>Women's and Gender Studies</td>
<td>18 credits</td>
<td>Women &amp; Gender Studies Office, HH 125</td>
</tr>
</tbody>
</table>
## Academic Planning for Career Success

**First Year**

- Do well academically—the higher your GPA, the more choices you’ll have.
- Consider college your first job—and as preparation for life.
- Take at least three self-assessments to discover your values, skills, and goals.
- Evaluate and discuss what you discover about yourself with your advisor, counselor, mentor, or faculty member.
- Explore and use the resources available on campus (including human resources).
- Use the GenEd courses to determine your likes and dislikes.
- Start a portfolio of your best work.
- Attend a university open house.
- Begin to develop/improve your leadership/organizational skills through moderate involvement in constructive extracurricular activities (2nd semester).
- Adopt a mentor.
- Begin a career file. Keep a file of all interesting careers you read or hear about.
- Cultivate skills that will enable you to adapt to change.
- **Analytical/critical thinking**
  - **verbal and oral communication**
  - **computer proficiency**
  - **leadership**
  - **teammanship** (organizational skills)
- Know and understand your academic options.
- Become familiar with Internet resources.
- Refine possible majors into two or three options.
- Talk to alumni who work in fields that interest you about their undergraduate and career experiences.

**Second Year**

- Do well academically.
- Continue to explore academics, the world of work—and yourself.
- If you haven’t already done so, choose your major!
- Explore career alternatives within your major.
- Cultivate key campus career contacts and network among them.
- Develop a tentative resume; as time passes, refine it.
- Track trends in the World of Work.
- Develop those adaptable skills (see first-year).
- Obtain a quality internship over the summer.
- Consider foreign study for a summer/semester.
- Obtain relevant employment, if possible.
Academic Planning (continued)

Junior Year

___ Do well academically.

___ Visit the Career Development Center periodically to check for relevant workshops, job fairs, and on-campus recruiting visits, etc.

___ Attend a workshop on the practice of interviewing.

___ Continue to research the workplace. Consult with as many experts as you can.

___ Refine your leadership/organizational skills in campus activities.

___ Refine your resume and portfolio.

___ Explore different internship opportunities.

___ Investigate graduate school.

___ Keep contact with key campus professionals (advisor, mentor, career personnel).

___ Consider foreign study for a semester.

___ Do public service work.

___ Attend job fairs for experience and knowledge.

___ Join at least one professional association to make appropriate contacts.

___ Narrow your career search.

___ Talk to recent graduates/alumni about their experiences in areas of interest to you.

Senior Year

___ Do well academically.

___ Perfect/complete your resume and cover letter(s). Have them quality-controlled and critiqued by the Career Development Center staff.

___ Update your portfolio.

___ Perform mock interviews.

___ Research prospective employers before interviewing. Prepare appropriate questions.

___ Schedule on-campus interviews.

___ Attend and interview at career fairs.

___ Evaluate each interview after completion. What did you learn? What did you do well? What could you do better next time?

___ Use computer job search resources.

___ Read at least two trade publications in your field of interest.

___ Complete applications for graduate school (if applicable).

III. The General Education Program

“Learning is not attained by chance. It must be sought for with ardor and attended to with diligence.” Abigail Adams
Undergraduate Programs at Ship

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 course work.

Overview: The General Education Program

What is the General Education Program?

The General Education Program at Shippensburg University comprises forty-eight of the credit hours required for graduation.

- All students at the university are required to complete the program.
- The program includes a series of special courses consisting of three parts:
  - Part 1: Required Skills and Competencies (15 credits)
  - Part 2: Categories of Knowledge (33 credits)
  - Part 3: Library Skills (completed in College Level Writing course)
    Diversity requirement

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.
The General Education Program

48 Credits

Part I: Required Skills and Competencies (15 Credits)

_____ Historical Foundations of Global Cultures [students may need to take Reading and Study Skills (RDG050) first]
_____ Thinking Historically in a Global Age
_____ Intro to Human Communication
_____ Writing Intensive First Year Seminar/Advanced Placement Writing [student may need to take Basic Writing (ENG 050) first]
_____ College-Level Mathematics [students may need to take Developmental Math (MAT 050) and/or an additional prerequisite]

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

1. 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.

2. The university is now offering Special Topics in General Education courses as part of the overall General Education Program. Check with your academic advisor to see how these courses may apply to your particular program of study.
The General Education Program
Part II - Categories of Knowledge

Category A: Logic and Numbers for Rational Thinking
(One Course - 3 Credit Hours)

**Computer Science**
CSC103 Overview of Computer Science
CSC180 Microcomputer Basic

**Mathematics**
MAT105 Mathematics for Liberal Studies
MAT107 Mathematical Models Applied to Money
MAT110 Fundamentals of Mathematics I
MAT117 Applied Statistics
MAT140 A/B College Algebra (3/4 credits)
MAT175 Pre-Calculus
MAT181 Applied Calculus I
MAT211 Calculus I

**Philosophy**
PHL101 Introduction to Philosophy
PHL102 Critical Thinking
PHL103 Introduction to Philosophy of the Mind
PHL105 Introduction to Ethics

Special Topics in General Education, Category A (xxx190)

Category B: Linguistic, Literary, Artistic, and Cultural Traditions
(3 Courses - 9 Credit Hours)

**Literature** (ONE course from this group)
ENG250 Introduction to Literature
ENG243 The Art of the Film
ENG248 Introduction to Culturally Diverse Lit. of the United States

**GER151 German Cinema**
GER320 Berlin
GER322 Readings in 19th and 20th Century German Literature

**SPN360 Masterpieces of Spanish Literature**
SPN361 Masterpieces of Spanish-American Literature

**FRN330 Masterpieces of French Literature**
FRN331 Masterpieces of Francophone Literature

**Humanities** (Select TWO courses from different disciplines)*
ART101 Art Appreciation
ART231 Art History I
ART232 Art History II
ART233 Art History III
ART274 Introduction to Cultural Studio
ART339 History of American Art
FRN101 Beginning French I
FRN102 Beginning French II
FRN103 Intermediate French
FRN150 French Civilization
FRN202 Intermediate French Conversation through the Media
FRN204 Ideas & Cultures from the French-speaking World
FRN320 Commercial French I

**SOC370 Sociology of the Arts**

**GER101 Beginning German I**
GER102 Beginning German II
GER103 Intermediate German
GER150 German Civilization and Culture
GER203 Intermediate German Conversation
GER204 Contemporary German Culture
GER215 Commercial German

IAP111 Intro to Interdisciplinary Arts

**SPN101 Beginning Spanish I**
SPN102 Beginning Spanish II
SPN103 Intermediate Spanish
SPN150 Spanish Civilization and Culture
SPN202 Interm. Spanish Conversation and Grammar Review
SPN204 Ideas & Cultures from the Spanish-speaking World
SPN330 Spanish for Professions

**THE121 Introduction to Theater**

Special Topics in General Education, Category B (xxx190)

*Other language courses as offered may be taken in this category.

All students completing a Bachelor of Arts (B.A.) program will be required to attain a Novice level of proficiency in a foreign language. Novice proficiency may be satisfied by the completion of three years of a foreign language in high school, three credits of intermediate level college coursework in a foreign language, an appropriate AP or CLEP score, or satisfactory completion of an intermediate-level proficiency examination.
Category C: Biological & Physical Sciences
(3 Courses - 9 Credit Hours)

Select ONE course from THREE of the following five disciplines (3 courses for 9 credits)

- ANT121 Physical Anthropology
- BIO100 Basic Biology
- BIO142 Introduction to Ecology
- BIO145 Environmental Biology
- BIO150 Human Biology
- BIO161 Principles of Biology: Cell Structure & Function
- BIO162 Principles of Biology: Organismal Diversity
- BIO208 Field Biology
- ESS108 Conservation of Natural Resources
- ESS110 Introduction to Geology
- ESS111 Introduction to the Atmosphere
- ESS210 Physical Geology
- PHY108 Astronomy
- PHY110 Physics for Society
- PHY115 Physical Science: A Laboratory Approach
- PHY121 Introduction to Physics I
- PHY122 Introduction to Physics II
- PHY205 Intermediate Physics I
- CHM103 Chemistry: A Cultural Approach
  Appropriate only for non-science majors. It discusses some basic ideas of chemistry in a non-mathematical way and shows how chemistry is involved in our lives.
- CHM105 Chemistry: An Observational Approach
  Is designed for non-science majors who want a laboratory experience. It requires a minimum amount of mathematical reasoning, for example, in determining mass relationships from chemical formulas and equations.
- CHM121 Chemical Bonding
  First chemistry course for a well prepared science major.
  (Prerequisites: MAT 175 or MAT 117 (either may be taken concurrently with CHM 121) or math placement at Level 5 and one year of high school chemistry.)

*Note: Students majoring in the biological or physical sciences are permitted to count one course from their major department toward satisfying this requirement. Natural science courses which carry one of the above courses as a prerequisite and required science courses for elementary education majors may also be counted toward this requirement.

Category D: Political, Economic, and Geographic Sciences
(2 Courses - 6 - 7 Credit Hours)

Select TWO - Each course must be from a different discipline.

- ECO101 Principles of Macroeconomics
- ECO102 Principles of Microeconomics
- ECO113 Principles of Economics
- GEO101 World Geography
- GEO103 Geography of the United States and Canada
- PLS100 U.S. Government and Politics
- PLS141 World Politics
- Special Topics in General Education, Category D (xxx190)

Category E: Social and Behavioral Sciences
(2 Courses - 6 Credit Hours)

Select TWO - Each course must be from a different discipline.

- ANT111 Cultural Anthropology
- DS 101 Introduction to Disability Studies
- ETH 100 Introduction to Ethnic Studies
- ETH 101 Introduction to African American Studies
- ETH 102 Introduction to Latino Studies
- GEO 140 Cultural Geography
- PSY 101 General Psychology
- SOC 101 Introduction to Sociology
- WST 100 Introduction to Women's Studies
- HCS 125 Survey of Communication Studies
- Special Topics in General Education, Category E (xxx190)
Student Record of General Education Courses

Name: __________________________________________ SU ID#_____________________   Test Scores: Math_____   Reading_____   English_____

Directions: List all General Education courses completed. Total of 48 credits.

Developmental Courses (Do NOT count toward graduation)
___ Basic Writing   ___ Developmental Reading & Study Skills
___ Developmental Math

I Required Skills & Competencies (15 credits)
___ Writing Competency/Advanced Placement Writing Grade ___
___ History 105 Grade ___
___ History 106 Grade ___
___ Human Communication Studies Grade ___
___ Math Competency _____________________ Grade ___

II Categories of Knowledge A through E (33 credits)

Category A: Logic & Numbers for Rational Thinking (3 credits) 
NOTE: Cannot be the math course selected under Required Skills
Course _____________________________ Grade ___

Category B: Linguistic, Literary, Artistic & Cultural Traditions (9 credits)

Literature Course ___________________________ Grade ___
Course ___________________________ Grade ___
Course ___________________________ Grade ___

Category C: Biological and Physical Sciences (9 credits)
Must be from different disciplines
Course ___________________________ Grade ___
Course ___________________________ Grade ___
Course ___________________________ Grade ___

Category D: Political, Economic & Geographic Sciences (6 credits) Must be from different disciplines
Course ___________________________ Grade ___
Course ___________________________ Grade ___

Category E: Social & Behavioral Sciences (6 credits) Must be from different disciplines
Course ___________________________ Grade ___
Course ___________________________ Grade ___

Diversity Course: ___________________________ Grade ___
(May double count as a General Education course)

Free Electives

Course ___________________________ Grade ___
Course ___________________________ Grade ___
Course ___________________________ Grade ___
Course ___________________________ Grade ___
Diversity Courses at Shippensburg University

All Shippensburg University students must complete at least one diversity course to graduate. Several of these courses fulfill General Education or major requirements as well. The following courses currently satisfy the diversity requirement:

- ART 101 Art Appreciation (Art)
- CRJ 452 Race, Ethnicity, and Crime (Criminal Justice)
- ECH 460 Family, School, & Community Partnerships in Early Childhood Educ. (Teacher Ed.)
- EEC 273 Introduction to Exceptionality (Teacher Ed.)
- ENG 248 Introduction to Culturally Diverse Literature of the U.S. (English)
- ETH 100 Introduction to Ethnic Studies (Ethnic Studies)
- GEO 103 Geography of the U.S. & Canada (Geography/Earth Science)
- GEO 140 Cultural Geography (Geography/Earth Science)
- HIS 201 US History (History)
- HIS 342 Immigration & Ethnicity (History)
- SWK 265 Understanding Human Diversity for Social Work Practice (Social Work)
- MGT 447 Business & Society (Management & Marketing)
- SOC 101 Introduction to Sociology: Society & Diversity (Sociology/Anthropology)
- WST 100 Introduction to Women's Studies (Women and Gender Studies)

See your advisor if you have questions on how you can best meet this requirement.

1. May fulfill a Category B Humanities requirement.
2. May fulfill a Category B Literature requirement.
3. May fulfill a Category D requirement.
4. May fulfill a Category E requirement.
Tips for Students
Choosing & Using General Education Coursework

The General Education Program helps you explore many different areas of study. But how do you decide which classes you should take? There are many ways. For example, look for a class that

- Is in a subject you have studied before, and you know you will like.
- You know nothing about or is in a discipline with which you are unfamiliar.
- Helps you develop one of your strengths.
- Helps you work on one of your weaknesses.
- Teaches you about cultures (history, political science, art, music, theater, literature, modern languages, women and gender studies, geography).
- Teaches you about social problems (women and gender studies, geography, sociology).
- Is an introductory course for a major you are considering.
- Helps you understand yourself (sociology, psychology, biology, philosophy).
- Helps you understand the physical world around you (geology, biology, geography, chemistry, physics, mathematics).
- Helps you lead a healthier life (biology, sociology, psychology).
- Examines the major institutions of our society (economics, philosophy, political science, public administration, sociology).
- Examines technology and how it works (computer science, chemistry, physics).
- Improves your communication skills (English, human communication, modern languages).
- Teaches you to solve problems (mathematics, philosophy, chemistry).
- Develops your skills in research, organization and critical thinking.

The above suggestions are examples. Your college education will encompass many different disciplines and will help you to make connections between those disciplines. Use this list as a stimulus, and consult your advisor for more information.

Adapted from 1993 Passport to Your Future: New Student Guidebook, p. 13. Wichita State University. Wichita, Kansas
IV. Undergraduate Degree Programs

“Knowledge is power.” Francis Bacon
<table>
<thead>
<tr>
<th>B.A.</th>
<th>B.S.</th>
<th>B.S.B.A.</th>
<th>B.S.</th>
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<td>Art &amp; Design (Education K-12)</td>
<td>Applied Physics (Pre-Engineering)</td>
<td>Accounting</td>
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<td>Communication Journalism (Electronic Media) (Print Media) (Public Relations)</td>
<td>Biology # (Biotech/Forensic Science) (Clinical Sciences) (Ecology &amp; Environmental) (Health Professions)</td>
<td>Finance</td>
<td>Exercise Science</td>
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<td>English # (Writing)</td>
<td>Chemistry # (Biochemistry) (Business) (Computational Chemistry) (Forensic Science) (Pre-Pharmacy)</td>
<td>Personal Financial Planning</td>
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<td>French # History (Public History)</td>
<td>Computer Engineering</td>
<td>Management</td>
<td>Social Work</td>
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<tr>
<td>Human Communication Interdisciplinary Arts Political Science Psychology Sociology Spanish #</td>
<td>Computer Science (Computer Graphics) (Embedded Programming) (Systems Programming)</td>
<td>Entrepreneurship</td>
<td>B.S.Ed.</td>
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<tr>
<td># B.A. also available with secondary certification</td>
<td>Economics Electrical Engineering Geoenvironmental Studies Geography (GIS) (Human Environment) (Land Use)</td>
<td>General Management</td>
<td>Early Childhood Education K-4</td>
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<tr>
<td>Earth &amp; Space Science Economics* Geography * History * Physics ( * Social Studies)</td>
<td>Math # (Statistics) (Applied Math) Physics# Public Administration Software Engineering</td>
<td>Human Resource Management</td>
<td>Middle School Education 4-8</td>
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<td></td>
<td></td>
<td>International Management</td>
<td>PreK-4/PreK-8 Special Education Dual Certification</td>
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College of Arts & Sciences

ART
CHEMISTRY
ELECTRICAL ENGINEERING
ENGLISH
GEOGRAPHY
HUMAN COMMUN. STUDIES
PSYCHOLOGY
PUBLIC ADMIN.
SOCIOLOGY
... MORE
College of Arts & Sciences

B.A.
Art and Design
  Graphics
Education K-12 Certification
Communications/Journalism:
  Electronic Media
  Print Media
  Public Relations
Economics
English #
  Writing
French #
History
  Public History
Human communication Studies
Interdisciplinary Arts Program
International Studies
Political Science
Psychology
Sociology
Spanish #

# B.A. also available with secondary education certification

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.
Earth & Space Science
Geography*
History*
Mathematics
Physics

* Social Studies

B.S.
Applied Physics (Pre-Engineering)
Biology: ##*
  Biotechnology/PreForensic Science
  Clinical Sciences
  Ecology and Environment
  Health Professions
Chemistry: ##
  Biochemistry
  Business
  Computational
  Forensic Science
  Pre-Pharmacy
Computer Engineering
Computer Science:
  Computer Graphics
  Embedded Programming
  Software Engineering
Electrical Engineering
Geoenvironmental Studies
Geography:
  Geographic Information Systems
  Human Environmental Studies
  Land Use
Mathematics
  Applied
  Secondary Certification
  Statistics
Physics
Public Administration
Software Engineering

* Includes Health Sciences – Pre-Med, Pre-Dental, etc.

## B.S. also available with secondary education certification
### ART-B.A.##

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tr>
<td>___ ART 210 Drawing II</td>
<td>3 cr</td>
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<tr>
<td>___ ART 215 Color &amp; Two-Dimensional Design</td>
<td>3 cr</td>
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<tr>
<td>___ ART 217 Computer Design I [Page Composition]</td>
<td>3 cr</td>
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<tr>
<td>___ ART 232 Art History II</td>
<td>3 cr</td>
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<td>___ ART 233 Art History III</td>
<td>3 cr</td>
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<tr>
<td>___ ART 300, 301, 302, 303, 304, 305 Independent Studio</td>
<td>3 cr</td>
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<tr>
<td>___ ART 306 Computer Design II [Illustration]</td>
<td>3 cr</td>
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<tr>
<td>___ ART 310 Drawing II</td>
<td>3 cr</td>
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<tr>
<td>___ ART 311 Figure Drawing</td>
<td>3 cr</td>
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<tr>
<td>___ ART 315 History of American Art</td>
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<tr>
<td>___ ART 319 Computer Design III [Photomanoipulation &amp; Painting]</td>
<td>3 cr</td>
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<tr>
<td>___ ART 320 Watercolor I</td>
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<td>___ ART 337 Printmaking I</td>
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<tr>
<td>___ ART 338 Printmaking I</td>
<td>3 cr</td>
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<td>___ ART 339 History of American Art</td>
<td>3 cr</td>
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<tr>
<td>___ ART 340 Ceramics</td>
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<tr>
<td>___ ART 341 Advanced Ceramics</td>
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<td>___ ART 370 Sculpture</td>
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<td>___ ART 395 Internship in Art</td>
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<td>___ ART 399 Independent Study</td>
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<tr>
<td>___ ART 425 Computer Design IV [Multimedia]</td>
<td>3 cr</td>
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<tr>
<td>___ ART 430 Computer Design V [Web Design]</td>
<td>3 cr</td>
</tr>
<tr>
<td>___ ART 435 Computer Design VI [Book &amp; Portfolio Design]</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

** Also Required:**
- Portfolio Review
- Yearly Student Art Exhibit
- Senior Exhibit

** May also count as part of Category B in General Education.

## B.A. students must satisfy the Novice level competency in a foreign language. This is accomplished via 3 years of the same language in high school, an AP score of at least 2, or the completion of a 103 level course. Three credits of a foreign language may count under category B.

### Free Electives
- 33 cr

#### Total Graduation Requirements
- 120 cr

### GPA Needed to Declare:
- 2.0

#### Helpful Hints for Advising:
- YEAR 1
  - ART 101 Art Appreciation
  - ART 215 Color/2-Dimensional Design
  - ART 110 Basic Drawing
  - ART 218 Three-Dimensional Design
- F= Fall only class
- S= Spring only class
- Double majors such as art/communication increase career options.

Art minor is available 21 credits.

Students interested in Commercial Art visual communication, photography/multimedia, interior design or computer animation/multimedia may want to consider the cooperative programs established between SU and The Arts Institutes International AllI: Art Institute of Pittsburgh, the Art Institute of Philadelphia, and six additional Art Institutes in Houston and Dallas Texas; Ft. Lauderdale, Florida; Atlanta, Georgia; and Seattle, Washington. Students spend their junior year at the Art Institute and their senior year at SU. Also, there is a cooperative program with the Fashion Institute of Technology in N.Y.C. Junior year residency in the following: fashion design, advertising design, textile/surface design, accessories design, or jewelry design.

See the department chairperson for more information.
A Guidebook for Undergraduate Students 2015-2016

ART EDUCATION CERTIFICATION (K-12) – B.A. ##

# B.A. students must satisfy the Novice level competency in a foreign language. This is accomplished via 3 years of the same language in high school, an AP score of at least 2, or the completion of a 103 level course. Three credits of a foreign language may count under category B.

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 course work. These basic skills tests must be passed before students are permitted to take any 300 level or above education course.

Students that were not accepted into the University as Art Education majors must apply for professional standing through the Art Department, where a Change of Major is required.

Also Required:

**Portfolio Review**

**Yearly Student Art Exhibit**

**Senior Exhibit**

Free Electives 3 cr

Total Graduation Requirements 120 cr

GPA Needed to Declare: 3.0

Helpful Hints for Advising:

Year 1

**ART 101 Art Appreciation**

**ART 110 Basic Drawing** offered all year round

**ART 210 Drawing II**

**ART 215 Color & Two-Dimensional Design**

**ART 218 Three-Dimensional Design**

**ART 232 Art History II**

**ART 233 Art History III**

**ART 385 Senior Art Seminar**

**ART 217 Computer Design I** (3 cr) Page Composition

**ART 326 Painting I** (3 cr)

**ART 340 Ceramics** (3 cr)

**ART 370 Sculpture** (3 cr)

Students interested in Commercial Art visual communication, photography/ multimedia, interior design or computer animation/multimedia may want to consider the cooperative programs established between SU and The Arts Institutes International AII: Art Institute of Pittsburgh, the Art Institute of Philadelphia, and six additional Art Institutes in Houston and Dallas Texas; Ft. Lauderdale, Florida; Atlanta, Georgia; and Seattle, Washington. Students spend their junior year at the Art Institute and return to SU for their senior year. Also, there is a cooperative program with the Fashion Institute of Technology in N.Y.C. Junior year residency in the following: fashion design, advertising design, textile/surface design, accessories design, or jewelry design.

See the department chairperson for more information.

A 4-year template is available at www.ship.edu/undeclared.
## General Education Requirements

### I. Required Skills and Competencies  
16 cr

- ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)  
  May need ENG 050 Basic Writing first, based on test results  
- HCS 100 Intro to Human Communication (3 cr)  
- Mathematical Competency-Required  
  MAT 211 Calculus I —if necessary, student may need MAT 175 Pre-Calculus first  
- HIS 105 Historical Foundations of Global Cultures (3 cr)  
  AND  
- HIS 106 Thinking Historically in a Global Age (3 cr)

### II. Categories of Knowledge  
35 cr

#### A: Logic/Numbers for Rational Thinking  
(4 cr)
- MAT 117 Applied Statistics

#### B: Literary, Artistic & Cultural Traditions  
(9 cr)
- ______________________________  
- ______________________________  
- ______________________________

#### C: Biological & Physical Sciences  
(10 cr)
- PHY 121 Introductory Physics  
- CHM121 Chemical Bonding  
- BIO 161 Principles of Biology: Cell Structure & Function **

#### D: Political, Economic & Geographic Science  
(6 cr)
- ______________________________  
- ______________________________  
- ______________________________

#### E: Social & Behavioral Science  
(6 cr)
- ______________________________  
- ______________________________  
- ______________________________

### III. Library Skills Complete via College/Advanced Writing course

### Biology Requirements  
37 cr

#### CORE COURSES**

- BIO 161 Principles of Biology: Cell Structure & Function (4 cr) *  
- BIO 162 Principles of Biology: Organismal Diversity (4 cr) **  
- BIO 260 Genetics (3 cr)  
- BIO 499 Capstone Seminar in Biology (1 cr)  
**Students must earn at least a 2.0 average in BIO 115 & 116 before upper level Biology electives may be taken. See the catalog for remediation procedure.

#### Additional Biology electives  
16 cr

- BIO ______________________________  
- BIO ______________________________  
- BIO ______________________________  
- BIO ______________________________  
- BIO ______________________________

### Math Requirements  
8 cr

- MAT 211 Calculus I (4 cr)  
- MAT A Statistics course (4 cr)  * See Category A

### Physics Requirements  
8 cr

- PHY 121 Introductory Physics I AND  
- PHY 123 Introductory Physics I lab (4 cr)  
- PHY 122 Introductory Physics II AND  
- PHY 125 Introductory Physics II lab (4 cr)

### Chemistry Requirements  
16 cr

- CHM 121 Chemical Bonding* AND  
- CHM 125 Lab IB (4 cr)  
- CHM 122 Chemical Dynamics AND  
- CHM 126 Lab IIB (4 cr)  
- CHM 221 Organic Chemistry I AND  
- CHM 225 Lab IIIIB (4 cr)  
- CHM 222 Organic Chemistry II AND  
- CHM 226 Lab IVB (4cr)  
  OR  
- CHM227 Introduction to Biochemistry (4 cr)

### Free Electives  
14 cr

*Major requirement double counts as General Education credits

### Total Graduation Requirements  
120 cr

GPA Needed to Declare: 2.5

Admission to this major is competitive. Students must have earned at least 15 credits and have grades of “C” or better in BIO 161/BIO 162 AND one of the following CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.

### Helpful Hints for Advising:

Students should begin their math sequence in the freshman year.  

Semester I  
- BIO 161 Principles of Biology: Cell Structure & Function and/or Chemical Bonding and lab

Semester II  
- BIO 162 Principles of Biology: Organismal Diversity and/or Chemical Dynamics and lab

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

Physics is normally taken in the junior year.  

Biology minor is available (19 credits).

---

A 4-year template is available at www.ship.edu/undeclared
**BIOLOGY-BIOTECHNOLOGY CONCENTRATION-B.S.**

### General Education Requirements

<table>
<thead>
<tr>
<th>I. Required Skills and Competencies</th>
<th>16 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td>May need ENG 050 Basic Writing first, based on test results</td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td>Mathematical Competency-Required</td>
</tr>
<tr>
<td>MAT 211 Calculus I —if necessary, student may need</td>
<td></td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND</td>
<td>HIS 106 Thinking Historically in a Global Age (3 cr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Categories of Knowledge</th>
<th>35 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Logic/Numbers for Rational Thinking (4 cr)</td>
<td>MAT 117 Applied Statistics</td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td></td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences (10 cr)</td>
<td>PHY 121 Introductory Physics</td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science (6 cr)</td>
<td>BIO 260 Genetics (3 cr)</td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science (6 cr)</td>
<td>BIO 162 Principles of Biology: Cell Structure &amp; Function **</td>
</tr>
</tbody>
</table>

| III. Library Skills Complete via College/Advanced Writing course | |

### Biology Requirements

<table>
<thead>
<tr>
<th>CORE COURSES</th>
<th>34 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 161 Principles of Biology: Cell Structure &amp; Function (4 cr) *</td>
<td>BIO 162 Principles of Biology: Organismal Diversity (4 cr) **</td>
</tr>
<tr>
<td>BIO 230 Botany (3 cr)</td>
<td>BIO 385 Cell Biology (3 cr)</td>
</tr>
<tr>
<td>BIO 351 Animal Physiology (4 cr)</td>
<td>BIO 418 Molecular Biology (3 cr)</td>
</tr>
<tr>
<td>BIO 461 Techniques in Biotechnology (3 cr)</td>
<td>BIO 499 Captone Seminar in Biology (1 cr)</td>
</tr>
<tr>
<td>*Major requirement double counts as General Education credits</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Physiological elective</th>
<th>3-4 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 350 Human Physiology (4 cr) OR</td>
<td>BIO 397 Intro. to Research (3 cr) OR Research/Internship</td>
</tr>
<tr>
<td>BIO 391 Internship (3 cr) **** must be forensic based</td>
<td>**Students must earn at least a 2.0 average in Bio 161 &amp; 162 before upper level Biology electives may be taken. See the catalog for remediation procedure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experiential Requirement</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 161 Principles of Biology: Cell Structure &amp; Function and/or</td>
<td>CHM 121 Chemical Bonding AND</td>
</tr>
<tr>
<td>CHM 125 Pre-Calc OR MAT 211: Calculus I</td>
<td>CHM 126 Lab IIB (4 cr)</td>
</tr>
</tbody>
</table>

**Free Electives** 7-8 cr

Consider taking Criminal Justice requirements listed below if interested in Pre-Forensic Science.

**Total Graduation Requirements** 120 cr

GPA Needed to Declare: 2.5

*Admission to this major is competitive. Students must have earned at least 15 credits and have grades of "C" or better in BIO 161/BIO 162 AND one of the following CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.*

### Math Requirements

<table>
<thead>
<tr>
<th>7-8 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 211 Calculus I (4 cr)</td>
</tr>
</tbody>
</table>

### Physics Requirements

<table>
<thead>
<tr>
<th>8 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 121 Introductory Physics I&quot; (3 cr) AND</td>
</tr>
<tr>
<td>PHY 122 Introductory Physics II and (3 cr) AND</td>
</tr>
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</table>

### Chemistry Requirements

<table>
<thead>
<tr>
<th>22-23 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121 Chemical Bonding* AND</td>
</tr>
<tr>
<td>CHM 122 Chemical Dynamics AND</td>
</tr>
<tr>
<td>CHM 224 Lab IIIIB (4 cr)</td>
</tr>
<tr>
<td>CHM 301 Biochemistry I (3 cr)</td>
</tr>
<tr>
<td>CHM 420 Biochemistry II (3 cr)</td>
</tr>
</tbody>
</table>

### Criminal Justice Requirements

<table>
<thead>
<tr>
<th>15 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRJ 100 Intro. to Criminal Justice (3 cr)</td>
</tr>
<tr>
<td>CRJ 309 Theories of Crime &amp; Crime Control (3 cr)</td>
</tr>
</tbody>
</table>

Students wishing to do the Pre-Forensic Science track will graduate with at least 122 credits.

**Helpful Hints for Advising:**

Students should begin their math sequence in the freshman year.

Semester I BIO 161 Principles of Biology: Cell Structure & Function and/or CHM 121 & CHM 125 Chemical Bonding and lab

Semester II BIO 162 Principles of Biology: Organismal Diversity and/or CHM 122 & CHM 126 Chemical Dynamics and lab

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

Physics is normally taken in the junior year.

Biology minor is available 19 credits.

****Internships are available Fall, Spring, and Summer in the Cumberland County Forensic Laboratory.

---

A 4-year template is available at www.ship.edu/undeclared
BIOLOGY - CLINICAL SCIENCES CONCENTRATION - B.S.
Includes: Medical Technology, Cyto-Technology, Histo-Technology, and Respiratory Therapy

General Education Requirements

I. Required Skills and Competencies
   16 cr
   - ENG 106 Writing Intensive First Year Seminar OR
   - ENG 110 Advanced Placement Writing (3 cr)
   - May need ENG 050 Basic Writing first, based on test results
   - HCS 100 Intro to Human Communication (3 cr)
   - Mathematical Competency-Required
   - MAT 211 Calculus I — if necessary, student may need
   - MAT 175 Pre-Calculus first
   - HIS 105 Historical Foundations of Global Cultures (3 cr) AND
   - HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge
    35 cr
    A: Logic/Numbers for Rational Thinking (4 cr)
    - MAT 117 Applied Statistics
    B: Literary, Artistic & Cultural Traditions (9 cr)
    - ______________________________
    - ______________________________
    - ______________________________
    C: Biological & Physical Sciences (10 cr)
    - PHY 121 Introductory Physics
    - CHM 121 Chemical Bonding
    - BIO 161 Principles of Biology: Cell Structure & Function
    D: Political, Economic & Geographic Science (6 cr)
    - ______________________________
    - ______________________________
    E: Social & Behavioral Science (6 cr)
    - ______________________________
    - ______________________________

III. Library Skills
     Complete via College/Advanced Writing course

Biology Major Requirements

38 cr

CORE COURSES**

15 cr
- BIO 161 Principles of Biology: Cell Structure & Function *(4 cr)
- BIO 162 Principles of Biology: Organismal Diversity (4 cr)
- BIO 220 Microbiology (3 cr)
- BIO 260 Genetics (3 cr)
- BIO 350 Human Physiology (4 cr)
- BIO 385 Cell Biology (3 cr)
- BIO 300 Careers in the Health Professions (1 cr)

Additional Biology electives

7 cr
- BIO ____________________________ (3 cr)
- BIO ____________________________ (4 cr)

**Students must earn at least a 2.0 average in Bio 161/162 before upper level Biology electives may be taken. See the catalog for remediation procedure.

Math Requirements

4 cr
- MAT 211 Calculus (4 cr)

Chemistry Requirements

18-21 cr
- CHM 121 Chemical Bonding* AND
- CHM 125 Lab IB (4 cr)
- CHM 122 Chemical Dynamics AND
- CHM 126 Lab II (4 cr)
- CHM 221 Organic Chemistry I AND
- CHM 225 Lab IIB (4 cr)
- CHM 227 Introduction to Biochemistry (4 cr)
- CHM 227 Introduction to Biochemistry (4 cr)

Physics Requirements
   8 cr
   - PHY 121 Introductory Physics I (3 cr)
   - PHY 122 Introductory Physics II (3 cr)
   - PHY 123 Introductory Physics I lab (1 cr)
   - PHY 124 Introductory Physics II lab (1 cr)

Medical Technology Concentration:
   8 cr
   Required:
   - BIO 371 Human Anatomy (4 cr)
   - BIO 418 Molecular Biology (3 cr)
   - BIO 375 Histology (3 cr)
   - ENG 248 Technical/Professional Writing (3 cr)

Cyto-Technology Concentration:
   7 cr
   Strongly recommended:
   - BIO 371 Human Anatomy (4 cr)
   - BIO 409 Immunology (3 cr)

Histo-Technology Concentration:
   7 cr
   Required:
   - BIO 371 Human Anatomy (4 cr)
   - BIO 409 Immunology (3 cr)
   - ENG 248 Technical/Professional Writing (3 cr)

Respiratory Therapy Concentration:
   7 cr
   Required:
   - BIO 371 Human Anatomy (4 cr)
   - BIO 409 Immunology (3 cr)
   - ENG 248 Technical/Professional Writing (3 cr)

*Major requirement double counts as General Education credits

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.

Total Graduation Requirements

120 cr

GPA Needed to Declare: 2.5

Admission to this major is competitive. Students must have earned at least 15 credits and have grades of "C" or better in BIO 161/BIO 162 AND one of the following CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.

A GPA of at least 2.8 is required to remain in the Health Sciences track.

Helpful Hints for Advising:

Students should begin their math sequence in the freshman year.

Semester I
- BIO 161 Principles of Biology: Cell Structure & Function and/or
- CHM 121 & CHM 125 Chemical Bonding and lab

Semester II
- BIO 162 Principles of Biology: Organismal Diversity and/or
- CHM 122 & CHM 126 Chemical Dynamics and lab

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

Physics is normally taken in the junior year.

A 4-year template is available at www.ship.edu/undeclared
## BIOLOGY - ECOLOGY AND ENVIRONMENTAL CONCENTRATION - B.S.

### General Education Requirements

#### I. Required Skills and Competencies 16 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results</td>
<td></td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>Mathematical Competency-Required</td>
<td></td>
</tr>
<tr>
<td>MAT 211 Calculus I —if necessary, student may need MAT 175 Pre-Calculus first</td>
<td>8 cr</td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

#### II. Categories of Knowledge 35 cr

**A: Logic/Numbers for Rational Thinking (4 cr)**
- MAT 117 Applied Statistics

**B: Literary, Artistic & Cultural Traditions (9 cr)**
- ______________________________
- ______________________________
- ______________________________

**C: Biological & Physical Sciences (10 cr)**
- PHY 121 Introductory Physics
- CHM121 Chemical Bonding
- BIO 161 Principles of Biology: Cell Structure & Function **

**D: Political, Economic & Geographic Science (6 cr)**
- ECO 101 Principles of Macroeconomics [recommended]

**E: Social & Behavioral Science (6 cr)**
- ______________________________
- ______________________________

#### III. Library Skills Complete via College/Advanced Writing course

### Biology Requirements 38 cr

**CORE COURSES** 18 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 161 Principles of Biology: Cell Structure &amp; Function (4 cr)</td>
<td>4 cr</td>
</tr>
<tr>
<td>BIO 162 Principles of Biology: Organismal Diversity (4 cr)</td>
<td>4 cr</td>
</tr>
<tr>
<td>BIO 230 Botany (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 242 Ecology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 260 Genetics (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 499 Capstone Seminar in Biology (1 cr)</td>
<td>1 cr</td>
</tr>
</tbody>
</table>

**Cellular elective Select 1 course:** 3 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 220 Microbiology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 385 Cell Biology (3 cr)</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**Physiology elective Select 1 course:** 3-4 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 351 Animal Physiology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 350 Human Physiology (4 cr)</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

**Ecology and Conservation electives Select any 3 courses:** 9 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIO 362 Invertebrate Zoology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 363 Vertebrate Zoology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 406 Mammalogy (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 412 Ichthyology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 417 Herpetology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 419 Ornithology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 430 Principles of Evolution (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 442 Aquatic Ecology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 444 Conservation Biology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 448 Field Botany &amp; Plant Taxonomy (3 cr)</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**Experiential elective Select 1 course:** 3 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 396-398 Research (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 391-392 Internship (3 cr)</td>
<td>3 cr</td>
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### Additional Biology electives with advisement 4 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO ______________________________________</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO ______________________________________</td>
<td>1 or 2 cr</td>
</tr>
</tbody>
</table>

### Math Requirements 8 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 211 Calculus I (4 cr) *</td>
<td>4 cr</td>
</tr>
<tr>
<td>MAT A Statistics course (4 cr) * See Category A</td>
<td></td>
</tr>
</tbody>
</table>

### Physics Requirements 8 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 121 Introductory Physics I * and</td>
<td>4 cr</td>
</tr>
<tr>
<td>PHY 123 Introductory Physics I lab (4 cr)</td>
<td>4 cr</td>
</tr>
<tr>
<td>PHY 122 Introductory Physics II and</td>
<td>4 cr</td>
</tr>
<tr>
<td>PHY 124 Introductory Physics II lab (4 cr)</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

### Chemistry Requirements 16-20 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121 Chemical Bonding* and</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 125 Lab IB (4 cr)</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 122 Chemical Dynamics and</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 126 Lab IIIB (6 cr)</td>
<td>6 cr</td>
</tr>
<tr>
<td>CHM 221 Organic Chemistry I and</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 225 Lab IIIIB (4 cr)</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 222 Organic Chemistry II and</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 226 Lab IVB (6 cr)</td>
<td>6 cr</td>
</tr>
<tr>
<td>CHM227 Introduction to Biochemistry (4 cr)</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

### Geography-Earth Science Requirement 3 cr

Choose one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESS 110 Introduction to Geology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>ESS 210 Physical Geology (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>GEO 202 Introduction to GIS (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>GEO 224 Soils (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>GEO 226 Hydrology (3cr)</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

### Free Electives 11 cr

*Major requirement double counts as General Education credits

### Total Graduation Requirements 120 cr

GPA Needed to Declare: 2.5

Admission to this major is competitive. Students must have earned at least 15 credits and have grades of “C” or better in BIO 161/BIO 162 AND one of the following: CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.

Helpful Hints for Advising:

Students should begin their math sequence in the freshman year.

Semester I BIO 161 Principles of Biology: Cell Structure & Function

Semester II BIO 162 Principles of Biology: Organismal Diversity

Year II BIO 242 Ecology

CHM 121 & CHM 125 Chemical Bonding and lab

A 4-year template is available at www.ship.edu/undeclared

---
### General Education Requirements

#### I. Required Skills and Competencies
16 cr
- ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)
- May need ENG 050 Basic Writing first, based on test results
- HCS 100 Intro to Human Communication (3 cr)
- Mathematical Competency-Required
- MAT 211 Calculus I —if necessary, student may need
- MAT 175 Pre-Calculus first
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND
- HIS 106 Thinking Historically in a Global Age (3 cr)

#### II. Categories of Knowledge
35 cr

**A: Logic/Numbers for Rational Thinking (4 cr)**
- MAT 117 Applied Statistics

**B: Literary, Artistic & Cultural Traditions (9 cr)**
- ______________________________
- ______________________________
- ______________________________

**C: Biological & Physical Sciences (10 cr)**
- PHY 121 Introductory Physics
- CHM 121 Chemical Bonding
- BIO 161 Principles of Biology: Cell Structure & Function

**D: Political, Economic & Geographic Science (6 cr)**
- ______________________________

**E: Social & Behavioral Science (6 cr)**
- ______________________________ #

**III. Library Skills** Complete via College/Advanced Writing course

### Biology Major Requirements
38 cr

**CORE COURSES**

- BIO 161 Principles of Biology: Cell Structure & Function (4 cr)
- BIO 162 Principles of Biology: Organismal Diversity (4 cr)
- BIO 220 Microbiology (3 cr)
- BIO 260 Genetics (3 cr)
- BIO 499 Capstone Seminar in Biology (1 cr)

**Students must earn at least a 2.0 average in Bio 161 & 162 before upper level Biology electives may be taken. See the catalog for remediation procedure.**

**Physiology elective** Select 1 course:

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

**Anatomy elective** Select 1 course:

- BIO 370 Comparative Anatomy (3 cr) OR
- BIO 371 Human Anatomy (4 cr) OR
- BIO 375 Histology (3 cr)

**Molecular/Cellular elective** Select 1 course:

- BIO 385 Cell Biology (3 cr) OR
- BIO 418 Molecular Biology (3 cr)

**Breath Biology electives** Select 1 course:

- 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 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)

**Chemistry Requirements**

- CHM 121 Chemical Bonding* AND
- CHM 122 Chemical Dynamics AND
- CHM 126 Lab IIB (4 cr)
- CHM 221 Organic Chemistry I AND
- CHM 225 Lab IIIB (4 cr)
- CHM 227 Introduction to Biochemistry (4 cr)

**Math Requirements**

- MAT 211 Calculus (4 cr) *
- MAT A Statistics course 4 cr * See Category A

**Physics Requirements**

- PHY 121 Introductory Physics I (3 cr) AND
- PHY 123 Introductory Physics I lab (1 cr)
- PHY 122 Introductory Physics II (3 cr) AND
- PHY 124 Introductory Physics II lab (1 cr)

### Free Electives
3-7 cr

Refer to the Undergraduate Catalog to determine the courses that can be counted under each section.

*Major requirement double counts as General Education credits

# PSY 101 General Psychology is required for all pre-Chiropractic students.

### Total Graduation Requirements
120 cr

GPA Needed to Declare: 2.8

**Admission to this major is competitive. Students must have earned at least 15 credits and have grades of “C” or better in BIO 161/BIO 162 AND one of the following CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.**

**Helpful Hints for Advising:**

Students should begin their math sequence in the freshman year.

**Year I**

- BIO 161 Principles of Biology: Cell Structure & Function
- BIO 162 Principles of Biology: Organismal Diversity

**Year II**

- CHM 121 & CHM 125 Chemical Bonding and lab
- CHM 122 & CHM 124 Chemical Dynamics and lab

Students lacking strong chemistry/math backgrounds should consider taking CHM 105: Chemistry: An Observational Approach during their first year.

**Physics** is normally taken in the senior year.

A Biology minor is available 19 credits
A Guidebook for Undergraduate Students 2015-2016

Biology Electives may be taken. **Students must earn at least a 2.0 average in Bio 161 & 162 before upper level 

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 499 Capstone Seminar in Biology</td>
<td>1 cr</td>
</tr>
<tr>
<td>BIO 385 Cell Biology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 260 Genetics</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 242 Ecology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 162 Principles of Biology: Organismal Diversity</td>
<td>4 cr</td>
</tr>
<tr>
<td>BIO 208 Field Biology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 242 Ecology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 260 Genetics</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 385 Cell Biology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 499 Capstone Seminar in Biology</td>
<td>1 cr</td>
</tr>
<tr>
<td>MAT 211 Calculus I</td>
<td>4 cr</td>
</tr>
<tr>
<td>MAT 175 Pre-Calculus</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHY 121 Introductory Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHY 122 Introductory Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHY 125 Introductory Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHY 123 Introductory Physics I lab</td>
<td>1 cr</td>
</tr>
<tr>
<td>PHY 123 Introductory Physics II lab</td>
<td>1 cr</td>
</tr>
<tr>
<td>PHYS 101 General Psychology</td>
<td>3 cr</td>
</tr>
<tr>
<td>EEC 273 Introduction to Exceptionality</td>
<td>3 cr</td>
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<tr>
<td>EEC 423 Effective Instructional Strategies</td>
<td>3 cr</td>
</tr>
<tr>
<td>EEC 483 Assessing Students for Curricular Decision Making</td>
<td>3 cr</td>
</tr>
<tr>
<td>RDG 413 Teaching Reading ELL</td>
<td>3 cr</td>
</tr>
<tr>
<td>EDU 495 Student Teaching &amp; Professional Practicum</td>
<td>12 cr</td>
</tr>
</tbody>
</table>

One course which emphasizes intergroup education must be included in the Categories of Knowledge. See the Biology Dept. for details.

III. Library Skills Complete via College/Advanced Writing course

Biology Requirements: 38 cr

Core Courses 15 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 161 Principles of Biology: Cell Structure &amp; Function</td>
<td>4 cr</td>
</tr>
<tr>
<td>BIO 162 Principles of Biology: Organismal Diversity</td>
<td>4 cr</td>
</tr>
<tr>
<td>BIO 208 Field Biology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 242 Ecology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 260 Genetics</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 385 Cell Biology</td>
<td>3 cr</td>
</tr>
<tr>
<td>BIO 499 Capstone Seminar in Biology</td>
<td>1 cr</td>
</tr>
</tbody>
</table>

**Students must earn at least a 2.0 average in Bio 161 & 162 before upper level Biology electives may be taken.

Physiology elective  Select 1 course: 4 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 350 Human Physiology</td>
<td>4 cr</td>
</tr>
<tr>
<td>BIO 351 Animal Physiology</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

Biological Education Certification - B.S.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math Requirements:</td>
<td>8 cr</td>
</tr>
<tr>
<td>MAT 211 Calculus I</td>
<td>4 cr</td>
</tr>
<tr>
<td>MAT 117 Applied Statistics</td>
<td>4 cr</td>
</tr>
<tr>
<td>Physics Requirements:</td>
<td>4 cr</td>
</tr>
<tr>
<td>PHY 121 Introductory Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHY 123 Introductory Physics</td>
<td>1 cr</td>
</tr>
<tr>
<td>PHY 123 Introductory Physics lab</td>
<td>1 cr</td>
</tr>
<tr>
<td>PHY 122 Introductory Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHY 125 Introductory Physics lab</td>
<td>1 cr</td>
</tr>
</tbody>
</table>

*Optional, but strongly recommended

Chemistry Requirements: 12 cr

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHM 121 Chemical Bonding</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 122 Chemical Dynamics</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 221 Organic Chemistry</td>
<td>4 cr</td>
</tr>
<tr>
<td>CHM 227 Introduction to Biochemistry</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

Total Graduation Requirements 120+ cr

GPA Needed to Declare: 3.0

Admission to this major is competitive. Students must have earned at least 15 credits and have grades of “C” or better in BIO 161/BIO 162 AND one of the following CHM 121: Chemical Bonding, MAT 175: Pre-Calc OR MAT 211: Calculus I.

Helpful Hints for Advising:

- Semester I BIO 161 Principles of Biology: Cell Structure & Function and/or CHM 121 Chemical Bonding (and lab)
- Semester II BIO 162 Principles of Biology: Organismal Diversity and/or CHM 122 Chemical Dynamics (and lab)
- Semester III BIO 208 Field Biology and/or BIO 260 Genetics

Students lacking strong chemistry/math backgrounds should consider taking CHM 105: Chemistry: An Observational Approach. Physics is normally taken in the junior year.

Environmental Education Certificate is available may teach any subject matter labeled as environmental education for grades K - 12. Requires 24 credits — See the department for details.

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

A 4-year template is available at www.ship.edu/undeclared
A Guidebook for Undergraduate Students 2015-2016

CHEMISTRY - B.S.

General Education Requirements

I. Required Skills and Competencies 16 cr
   - ENG 106 Writing Intensive First Year Seminar OR
     ENG 110 Advanced Placement Writing (3 cr)
     May need ENG 050 Basic Writing first, based on test results
   - HCS 100 Intro to Human Communication (3 cr)
   - Mathematical Competency-Required
     MAT211 Calculus I —if necessary, student may need
     MAT175 Pre-Calculus first
   - HIS 105 Historical Foundations of Global Cultures (3 cr) AND
     HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 35 cr
   A: Logic/Numbers for Rational Thinking (4 cr)
     MAT 212 Calculus II
   B: Literary, Artistic & Cultural Traditions (9 cr)
     ______________________________
     ______________________________
     ______________________________
   C: Biological & Physical Sciences (10 cr)
     BIO 161 Principles of Biology: Cell Structure & Function
     CHM121 Chemical Bonding
     PHY 205 Intermediate Physics I
   D: Political, Economic & Geographic Science (6 cr)
     ______________________________
     ______________________________
   E: Social & Behavioral Science (6 cr)
     ______________________________
     ______________________________

III. Library Skills Complete via College/Advanced Writing course

Chemistry Requirements 50 cr

   __ CHM 110 The Chemistry Experience (1 cr)
   __ CHM 121 Chemical Bonding (3 cr) *
     (Prerequisites: MAT 175 or MAT 117 (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.)
   __ CHM 123 Lab IA (1 cr)
   __ CHM 122 Chemical Dynamics (3 cr)
     (Prereq: Grade of C or better in CHM 121)
   __ CHM 124 Lab IIA (3 cr)
   __ CHM 221 Modern Organic Chemistry I (3 cr)
   __ CHM 222 Modern Organic Chemistry II (3 cr)
   __ CHM 224 Lab IVA (3 cr)
   __ CHM 301 Biochemistry I (3 cr)
   __ CHM 312 Chemistry Seminar (1 cr)
   __ CHM 324 Advanced Organic Lab (1 cr)
   __ CHM 361 Physical Chemistry I (4 cr)
   __ CHM 362 Physical Chemistry II (4 cr)
   __ CHM 371 Analytical Chemistry (4 cr)
   __ CHM 381 Intermediate Inorganic Chemistry (3 cr)
   __ CHM 420 Biochemistry II (3 cr) OR
     CHM 490 Special Topics (3 cr)
   __ CHM 481 Advanced Inorganic Chemistry (4 cr)
   __ CHM 497 Introduction to Research (semester I) (1 cr)
   __ CHM 498 Introduction to Research (semester II) (1 cr)

Physics Requirements 8 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)

Computer Science Requirements 4 cr

   __ CSC 110 Computer Science I (3 cr) AND
   __ CSC 106 Computer Science Lab I (1 cr)

Free Electives 13 cr

*Major requirement double counts as General Education Credits

Min. Total Graduation Requirements 120 cr

Helpful Hints for Advising:

Semester I  CHM 121 Chemical Bonding & CHM 123 Lab IA
           MAT 211 Calculus II
Semester II CHM122 Chemical Dynamics & CHM 124 Lab IIA
            MAT 212 Calculus II
            BIO 162 Principles of Biology; Organismic Diversity
Semester III PHY 205 Intermediate Physics I & PHY 123 Lab I
           CHM221 Modern Organic Chem I & CHM 223 Lab IIIA
Semester IV PHY 206 Intermediate Physics II & PHY 125 Lab II
           CHM222 Mod Organic Chem II & CHM 224 Lab IVA

Chemistry minor is available 23-27 credits.
Biochemistry minor is available 24-28 credits; see department.

American Chemical Society Certification available.
See Department Chairperson for details.

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

A 4-year template is available at www.ship.edu/undeclared
CHEMISTRY - BIOCHEMISTRY CONCENTRATION - B.S.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Skills and Competencies</td>
<td>16 cr</td>
</tr>
<tr>
<td>___ ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr) May need ENG 050 Basic Writing first, based on test results</td>
<td></td>
</tr>
<tr>
<td>___ HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ Mathematical Competency-Required</td>
<td></td>
</tr>
<tr>
<td>MAT 211 Calculus I —if necessary, student may need MAT 175 Pre-Calculus first</td>
<td></td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

| II. Categories of Knowledge                   | 37 cr   |
| A: Logic/Numbers for Rational Thinking       | (4 cr)  |
| ___ MAT 212 Calculus II                      |         |
| B: Literary, Artistic & Cultural Traditions  | (9 cr)  |
| ___ ______________________________         |         |
| ___ ______________________________         |         |
| ___ ______________________________         |         |
| C: Biological & Physical Sciences (12 cr)    |         |
| ___ CHM 121 Chemical Bonding *               |         |
| ___ PHY 205 Intermediate Physics I *         |         |
| ___ BIO 161 Principles of Biology: Cell Structure & Function |         |
| D: Political, Economic & Geographic Science  | (6 cr)  |
| ___ ______________________________         |         |
| ___ ______________________________         |         |
| ___ ______________________________         |         |
| E: Social & Behavioral Science (6 cr)        |         |
| ___ ______________________________         |         |
| ___ ______________________________         |         |

III. Library Skills Complete via College/Advanced Writing course

**Chemistry Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ CHM 110 The Chemistry Experience (1 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 121 Chemical Bonding (3 cr) *(Prerequisites: MAT 175 or MAT 117 (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.)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 123 Lab IA (1 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 122 Chemical Dynamics (3 cr) *(Prereq: Grade of C or better in CHM 121)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 124 Lab IIA (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 221 Modern Organic Chemistry I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 223 Lab IIIA (1 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 222 Modern Organic Chemistry II (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 224 Lab IVA (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 301 Biochemistry I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 312 Chemistry Seminar (1 cr)</td>
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</tr>
<tr>
<td>___ CHM 324 Advanced Organic Lab (1 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 361 Physical Chemistry I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 362 Physical Chemistry II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 371 Analytical Chemistry (4 cr)</td>
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<tr>
<td>___ CHM 381 Intermediate Inorganic Chemistry (3 cr)</td>
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<tr>
<td>___ CHM 420 Biochemistry II (3 cr)</td>
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</tr>
<tr>
<td>___ CHM 421 Biochemistry Lab (1 cr)</td>
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<tr>
<td>___ CHM 496 Introduction to Research III (1 cr)</td>
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</tbody>
</table>

**Physics Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ PHY 205 Intermediate Physics I (3 cr) * AND PHY 123 Physics I Lab (1 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 206 Intermediate Physics II (3 cr) AND PHY 125 Physics II Lab (1 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Biology Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ BIO 260 Genetics (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ BIO 385 Cell Biology (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ BIO 418 Molecular Biology (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ BIO 461 Techniques in Biochemistry (3 cr)</td>
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</tr>
</tbody>
</table>

**Restricted Elective (choose one)**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ CHM 481 Advanced Inorganic Chemistry (4 cr)</td>
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</tr>
<tr>
<td>___ BIO 220 Microbiology (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ BIO 408 Virology (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ BIO 409 Immunology (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Free Electives**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ CSC 110 Computer Science I (3 cr) AND CSC 106 Computer Science I Lab (1 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CHM 490 Special Topics (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

Recommended Electives:

- To graduate with American Chemical Society certification students must complete 2 additional credits in research (CHM 497/498).

**Total Graduation Requirements**

120 cr

GPA Needed to Declare: 2.0

Helpful Hints for Advising:

- Semester I: CHM121 Chemical Bonding and CHM 123 Lab IA
  MAT 211 Calculus II

- Semester II: CHM122 Chemical Dynamics and CHM 124 Lab IIA
  MAT 212 Calculus II
  BIO 162 Principles of Biology: Organismal Diversity

- Semester III: PHY 205 Intermediate Physics I & PHY 123 Lab I
  CHM221 Modern Organic Chem I & CHM 223 Lab IIIA
  BIO 260 Genetics

- Semester IV: PHY 206 Intermediate Physics II & PHY 125 Lab II
  CHM222 Mod Organic Chem II
  MAT 212 Calculus II

Second semester juniors are required to take a comprehensive examination a graduation requirement.

Internships are available Fall, Spring, and Summer in the Carlisle Forensic Laboratory.
## General Education Requirements

### I. Required Skills and Competencies 16 cr
- **ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)**
- May need ENG 050 Basic Writing first, based on test results
- **HCS 100 Intro to Human Communication (3 cr)**
- **Mathematical Competency-Required**
  - MAT 211 Calculus I —if necessary, student may need to take MAT 175 Pre-Calculus first
- **HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)**

### II. Categories of Knowledge 37 cr

#### A: Logic/Numbers for Rational Thinking (4 cr)
- **MAT 212 Calculus II**

#### B: Literary, Artistic & Cultural Traditions (9 cr)
- __________________________________________
- __________________________________________
- __________________________________________

#### C: Biological & Physical Sciences (12 cr)
- **CHM121 Chemical Bonding *
- **PHY 205 IntermediatePhysics I *
- **BIO 161 Principles of Biology: Cell Structure & Function I *

#### D: Political, Economic & Geographic Science (6 cr)
- __________________________________________

#### E: Social & Behavioral Science (6 cr)
- __________________________________________

### III. Library Skills Complete via College/Advanced Writing course

### Chemistry Requirements 43-44 cr
- **CHM 110 The Chemistry Experience (1 cr)**
- **CHM 121 Chemical Bonding (3 cr)** *(Prerequisites: MAT 175 or MAT 117 (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.)*
- **CHM 123 Lab IA (1 cr)**
- **CHM 221 Modern Organic Chemistry I (3 cr)**
- **CHM 222 Modern Organic Chemistry II (3 cr)**
- **CHM 224 Lab IVA (3 cr)**
- **CHM 301 Biochemistry I (3 cr)**
- **CHM 324 Advanced Organic Lab (1 cr)**
- **CHM 361 Physical Chemistry I (4 cr)**
- **CHM 362 Physical Chemistry II (4 cr)**
- **CHM 371 Analytical Chemistry (4 cr)**
- **CHM 381 Intermediate Inorganic Chemistry (3 cr)**
- **CHM 4xx Level Chemistry Elective (3-4 cr)**

### Physics Requirements 8 cr
- **PHY 205 Intermediate Physics I (3 cr) * AND PHY 206 Intermediate Physics II (3 cr) AND PHY 123 Physics I Lab (1 cr) AND PHY 125 Physics II Lab (1 cr)**

### Biology Requirements 9 cr
- **BIO 260 Genetics (3 cr)**
- **BIO 418 Molecular Biology (3 cr)**
- **BIO 461 Techniques in Biochemistry (3 cr)**

### Criminal Justice Requirements 15 cr
- **CRJ 100 Intro. to Criminal Justice (3 cr)**
- **CRJ 211 Criminal Law and Procedures (3 cr)**
- **CRJ 321 Criminal Investigation (3 cr)**
- **CRJ 336 Intro to Forensic Science (3 cr)**
- **CRJ 456 Forensic Science: Evidence Analysis (3 cr)**

*Major requirement fulfills General Education Credits

### Total Graduation Requirements 123 cr

GPA Needed to Declare: 2.0

Helpful Hints for Advising:

Semester I  
**CHM121 Chemical Bonding & CHM 123 Lab IA**  
**MAT 211 Calculus II**

Semester II  
**CHM122 Chemical Dynamics & CHM 124 Lab IIA**  
**MAT 212 Calculus II**  
**BIO 162 Principles of Biology: Organismal Diversity**

Semester III  
**PHY 205 Intermediate Physics II & PHY 125 Lab II**  
**CHM221 Modern Organic Chem I & Chem 223 Lab IIIA**  
**BIO 260 Genetics**

Semester IV  
**PHY 206 Intermediate Physics II & PHY 125 Lab II**  
**CHM222 Modern Organic Chem II & Chem 224 Lab IVA**  
**BIO 220 Microbiology**

American Chemical Society Certification available. See Department Chairperson for details.

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.
### CHEMISTRY - PRE-PHARMACY CONCENTRATION - B.S.

#### General Education Requirements

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<td>CHM 122 Chemical Dynamics (3 cr)</td>
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<tr>
<td>(Prereq: Grade of C or better in CHM 121)</td>
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<tr>
<td>CHM 124 Lab IIA (3 cr)</td>
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<td>CHM 221 Modern Organic Chemistry I (3 cr)</td>
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<td>CHM 324 Advanced Organic Lab (1 cr)</td>
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<td>CHM 371 Analytical Chemistry (4 cr)</td>
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<td>CHM 381 Intermediate Inorganic Chemistry (3 cr)</td>
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<td>CHM 4xx Level Chemistry Elective (3-4 cr)</td>
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#### Physics Requirements

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<td>BIO 162 Principles of Biology: Organismal Diversity (4 cr)</td>
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Choose one:

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<tbody>
<tr>
<td></td>
<td>11 cr</td>
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</table>

*Major requirement double counts as General Education Credits

### GPA Needed to Declare: 2.8 **

** 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.

#### Helpful Hints for Advising:

**Semester 1**

- CHM121 Chemical Bonding and Lab IA
- MAT 211 Calculus I

**Semester II**

- CHM122 Chemical Dynamics and Lab IIA
- MAT 212 Calculus II
- BIO 162 Principles of Biology: Organismal Diversity

**Semester III**

- PHY 205 Intermediate Physics I & PHY 123 Lab I
- CHM221 Modern Organic Chem I & Chem 223 Lab IIIA
- BIO 260 Genetics

**Semester IV**

- PHY 206 Intermediate Physics II & PHY 125 Lab II
- CHM222 Mod Organic Chem II & Chem 224 Lab IVA
- BIO 220 Microbiology

All chemistry majors will take a comprehensive examination in their junior year at a time and place designated by the department. A satisfactory performance in all areas of this examination is a requirement for departmental recommendation and ACS certification.
CHEMISTRY-SECONDARY EDUCATION CERTIFICATION B.S.

### General Education Requirements

**I. Required Skills and Competencies**  
16 cr

- **ENG 106 Writing Intensive First Year Seminar OR**  
  ENG 110 Advanced Placement Writing (3 cr)  
  May need ENG 050 Basic Writing first, based on test results
- **HCS 100 Intro to Human Communication (3 cr)**
- **Mathematical Competency-Required**
  MAT 211 Calculus I —if necessary, student may need to take MAT 175 Pre-Calculus first
- **HIS 105 Historical Foundations of Global Cultures (3 cr) AND**  
  HIS 106 Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge**  
37 cr

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<td><strong>PHY 205 Intermediate Physics I</strong></td>
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<td><strong>___</strong></td>
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**III. Library Skills Complete via College/Advanced Writing course**

### Chemistry Requirements

39 cr

- **CHM 110 The Chemistry Experience (1 cr)**
- **CHM 121 Chemical Bonding (3 cr)**  
  (Prerequisites: MAT 175 or MAT 117 (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.)
- **CHM 123 Lab IA (1 cr)**
- **CHM 122 Chemical Dynamics (3 cr)**  
  (Prereq: Grade of C or better in CHM 121)
- **CHM 124 Lab IIA (3 cr)**
- **CHM 221 Modern Organic Chemistry I (3 cr)**
- **CHM 223 Lab IIIA (1 cr)**
- **CHM 222 Modern Organic Chemistry II (3 cr)**
- **CHM 224 Lab IV A (3 cr)**
- **CHM 301 Biochemistry I (3 cr)**
- **CHM 361 Physical Chemistry I (4 cr)**
- **CHM 362 Physical Chemistry II (4 cr)**
- **CHM 371 Analytical Chemistry (4 cr)**
- **CHM 381 Intermediate Inorganic Chemistry (3 cr)**

### Physics Requirements

8 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)**

### Professional Education Requirements

33 cr

- **TCH 207 Org. & Psych. Foundations of Secondary Education (3 cr)**

The following must be taken concurrently:

- **EDU 440 Teaching Science In Secondary Schools (3 cr)**
- **EDU 441 Curriculum & Evaluation in the Secondary Science Classroom (3 cr)**
- **EDU 495 Student Teaching & Professional Practicum (12 cr)**
- **EEC 273 Introduction to Exceptionality** (3 cr)
- **EEC 423 Effective Instructional Strategies (3 cr)**
- **EEC 483 Assessing Students for Curricular Decision Making (3 cr)**
- **RDG 413 Teaching Reading ELL (3 cr)**

*Major requirement double counts as General Education Credits*

### Total Graduation Requirements

130 cr

**GPA Needed to Declare:**  
3.0

**Helpful Hints for Advising:**

- **Semester I**  
  CHM121 Chemical Bonding and CHM 123 Lab IA  
  MAT 211 Calculus I

- **Semester II**  
  CHM122 Chemical Dynamics and CHM 123 Lab IIA  
  PSY 101 General Psychology

- **Semester III**  
  PHY 205 Intermediate Physics I & PHY 123 Lab I  
  CHM221 Modern Organic Chem I & Chem 223 Lab IIIA  
  BIO 162 Principles of Biology: Organismal Diversity

- **Semester IV**  
  PHY 206 Intermediate Physics II & PHY 125 Lab II  
  CHM222 Mod Organic Chem II & Chem 224 Lab IVA  

American Chemical Society Certification available.  
See Department Chairperson for details.

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

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

Electronic Media, Print Media, & Public Relations Professional Emphases

General Education Requirements

I. Required Skills and Competencies

16 cr

- ENG 106 Writing Intensive First Year Seminar QR
- ENG 110 Advanced Placement Writing (3 cr)
- Mathematical Competency–Required
- MAT 117 Applied Statistics (4 cr)
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND
- HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge

33 cr

A: Logic/Numbers for Rational Thinking (3 cr)
- __________

B: Literary, Artistic & Cultural Traditions (9 cr)
- __________
- __________
- __________

C: Biological & Physical Sciences (9 cr)
- __________
- __________
- __________

D: Political, Economic & Geographic Science (6 cr)
- __________
- __________
- __________

E: Social & Behavioral Science (6 cr)
- __________
- __________
- __________

** B.A. students must satisfy the Novice level competency in a foreign language. This is accomplished via 3 years of the same language in high school, an AP score of at least 2, or the completion of a 103 level course. Three credits of a foreign language may count under category B.

III. Library Skills Completed via College/Advanced Writing course

IV. Communications/Journalism Major

Note: Students take 42 credits to complete the major.

Communications/Journalism Core

15 cr

Students must complete the following core courses with "C" grades or better before taking any other Comm/Journ course:

- COM 111 Introduction to Mass Communication (3 cr)
- COM 112 Media Writing (3 cr)

Students in the program need appropriate prerequisites and class standing before taking advanced Comm/Journ courses.

- COM 245 Diversity & the Media (3 cr)
- COM 345 Communication Law and Ethics (3 cr) Jr./Sr. standing
- COM 355 Comm/Journ. Professional Practicum (3 cr) Jr. standing
  (prereq. COM 201 & 241, or 285 & 293, or 224 & 284)

Professional Emphasis 12 credits in one of the following areas: 12 cr

Electronic Media

- COM 224 Electronic Media Writing (3 cr)
- COM 284 Electronic Media Basic Production (3 cr)
- COM 424 Electronic Media Producing & Performance (3 cr)
  (Prereq: COM 284 & COM 224)
- COM 484 Electronic Media Programming & Management (3 cr)

Print Media

- COM 285 News Writing & Reporting (3 cr)
- COM 293 Editing (3 cr)
- COM 375 Public Affairs Reporting (3 cr) (Prereq: COM 285)
- COM 478 Digital Journalism (3 cr) (Prereq: COM 285; 393; 355) (Spr only)

A graduable template is available at www.ship.edu/undeclared

Communications/Journalism Electives 15 cr

- COM 201 Principles of Public Relations (3 cr)
- COM 241 Public Relations Writing (3 cr)
- COM 381 Promotional Publication Design (3 cr)
- COM 432 Public Relations Research & Campaigns (3 cr) (Prereq COM 201; 241; 201; 355) (Snr. only)

Communications/Journalism Electives

15 cr

- COM 290 Advertising Copywriting (3 cr)
- COM 305 Sports Journalism (3 cr) (prereq. COM 245)
- COM 335 Media Advertising & Sales (3 cr)
- COM 360 Basic Digital Photographic Communication (3 cr)
- COM 362 Photojournalism (3 cr)

The following courses require junior or senior status:

- COM 395 Internship I (3 cr) (Dept. permission; overall GPA=2.5 & Major GPA=3.0)
- COM 410 Women & the Media (3 cr)
- COM 425 Feature Writing (3 cr)
- COM 451 Electronic Field Productions (3 cr) (Prereq. COM 224; 284)
- COM 452 Multimedia Journalism (3 cr) (Prereq. COM 224; 284)
- COM 460 Case Studies in Public Relations (3 cr)
- COM 470 Advanced Digital Photographic Communication (3 cr)
- COM 476 Magazine Design (3 cr)
- COM 481 Digital Media Design (3 cr)
- COM 482 Internet Communication (3 cr)
- COM 490, 491, 492 Selected Topics in Comm./Journalism (3 cr)

Free Electives

29 cr

These courses can be from any academic area outside of Comm/Journ.

Total Graduation Requirements

120 cr

GPA Needed to Declare: 2.3

Helpful Hints for Advising:

Semester I

- COM 111 Introduction to Mass Communication
- COM 112 Media Writing

As part of the COM 112: Media Writing course, a grammar/style proficiency exam is given to all students. This exam must be passed with a score of 70 or better to pass the course and stay in the major/minor. Students are permitted to take the exam no more than two times. COM 112 must be taken at Shippensburg University.

Only current majors or minors may schedule Comm/Journ courses without departmental permission.

Above average writing skills are needed in this major and students are highly encouraged to take courses that will enhance these skills.

A professional internship is strongly recommended. One to three internship credits may be scheduled by qualified juniors or seniors who meet the department standards and who have obtained written approval from the department internship coordinator. Each internship credit is equivalent to 40 hours of work on site.

Only 12 credits of transfer credit may be counted as part of the major.

A Comm/Journ minor is available 18 cr. Note: this department does not permit any transfer courses to be counted in the minor.

56
### Computer Engineering B.S.

#### General Education Requirements

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</table>

| III. Library Skills: Complete via College/Advanced Writing | |
| Computer Science Core Requirements | 43 cr |
| CSC 107 Computer Science I Lab (1 cr) (Majors) | |
| CSC 110 Computer Science I (4 cr) | |
| CSC 111 Computer Science II (4 cr) | |
| CMPE 220 Computer Organization (4 cr) | |
| CMPE 310 Design & Analysis of Algorithms (4 cr) | |
| CMPE 320 Operating Systems (4 cr) | |
| CMPE 322 Microcontrollers and Interfaces (4 cr) | |
| CMPE 410 Real-Time and Mobile Development (4 cr) | |
| CMPE 420 Digital and Reconfigurable Computing (4 cr) | |
| CMPE 498 Engineering Research Methods (2 cr) | |
| CMPE 499 Engineering Design and Development (2 cr) | |
| CSC/CMPE Elective (3 cr)* | |
| CSC/CMPE Elective (3 cr)* | |

Computer Science or Engineering Elective is any computer science, computer engineering, or software engineering course at the 300-level or above. Check with your advisor or the department for the frequency of related courses.

#### Mathematics Requirements

<table>
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<tr>
<td>MAT 211 Calculus I (4 cr)</td>
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<td>MAT 212 Calculus II (4 cr)</td>
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<td>MAT 213 Calculus III (4 cr)</td>
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<tr>
<td>MAT 225 Discrete Mathematics (4 cr)</td>
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<td>MAT 313 Statistics I (4 cr)</td>
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<tr>
<td>MAT 322 Differential Equations (3 cr)</td>
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<tr>
<td>PHY 311 Quantum (4 cr)</td>
</tr>
<tr>
<td>PHY 326 Semiconductor Devices (4 cr)</td>
</tr>
<tr>
<td>PHY 335 Electronics (4 cr)</td>
</tr>
</tbody>
</table>

Total Graduation Requirements: 125 cr

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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.

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 have strong math, logic, and reasoning skills; and a background in science. To complete the program in 4 years, students must begin their first semester with MAT 211: Calculus I. Students requiring remedial mathematics should complete this work prior to beginning their first semester.

Helpful Hints for Advising:

**Semester I**
- CSC 110 Computer Science I (3 cr)
- CSC 107 Computer Science I Lab (1 cr)
- Calculus I (4 cr)****
- Two General Education Classes (6 cr)

**Semester II**
- CSC 111 Computer Science II (4 cr)
- MAT 225 Discrete Mathematics (4 cr)****
- Two General Education Classes (6 cr)

An alternative to this program that does not include the rigorous math and science requirements is the embedded systems concentration in computer science.

Students who enroll in computer engineering may complete a physics minor by completing two additional course requirements. Students may complete a mathematics dual-major by completing (2) 300 level or 400 level courses, and (2) 400 level course.

**** Depending on math placement.

**** Students not qualified to take Calculus I may be required to first complete MAT 175 Pre-Calculus

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A 4-year template is available at www.ship.edu/undeclared
# COMPUTER SCIENCE B.S.

General Computer Science, Computer Graphics, Embedded Programming, & Related Discipline Concentrations

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<td>6 cr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>III. Library Skills: Complete via College/Advanced Writing</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science Major Core Requirements all concentrations</td>
<td>32 cr</td>
</tr>
<tr>
<td>CSC 107 Computer Science I Lab (1 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 110 Computer Science I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 111 Computer Science II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>SWE 200 Design Patterns (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CMPE 220 Computer Organization (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 310 Design &amp; Analysis of Algorithms (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CMPE 320 Operating Systems (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 371 Database Management (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 498 Senior Research Methods (2 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 499 Research and Development Project (2 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Courses required in all Concentrations</th>
<th>15 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 211 Calculus I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 225 Discrete Mathematics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 313 Statistics I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 318 Elementary Linear Algebra (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General Computer Science Degree</th>
<th>20 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>The general computer science degree consists of the following courses. Student may instead choose a specific area of interest. (See concentrations below).</td>
<td></td>
</tr>
<tr>
<td>CSC 350 Intro to Computer Graphics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 401 Simulation Techniques (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 431 Computer Networks (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 440 Compiler Design (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 462 Artificial Intelligence (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concentrations</th>
<th>20 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three concentrations are pre-approved: (See Below) In addition, other concentrations can be developed. Students may, with their advisor, draw up a customized concentration to be submitted to the dept. for approval.</td>
<td></td>
</tr>
<tr>
<td>Embedded Programming Concentration</td>
<td></td>
</tr>
<tr>
<td>CSC 401 Simulation Techniques (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 420 Embedded &amp; Real-Time Programming (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 431 Computer Networks (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 440 Compiler Design (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 461 Introduction to Robotics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CMPE 410 Real-Time &amp; Mobile Computing (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CMPE 420 Digital &amp; Reconfigurable Computing (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CMPE 322 Microcontrollers &amp; Interfaces (4 cr)</td>
<td></td>
</tr>
<tr>
<td>One of the following:</td>
<td></td>
</tr>
<tr>
<td>CSC 432 Computer Networks (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 440 Compiler Design (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 463 Introduction to Robotics (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Computer Graphics Concentration</th>
<th>25 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 350 Intro to Computer Graphics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 450 Advanced Computer Graphics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 451 Computer Graphics Algorithms (4 cr)</td>
<td></td>
</tr>
<tr>
<td>Computer Science Elective** (4 cr)</td>
<td></td>
</tr>
<tr>
<td>ART 217 Computer Design I (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

Any two of the following:

<table>
<thead>
<tr>
<th>Related Discipline Concentration</th>
<th>16 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Science Elective (4 cr)**</td>
<td></td>
</tr>
<tr>
<td>Computer Science Elective (4 cr)***</td>
<td></td>
</tr>
<tr>
<td>Major or Minor in other discipline</td>
<td></td>
</tr>
</tbody>
</table>

None of these electives can overlap with your other major/minor

*Computer Science majors must complete a two-semester science sequence. Students can choose from BIO161/162, CHM 121&125/122&126, or PHY 205&123/206&125. The first course in the sequence can count as a Category C General Education course.

**Math or Computer Science Elective is any CSC or MAT course at the 300-level or above or MAT 223 or MAT 329 or PHL 332

***Computer Science Elective is any CSC course at the 300-level or above. Check with advisor or bulletin board for frequency of required courses.

<table>
<thead>
<tr>
<th>Free Electives</th>
<th>17 cr</th>
</tr>
</thead>
</table>

Total Graduation Requirements 120-122 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.

Students pursuing this major should have strong math skills.

Helpful Hints for Advising:

<table>
<thead>
<tr>
<th>Semester I</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 110 Computer Science I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 107 Computer Science I Lab (1 cr)</td>
<td></td>
</tr>
<tr>
<td>Calculus I (4 cr)****</td>
<td></td>
</tr>
<tr>
<td>Two Gen Ed courses (6 cr)</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester II</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 111 Computer Science II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 225 Discrete Mathematics (4 cr)****</td>
<td></td>
</tr>
<tr>
<td>Two General Education Classes (6 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**** Depending on math placement.

*****Students not qualified to take Calculus I may be required to first complete MAT 175 Pre-Calculus

A Computer Science minor is available 20-21 cr.
EARTH-SPACE & GENERAL SCIENCE –SECONDARY EDUCATION CERTIFICATION-B.S.Ed.

With Environmental Education Certification Option

General Education Requirements

I. Required Skills and Competencies 15 cr
   - ENG 106 Writing Intensive First Year Seminar OR
     ENG 110 Advanced Placement Writing (3 cr)
     Student may require ENG 050 Basic Writing first, based on test results.
   - HCS 100 Intro to Human Communication (3 cr)
   - Mathematical Competency — See math courses listed under math/computer science requirements OR
     MAT 140 College Algebra AND
     HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 34 cr
   A: Logic/Numbers for Rational Thinking (4 cr)
      MAT 117 Applied Statistics
   B: Literary, Artistic & Cultural Traditions (9 cr)
   C: Biological & Physical Sciences (9 cr)
      Note course options under CHM, PHY, BIO
   D: Political, Economic & Geographic Science (6 cr)
   E: Social & Behavioral Science (6 cr)
      PSY 101 General Psychology

III. Library Skills Complete via College/Advanced writing course

Required Earth Science Courses 15 cr
   - ESS 210 Physical Geology (3 cr)
   - ESS 212 Historical Geology (3 cr)
   - ESS 220 Oceanography (3 cr)
   - PHY 108 Astronomy (3 cr)
   - ESS 355 Meteorology (3 cr)

Earth Science Electives  Select 4 courses: 12 cr
   - ESS 108 Conservation of Natural Resources (3 cr)
   - ESS 214 Geology of National Parks (3 cr)
   - ESS 306 Geomorphology (3 cr)
   - ESS 404 Applied Meteorology & Climatology (3 cr)
   - ESS 442 Environmental Geology (3 cr)
   - GEO 202 GIS I (3 cr)
   - GEO 203 Climatology (3 cr)
   - GEO 224 Soils (3 cr)
   - GEO 226 Hydrology (3 cr)
   - GEO 339 Remote Sensing (3 cr)
   - GEO 352 Cartography (3 cr)
   - GEO 363 GIS II (3 cr)
   - GEO 397 Introduction to Research (3 cr)
   - GEO 420 Geographic Information Systems (3 cr)
   - GEO 440 Field Techniques (3 cr)
   - GEO 444 Environmental Land Use Planning (3 cr)

Allied Sciences 34+ cr
   Biology (9 credits by advisement)
      - BIO 161 Principles of Biology: Cell Structure & Function (4 cr)
      - BIO 162 Principles of Biology: Organismal Diversity (4 cr)
      - BIO 145 Environmental Biology (3 cr)
      - BIO 242 Ecology * (3 cr) (prereq. BIO 162 and Soph standing)
      - BIO 248 Field Biology * (3 cr) (prereq. BIO 162)
      - BIO 311 Ornithology (3 cr) (prereq. BIO 161 and 162)
      - BIO 448 Field Botany & Plant Taxonomy * (3 cr) (prereq. BIO 162)

Chemistry (8 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)

Physics (11 cr)
   - PHY 108 Astronomy (3 cr)
   - PHY 121 Introductory Physics I (3 cr)
   - PHY 123 Lab (1 cr)
   - PHY 122 Introductory Physics II (3 cr)
   - PHY 125 Lab (1 cr)

Math (8+ credits by advisement)
   - MAT 117 Applied Statistics (4 cr)
   - MAT 211 Calculus I (4 cr) (prereq MAT 175 or Math Placement Level 6)
   - MAT 212 Calculus II (4 cr)

Professional Education Requirements 34 cr
   - TCH 207 Org. & Psych. Foundations of Secondary Education (3 cr)
   - EEC 273 Introduction to Exceptionality (3 cr)
   - EEC 423 Effective Instructional Strategies (3 cr)
   - EEC 483 Assessing Students for Curricular Decision Making (3 cr)
   - EDU 440 Teaching Science In Secondary School (4 cr)
   - EDU 441 Curriculum & Evaluation/Secondary Science Classroom I (3 cr)
   - RDG 413 Teaching Reading to English Language Learners (3 cr)
   - EDU 495 Student Teaching & Professional Practicum (12 cr)

Recommended: General Science Certification - 39 Credits

In order to complete a General Science Certification, students must take one of the following in addition to their Earth-Space program:
   - TCH 207 Org. & Psych. Foundations of Secondary Education (3 cr)
   - EEC 273 Introduction to Exceptionality (3 cr)
   - EEC 423 Effective Instructional Strategies (3 cr)
   - EEC 483 Assessing Students for Curricular Decision Making (3 cr)
   - EDU 440 Teaching Science In Secondary School (4 cr)
   - EDU 441 Curriculum & Evaluation/Secondary Science Classroom I (3 cr)
   - RDG 413 Teaching Reading to English Language Learners (3 cr)
   - EDU 495 Student Teaching & Professional Practicum (12 cr)

Optional: Environmental Education Certification - 24 Credits

Courses listed in major with an * fulfill requirements
   - BIO 145 Environmental Biology (3 cr)
   - BIO 161 Principles of Biology: Cell Structure & Function (4 cr)
   - BIO 162 Principles of Biology: Organismal Diversity (4 cr)
   - BIO 145 Environmental Biology (3 cr)
   - BIO 242 Ecology * (3 cr) (prereq. BIO 162 and Soph standing)
   - BIO 248 Field Biology * (3 cr) (prereq. BIO 162)
   - BIO 311 Ornithology (3 cr) (prereq. BIO 161 and 162)
   - BIO 448 Field Botany & Plant Taxonomy * (3 cr) (prereq. BIO 162)

Recommended: General Science Certification - 39 Credits

In order to complete a General Science Certification, students must take one of the following in addition to their Earth-Space program:
   - TCH 207 Org. & Psych. Foundations of Secondary Education (3 cr)
   - EEC 273 Introduction to Exceptionality (3 cr)
   - EEC 423 Effective Instructional Strategies (3 cr)
   - EEC 483 Assessing Students for Curricular Decision Making (3 cr)
   - EDU 440 Teaching Science In Secondary School (4 cr)
   - EDU 441 Curriculum & Evaluation/Secondary Science Classroom I (3 cr)
   - RDG 413 Teaching Reading to English Language Learners (3 cr)
   - EDU 495 Student Teaching & Professional Practicum (12 cr)

Total Graduation Requirements 120 cr

GPA Needed to Declare: 3.0

Helpful Hints for Advising:

Semester I  ESS 210 Physical Geology
   Second Core Course
   Biology 162

A 4-year template is available at www.ship.edu/undeclared
### ECONOMICS- B.S.

**Business, Math, Political Science, Public Administration, Social Science Concentrations**

#### General Education Requirements

<table>
<thead>
<tr>
<th>I. Required Skills and Competencies</th>
<th>15-16 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results.</td>
<td></td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>Mathematical Competency-Required</td>
<td></td>
</tr>
<tr>
<td>MAT 140 College Algebra (3 cr) or MAT 175 Pre-Calculus (3 cr)</td>
<td></td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Categories of Knowledge</th>
<th>33 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Logic/Numbers for Rational Thinking (3-4 cr)</td>
<td></td>
</tr>
<tr>
<td>Strongly Recommended:</td>
<td></td>
</tr>
<tr>
<td>MAT 181 Applied Calculus If MAT 140 taken OR MAT 211 Calculus I If MAT 175 taken</td>
<td></td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td></td>
</tr>
<tr>
<td>Lit. Course</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences (9 cr)</td>
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<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science (6 cr)</td>
<td></td>
</tr>
<tr>
<td>PLS 100 U.S. Government and Politics</td>
<td></td>
</tr>
<tr>
<td>ECO 101 Principles of Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science (6 cr)</td>
<td></td>
</tr>
<tr>
<td>SOC 101 Intro to Sociology</td>
<td></td>
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<tr>
<td></td>
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</tr>
</tbody>
</table>

| III. Library Skills Completed as part of the College Writing or Advanced Writing course | |

#### Economics Requirements

<table>
<thead>
<tr>
<th>27 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 101 Principles of Macroeconomics (3 cr) and ECO 102 Principles of Microeconomics (3 cr) **</td>
</tr>
<tr>
<td>ECO 270 Intermediate Macroeconomic Theory (3 cr)</td>
</tr>
<tr>
<td>ECO 280 Managerial Economics (3 cr)</td>
</tr>
</tbody>
</table>

**Five (5) Economics Electives at the 300 level:**

- ECO 101 Principles of Macroeconomics (3 cr)
- ECO 102 Principles of Microeconomics (3 cr)
- ECO 270 Intermediate Macroeconomic Theory (3 cr)
- ECO 280 Managerial Economics (3 cr)

#### Mathematics Requirement

<table>
<thead>
<tr>
<th>6-8 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 140 College Algebra (3 cr) OR MAT 175 Pre-Calculus (3 cr)</td>
</tr>
<tr>
<td>MAT 181 Applied Calculus (3 cr) OR MAT 211 Calculus I (4 cr)</td>
</tr>
</tbody>
</table>

#### Statistics Requirement

<table>
<thead>
<tr>
<th>4 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 117 Statistics (4 cr) OR MAT 313 Statistics I (4 cr) [for math concentration] OR SCM 200 Statistical Applications for Business [for business conc] Pre-req is MIS 142</td>
</tr>
</tbody>
</table>

#### Concentration Requirements

<table>
<thead>
<tr>
<th>18-24 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Economics major includes a concentration in an applied area. Pre-approved concentrations include: Business, Mathematics, Political Science, Public Administration, and Social Science.</td>
</tr>
</tbody>
</table>
# Electrical Engineering - B.S.

**General Education Requirements**

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Skills and Competencies</td>
<td>16 cr</td>
</tr>
<tr>
<td>___ ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results</td>
<td></td>
</tr>
<tr>
<td>___ HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ College Level Math. Satisfied by MAT 211 Calculus I * (4 cr) If necessary, student may need MAT 175 Pre-Calculus first.</td>
<td></td>
</tr>
<tr>
<td>___ HIS 105 Historical Foundations of Global Cultures (3 cr) AND ___ HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
<tr>
<td>II. Categories of Knowledge</td>
<td>35 cr</td>
</tr>
<tr>
<td>A: Language/Numbers for Rational Thinking (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ Automatically Satisfied by MAT 212 Calculus II*</td>
<td></td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td></td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences (10 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 205/123 Physics I I* (4 cr)</td>
<td></td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science (6 cr)</td>
<td></td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science (6 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Physics Requirements**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>20 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ PHY 205/123 Physics I I* (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 206/125 Physics II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 301 Mathematical and Numerical Techniques (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 311 Quantum I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 321 Electricity &amp; Magnetism (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Physics Engineering Requirements**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>8 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ PHY 325 Semiconductor Devices (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PHY 355 Electronics (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Math Requirements**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>19 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ MAT 211 Calculus I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ MAT 212 Calculus II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ MAT 213 Calculus III (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ MAT 225 Discrete Math (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ MAT 322 Differential Equations (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Computer Engineering Requirements**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>14 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ CMPE 220 Computer Organization (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CMPE 322 Microcontrollers and Interfaces (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CMPE 420 Digital and Reconfigurable Computing (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ CMPE 498 Engineering Research Methods (2 cr) OR CMPE 499 Development Project (capstone) (2 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Electrical Engineering Requirements**

<table>
<thead>
<tr>
<th>Requirements</th>
<th>15 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ ELEC 100 Programming for Engineers (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ ELEC 200 Signals &amp; Systems (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ ELEC 300 Foundations of Electronic Systems (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ ELEC 323 Electronic Design &amp; Processes (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ ELEC 422 High-Speed Circuits (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Electives:** Choose >= 5 cr

- CMP or ELEC courses, 300 level or above, or Internship

**Total Graduation Requirements** 120 cr

**GPA Needed to Declare** 2.0

**Helpful Hints for Advising:**

This is an academically challenging major and requires a significant effort outside the classroom. The successful student will be self-disciplined and committed to task completion. Additionally, students in this major can expect to engage in independent research and work beyond the basic requirements.

In deciding if this major is appropriate for you, and for an explanation on differences between Computer Engineering and Computer Engineering Technology, visit www.cs.ship.edu.

---

1 Students who have completed PHY 224/226 satisfy this requirement

* Credits may be applied to Math/Physics Requirements and General Education Credit Requirements (Category C, Categories of Knowledge).
**ENGLISH-B.A.**

### General Education Requirements

<table>
<thead>
<tr>
<th>I. Required Skills and Competencies</th>
<th>15 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 114 (Prev. ENG 106) Writing Intensive First Year Seminar (3 cr)</td>
<td></td>
</tr>
<tr>
<td>OR ENG 115 (Prev. ENG 110) Advanced Placement Writing (3 cr) May need ENG 113 Intro to Academic Writing (Prev. 050 Basic Writing) first, based on test results</td>
<td></td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT XXX any college-level math course</td>
<td></td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

### Categories of Knowledge

#### A: Logic/Numbers for Rational Thinking (3 cr)

#### B: Literary, Artistic & Cultural Traditions (9 cr)

-  
-  
-  

#### C: Biological & Physical Sciences (9 cr)

-  
-  
-  

#### D: Political, Economic & Geographic Science (6 cr)

-  
-  
-  

#### E: Social & Behavioral Science (6 cr)

-  
-  
-  

### Library Skills: Complete via College/Advanced Writing course.

### English Major Requirements

<table>
<thead>
<tr>
<th>42 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 107 Introduction to Literary Studies (3 cr)</td>
</tr>
<tr>
<td>ENG 111 Introduction to Literary Studies II (3 cr)</td>
</tr>
<tr>
<td>ENG 233 American Literature I (3 cr)</td>
</tr>
<tr>
<td>ENG 234 American Literature II (3 cr)</td>
</tr>
<tr>
<td>ENG 236 British Literature I (3 cr)</td>
</tr>
<tr>
<td>ENG 237 British Literature II (3 cr)</td>
</tr>
<tr>
<td>ENG 330 Shakespeare (3 cr)</td>
</tr>
</tbody>
</table>

### TOPICS AND APPROACHES (cont.)

<table>
<thead>
<tr>
<th>3 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 377 Studies in Restoration/18th C. Lit. (3 cr)</td>
</tr>
<tr>
<td>ENG 378 Studies in Early American Lit (3 cr)</td>
</tr>
<tr>
<td>ENG 380 Studies in 19th C. British Lit. (3 cr)</td>
</tr>
<tr>
<td>ENG 381 Studies in 19th C. American Lit. (3 cr)</td>
</tr>
<tr>
<td>ENG 382 Studies in 20th C. British Lit. (3 cr)</td>
</tr>
<tr>
<td>ENG 383 Studies in 20th C. American Lit. (3 cr)</td>
</tr>
<tr>
<td>ENG 385 Studies in Lit. of the Postcolonial World (3 cr)</td>
</tr>
<tr>
<td>ENG 394 Selected Topics (3 cr)</td>
</tr>
<tr>
<td>ENG 420 Studies in Writing (3 cr)</td>
</tr>
<tr>
<td>ENG 426 Adolescent Literature (3 cr)</td>
</tr>
<tr>
<td>ENG 427 Advanced Poetry Writing (3 cr)</td>
</tr>
<tr>
<td>ENG 428 Advanced Fiction Workshop (3 cr)</td>
</tr>
<tr>
<td>ENG 438 Technical/Professional Writing II (3 cr)</td>
</tr>
</tbody>
</table>

#### Note: Courses may fulfill both the period and multicultural requirement. See course descriptions in department advising materials.

### ENGLISH SEMINARS (Choose one)

<table>
<thead>
<tr>
<th>3 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 464 Seminar in Major Author (3 cr)</td>
</tr>
<tr>
<td>ENG 465 Seminar in Creative Nonfiction (3 cr)</td>
</tr>
<tr>
<td>ENG 466 Seminar in Literary Theory (3 cr)</td>
</tr>
<tr>
<td>ENG 467 Seminar in Drama (3 cr)</td>
</tr>
<tr>
<td>ENG 468 Seminar in Fiction (3 cr)</td>
</tr>
<tr>
<td>ENG 469 Seminar in Poetry (3 cr)</td>
</tr>
<tr>
<td>ENG 490 Seminar in Selected Topics (3 cr)</td>
</tr>
</tbody>
</table>

### CATEGORIES OF KNOWLEDGE (Choose appropr. Topic & Approaches courses)

#### A. Historical Knowledge

- Pre-1800
- Post-1800

#### B. Criticism (non-writing concentration)

Any course whose content focuses on criticism, method, and/ or theory.

#### C. Multicultural Perspectives

Any course whose content and topic concern work by historically marginalized social groups.

### Minor or Free Electives

<table>
<thead>
<tr>
<th>30 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Graduation Requirements</td>
</tr>
<tr>
<td>GPA Needed to Declare:</td>
</tr>
</tbody>
</table>

**Helpful Hints for Advising:**

Take ENG 107 and ENG 111, Intro. to Literary Studies and Introduction to Literary Studies II, before taking upper level courses.

### Semester II: Two core courses

- Shakespeare should NOT be taken in the first 2 semesters.
- Designated courses may double count for the period and multicultural requirement. See course descriptions in department advising materials.
- A literature course taken to satisfy the Gen. Ed. Category B requirement does NOT double count for the English major or the English minor.

**An English minor is available — 18 credits.**
A Guidebook for Undergraduate Students 2015-2016

ENGLISH - WRITING EMPHASIS - B.A. ##

General Education Requirements
I. Required Skills and Competencies 15 cr
   ___ ENG 113 (Prev. ENG 106) Writing Intensive First Year Seminar (3 cr)
   OR
   ___ ENG 115 (Prev. ENG 110) Advanced Placement Writing (3 cr)

   May need ENG 113 Intro. to Academic Writing/Basic Writing first, based
   on test results
   ___ HCS 100 Intro to Human Communication (3 cr)
   ___ MAT 105 Math for Liberal Studies (recommended)
   ___ HIS 105 Historical Foundations of Global Cultures (3 cr) AND
   ___ HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 34 cr

   A: Logic/Numbers for Rational Thinking (4 cr)

   B: Literary, Artistic & Cultural Traditions (9 cr)

   C: Biological & Physical Sciences (9 cr)

   D: Political, Economic & Geographic Science (6 cr)

   E: Social & Behavioral Science (6 cr)

   ## B.A. students must satisfy the Novice level competency in a foreign
   language. This is accomplished via 3 years of the same language in high
   school, an AP score
   of at least 2, or the completion of a 103 level course. Three credits of a
   foreign
   language may count under category B.

III. Library Skills: Complete via College/Advanced Writing course

English Major Requirements 42 cr

CORE COURSES all required 21 cr
   ___ ENG 107 Introduction to Literary Studies (3 cr)
   ___ ENG 111 Introduction to Literary Studies II (3 cr)
   ___ ENG 233 American Literature I (3 cr)
   ___ ENG 234 American Literature II (3 cr)
   ___ ENG 236 British Literature I (3 cr)
   ___ ENG 237 British Literature II (3 cr)
   ___ ENG 330 Shakespeare (3 cr)

WRITING select three 9 cr
   ___ ENG 238 Technical/Professional Writing I (3 cr)
   ___ ENG 239 Technical/Professional Writing II (3 cr)
   ___ ENG 323 Reviewing the Arts (3 cr)
   ___ ENG 335 Creative Nonfiction (3 cr)
   ___ ENG 420 Studies in Writing (3 cr)
   ___ ENG 427 Advanced Poetry Writing (3 cr)
   ___ ENG 428 Advanced Fiction Workshop (3 cr)
   ___ ENG 438 Technical/Professional Writing II (3 cr)

TOPICS and APPROACHES select three 9 cr
   ___ ENG 240 World Literature (3 cr)
   ___ ENG 243 Art of the Film (3 cr)
   ___ ENG 256 Introduction to Mythology (3 cr)
   ___ ENG 304 Literary Criticism (3 cr)
   ___ ENG 318 Studies in English Renaissance Lit. (3 cr)
   ___ ENG 333 Cultural Studies (3 cr)
   ___ ENG 336 Theories & Approaches (3 cr)

Note: Courses may fulfill both the period and multicultural requirement. See
course descriptions in department advising materials.

TOPICS IN ENGLISH
A. Historical Knowledge
   ___ Pre-1800 (3 cr)
   ___ Post-1800 (3 cr)

B. Multicultural Perspectives
   Any course whose content and topic concern work by historically
   marginalized social groups.

ENGLISH SEMINARS select one 3 cr
   ___ ENG 464 Seminar in Major Author (3 cr)
   ___ ENG 465 Seminar in Creative Nonfiction (3 cr)
   ___ ENG 466 Seminar in Literary Theory (3 cr)
   ___ ENG 467 Seminar in Drama (3 cr)
   ___ ENG 468 Seminar in Fiction (3 cr)
   ___ ENG 469 Seminar in Poetry (3 cr)
   ___ ENG 490 Seminar in Selected Topics (3 cr)

Minor or Free Electives 30 cr

Total Graduation Requirements 120 cr

****************************************************************************

A 4-year template is available at www.ship.edu/undeclared
### General Education Requirements

**I. Required Skills and Competencies**

15-16 cr

- ENG 106 Writing Intensive First Year Seminar (3 cr) OR ENG 110 Advanced Placement Writing (3 cr)
- May need ENG 050 Basic Writing first, based on test results
- MAT 117 Applied Statistics [recommended]
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge**

33 cr

A: Logic/Numbers for Rational Thinking (3 cr)
- ENG 105 Historical Foundations of Global Cultures (3 cr) AND
- MAT 117 Applied Statistics [recommended]

B: Literary, Artistic & Cultural Traditions
- Pre-1800
- Post-1800

C: Biological & Physical Sciences (9 cr)
- ENG 105 Historical Foundations of Global Cultures (3 cr)
- MAT 117 Applied Statistics [recommended]

D: Political, Economic & Geographic Science (6 cr)

E: Social & Behavioral Science (6 cr)
- ENG 101 General Psychology (3 cr)

### ENGLISH-SECONDARY EDUCATION CERTIFICATION-B.A.##

### ENGLISH-SECONDARY EDUCATION CERTIFICATION-B.A.##

#### General Education Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORE COURSES all required</td>
<td>27 cr</td>
</tr>
<tr>
<td>ENG 107 Introduction to Literary Studies I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 233 American Literature I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 234 American Literature II (3 cr)</td>
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</tr>
<tr>
<td>ENG 237 British Literature II (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 330 Shakespeare (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 366 History &amp; Structure of English (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 426 Teaching Adolescent Literature (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 381 Studies in 19th C. American Lit. (3 cr)</td>
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<tr>
<td>ENG 382 Studies in 20th C. British Lit. (3 cr)</td>
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<tr>
<td>ENG 385 Studies in the Postcolonial World (3 cr)</td>
<td></td>
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<tr>
<td>ENG 386 History &amp; Structure of English (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 388 Studies in Early American Lit (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 389 Studies in 20th C. British Lit. (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 390 Seminar in Selected Topics (3 cr)</td>
<td></td>
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<tr>
<td>ENG 394 Seminar in Poetry (3 cr)</td>
<td></td>
</tr>
<tr>
<td>ENG 395 Student Teaching (12 cr)</td>
<td></td>
</tr>
</tbody>
</table>

#### TOPICS and APPROACHES

9 cr

A: Historical Knowledge
- Pre-1800 (3 cr)
- Post-1800 (3 cr)

B: Multicultural Perspectives
- Any course whose content and topic concern work by historically marginalized social groups.
- ENG 240 World Literature (3 cr) OR ENG 385 Studies in Lit. of the Postcolonial World (3 cr)

#### TOPICS and APPROACHES select three

9 cr

- ENG 240 World Literature (3 cr)
- ENG 256 Introduction to Mythology (3 cr)
- ENG 304 Literary Criticism (3 cr)
- ENG 318 Studies in English Renaissance Lit. (3 cr)
- ENG 333 Cultural Studies (3 cr)
- ENG 336 Theories & Approaches (3 cr)
- ENG 343 Film Criticism (3 cr)

A 4-year template is available at www.ship.edu/undeclared

### Professional Certification Requirements

33 cr

- TCH 207 Org. & Psych. Foundations in Secondary Education (3 cr)
- EEC 273 Introduction to Exceptionalities Understanding Diverse Learners (3 cr)
- EEC 423 Effective Instructional Strategies for Children with Exceptionalities PK-8 (3 cr)
- EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3 cr)
- RDG 413 Teaching Reading to English Language Learners (3 cr)
- EDU 290 Introduction to ELA Education (3 cr)
- EDU 422 Teaching English II (3 cr)
- EDU 495 Student Teaching (12 cr)

Note: Students need to apply for “Professional Standing” the semester before Methods in order to be admitted to the course. Students must not schedule ANY classes BEFORE noon the semester they take Methods in order to keep their mornings free. See www.ship.edu/english/certindex for all the requirements for receiving certification, PAPA testing, GPA, observation hours, student teaching, etc.

TK 20 is a required computer program for the English certification and can be bought at the university store. Purchase should be made before scheduling Methods course.

#### Total Graduation Requirements

122 cr

GPA Needed to Declare: 3.0

Helpful Hints for Advising:

Students must take all courses in the core and one “seminar” course.

Students must take three historically periodized courses outside the core, one of which must be pre-1800.

Students must take one course within the major designated as multicultural outside the core.

**Students must take one theory/criticism course non-core.

***Students earning certification must take one course in world literature.

Shakespeare should NOT be taken in the first 2 semesters.

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

# One science course in Category C must be an environmental science course.
### General Education Requirements

**I. Required Skills and Competencies**  
15 cr

- **ENG 106** Writing Intensive First Year Seminar **OR** ENG 110 Advanced Placement Writing (3 cr)  
  May need ENG 050 Basic Writing first, based on test results  
- **HCS 100** Intro. to Human Communication (3 cr)  
- Mathematical Competency—any math listed under Category “A”  
- **HIS 105** Historical Foundations of Global Cultures (3 cr) **AND** **HIS 106** Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge**  
33 cr

- **A: Logic/Numbers for Rational Thinking** (3 cr)
  
- **B: Literary, Artistic & Cultural Traditions** (9 cr)  
  
- **C: Biological & Physical Sciences** (9 cr)
  
- **D: Political, Economic & Geographic Science** (6 cr)
  
- **E: Social & Behavioral Science** (6 cr)
  
**III. Library Skills** Completed via College or Advanced Writing

### French Major Requirements

**French Major/Elective requirements remain the same.**

**30 cr**

- **FRN 202** Interm. French Conversation through the Media (3 cr)  
- **FRN 204** Ideas & Cultures from the French-Speaking World (3 cr)  
- **FRN 211** Intermediate Grammar (3 cr)  
- **FRN 300** Advanced French Conversation (3 cr)  
- **FRN 308** Diction and Compréhension (3 cr)  
- **FRN 309** 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 (Choose any 2)**  
6 cr

- **FRN 320** French for the Professions (3 cr)  
- **FRN 380** Aspects de la civilization francaise/francophone (3 cr)  
- **FRN 395** French Cultural Studies Immersion (3 cr)  
- **FRN 400** Seminar (3 cr)  
- **FRN 411** Theory & Practice of Translation (3 cr)  
- **FRN 490** Special Topics (3 cr)

**Free Electives**  
36 cr

**Total Graduation Requirements**  
120 cr

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### French & French Secondary Education Certification-B.A.

**Secondary Education Certification:**

Secondary Education majors in French must take a math course to satisfy the Category A requirement. **This cannot be the same course used for Required Skills. They must also take two English courses. If any exceptions are made, they must be approved by the Teacher Education Office.**

French Major/Elective requirements remain the same.

Replace free electives with the following:

**Professional Education Requirements (to teach French)**  
30 cr

- **TCH 207** Organizational & Psychological Foundations (3 cr)  
- **TCH 251** Elements of Middle Level Instruction (3 cr)  
- **EEC 273** Introduction to Exceptionalities: Understanding Diverse Learners (3 cr)**  
- **EEC 483** Effective Instructional Strategies for Children with Exceptionalities PK-8 (3 cr)**  
- **EDU 426** Teaching of Foreign Language** (3 cr)**  
- **EDU 495** Student Teaching & Professional Practicum** (12 cr)**

**Free Electives**  
6 cr

**Total Graduation Requirements**  
120 cr

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**GPA Needed to Declare:**  
3.0

### Helpful Hints for Advising:

**Year I**

Any introductory language courses necessary.

Students planning to teach French 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.

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

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

A French minor is available 18 credits.

---

A 4-year template is available at www.ship.edu/undeclared
**GEOENVIRONMENTAL STUDIES-B.S.**

**General Education Requirement**

I. Required Skills and Competencies  
   - ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)
   - May need ENG 650 Basic Writing first, based on test results
   - HCS 100 Intro to Human Communication (3 cr)
   - Mathematical Competency—Schedule highest level possible
   - HIS 105 Historical Foundations of Global Cultures (3 cr)
   - HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge  
    33 cr
   - ENG 110 Advanced Placement Writing (3 cr)
   - HIS 106 Thinking Historically in a Global Age (3 cr)
   - HIS 105 Historical Foundations of Global Cultures (3 cr) AND Mathematical Competency—Schedule highest level possible
   - HCS 100 Intro to Human Communication (3 cr)
   - May need ENG 050 Basic Writing first, based on test results

III. Library Skills Complete via writing course

**Required GeoEnvironmental Studies Courses**  
   15 cr
   - GEO 202 GIS I  
   - GEO 244 Land Use (3 cr)
   - GEO 305 Geography of Europe (3 cr)
   - GEO 306 Geography of Latin America (3 cr)
   - GEO 310 Transportation Geography (3 cr)
   - GEO 313 Geography of S. and S.E. Asia (3 cr)
   - GEO 317 Geography of East Asia (3 cr)
   - GEO 320 Historical Geography (3 cr)
   - GEO 322 Urban Geography (3 cr)
   - GEO 415 Regional Geographic Studies (3 cr)
   - GEO 420 GIS III  
   - GEO 425 Image Processing (3 cr)
   - GEO 444 Environmental Land Use Planning (3 cr)
   - GEO 446 Water Resources Management (3 cr) (GEO 226 is pre-req)
   - GEO 490 Geographic Information Systems GIS Letter of Completion (optional)

**GeoEnvironmental Electives**  
   - Any 200-400 level courses listed above and not taken may be counted as an elective or select 1 course:
   - ESS 212 Historical Geology (3 cr)
   - ESS 214 Geology of National Parks (3 cr)
   - ESS 220 Oceanography (3 cr)
   - GEO 203 Climatology (3 cr)
   - GEO 306 Geomorphology (3 cr)
   - GEO 450 Geog. – Geography Field Studies (3 cr)
   - GEO 490 Selected Topics
   - Marine Science Consortium Courses (3 cr)

**Geoenvironmental Field Experience**  
   - Internship Junior Status: 60 cr - 2.0 Required

**Biology Requirement**  
   - at least one 200-level or higher 9 or 10 cr
   - BIO 162 Principles of Biology: Organismal Diversity  
   - BIO 145 Environmental Biology (3 cr) **
   - BIO 210 Field Zoology (3 cr)
   - BIO 242 Ecology (3 cr)
   - BIO 448 Field Botany & Plant Taxonomy (3 cr) **
   - **Required for 200 level or above biology courses. If student has a special interest in zoology or botany, they should follow sequential courses in that area.

**Chemistry and/or Physics Requirement**  
   - 7 - 9 cr
   - Choose 2 courses Include lab where appropriate
   - CHM 105 Chemistry; Observational Approach (3 cr) [recommended]
   - CHM 121 Chemical Bonding (3 cr)
   - CHM 125 Lab IB (1 cr)
   - CHM 122 Chemical Dynamics (3 cr)
   - CHM 126 Lab IIB (3 cr)
   - PHY 121 Physics I and PHY 125 Physics I lab (4 cr) [recommended]

**Math Requirement Select 1 course:**  
   - MAT 117 Applied Statistics (4 cr)
   - MAT 140 (A or B) College Algebra (3 cr)
   - MAT 175 Pre-Calculus (4 cr)
   - MAT 211 Calculus I (4 cr)
   - MAT 212 Calculus II (4 cr)

**Math Requirement Select 1 course:**  
   - MAT 117 Applied Statistics (4 cr)
   - MAT 140 (A or B) College Algebra (3 cr)
   - MAT 175 Pre-Calculus (4 cr)
   - MAT 211 Calculus I (4 cr)
   - MAT 212 Calculus II (4 cr)

**Geographic Information Systems GIS Letter of Completion (optional)**  
   - 12 cr
   - Required:
   - GEO 202 GIS I (3 cr)
   - GEO 363 GIS II (3 cr)
   - GEO 450 Geog. – Geography Field Studies (3 cr)
   - GEO 446 Water Resources Management (3 cr) (GEO 226 is pre-req)
   - GEO 490 Selected Topics By advisement (3 cr)

**Total Graduation Requirements**  
   - 120 cr

GPA Needed to Declare:  
   - 2.0

Helpful Hints for Advising

Year I: Hydrology; Physical Geology, Biology 162; World Geography or Geography U.S. and Canada.

Gen Eds should be completed as soon as possible

A 4-year template is available at www.ship.edu/undeclared
### GEOGRAPHY – GEOGRAPHIC INFORMATION SYSTEMS (GIS) TRACK/B.S.

#### General Education Requirements

**I. Required Skills and Competencies** 15 cr

- ENG 106 Writing First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)
- May need ENG 050 Basic Writing first, based on test results
- HCS 100 Intro to Human Communication (3 cr)
- Mathematical Competency—See math requirements under allied courses in major
- HIS 105 Historical Foundations of Global Cultures (3 cr) **AND**
- HIS 106 Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge** 33 cr

<table>
<thead>
<tr>
<th>A: Logic/Numbers for Rational Thinking (3 cr)</th>
<th>CSC 190 Selected Topics: Programming in Python</th>
</tr>
</thead>
<tbody>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td></td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences (9 cr)</td>
<td></td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science (6 cr)</td>
<td></td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science (6 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**III. Library Skills Completed as part of the College Writing or Advanced Writing course**

**Required Geography Courses** 15 cr

- GEO 105 Physical Geography (3 cr)
- GEO 202 GIS I (3 cr)
- GEO 230 Economic Geography (3 cr)
- GEO 244 Land Use (3 cr)
- GEO 391 Geography Seminar (3 cr)

**Geographic Information Systems GIS Track** 18 cr

- GEO 339 Remote Sensing (3 cr)
- GEO 352 Cartography (3 cr)
- GEO 363 GIS II (3 cr)
- GEO 420 GIS III (3 cr)

Select 2 courses: 9 cr

- GEO 339 Remote Sensing (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)
- GEO or ESS 400 Level Elective (3 cr)

**Geography Internship**

- Internship - Junior Status, 60 cr - 2.0 Required 3 cr

**GIS Content Electives**

Select 1 course:

- * GEO 244 Land Use (3 cr)
- * GEO 310 Transport Geography (3 cr)
- * GEO 322 Urban Geography (3 cr)

*If not taken in core

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**Allied Sciences** 27 + credits

**Social Sciences [6+ credits]**

Select two:

- PHL 332 Ethical Issues and Computer Technology (3 cr)
- PLS 231 State and Local Government (3 cr)
- PLS 271 Introduction to Public Administration (3 cr)
- PLS 331 City Politics and 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 Management Systems [9+ credits]**

Select three:

- ART 217 Computer Design I (3 cr)
- CSC 104 Python Programming (3 cr)
- CSC 110 Computer Science I (3 cr) + CSC 106 Lab (1 cr)
- CSC 111 Computer Science II (4 cr)
- CSC (by advisement) (3 cr)
- MIS 142 Business Computer Systems (3 cr)
- MIS 240 Introduction to Programming Concepts (3 cr)
- MIS 300 Info Tech and Business Operations (3 cr)
- MIS 355 Database Applications (3 cr)

**Math [6+ credits]**

Select two:

- MAT 117 Applied Statistics (4 cr) *(REQUIRED)*
- MAT 140A College Algebra (4 cr) *(Students who place at the advanced level in the mathematics placement/competency tests should not take MAT 140A)*
- MAT 140B College Algebra (3 cr)
- MAT 175 Precalculus (3 cr)
- MAT 211 Calculus I (4)
- MAT 225 Discrete Mathematics (4 cr)

**Technical Writing [3 cr]**

- ENG 238 Technical/Professional Writing

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**GENERAL EDUCATION ELECTIVES:**

Recommended background courses:

- GEO 101 World Geography (3 cr)
- GEO 103 Geography of the U.S. and Canada (3 cr)
- GEO 140 Cultural Geography (3 cr)

**Free Electives** 25+ cr

*Major Requirement Fulfills General Education Credits

**Total Graduation Requirements** 120 cr

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**Helpful Hints for Advising:**

**Semester I**

- GEO 101 World Geography or GEO 103 Geography of U.S. & Canada
- GEO 105 Physical Geography

**Semester II**

- Core Course

General Education courses should be completed as soon as possible.
### Geography - Human Environmental Studies Track / B.S.

**General Education Requirements**

**I. Required Skills and Competencies**

- ENG 106 Writing First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr) OR May need ENG 050 Basic Writing first, based on test results
- HCS 100 Intro to Human Communication (3 cr)
- Mathematical Competency—See math under allied courses
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge**

**A: Logic/Numbers for Rational Thinking (3 cr)**

**B: Literary, Artistic & Cultural Traditions (9 cr)**

**C: Biological & Physical Sciences (9 cr)**

**D: Political, Economic & Geographic Science (6 cr)**

- ECO 101 or 102
- PLS 100 or 141

**E: Social & Behavioral Science (6 cr)**

**III. Library Skills Completed as part of the College Writing or Advanced Writing course**

**Required Geography Courses**

- GEO 105 Physical Geography (3 cr)
- GEO 202 GIS I (3 cr)
- GEO 230 Economic Geography (3 cr)
- GEO 244 Land Use OR
- GEO 322 Urban Geography (3 cr)
- GEO 391 Geography Seminar (3 cr)

**Human-Environment Track**

**Required:**

- GEO 140 Cultural Geography (3 cr)

**Human Geography Courses** Select 2 courses:

- GEO 244 Land Use (if not in Core)
- GEO 310 Transportation Geography (3 cr)
- GEO 320 Historical Geography (3 cr)
- GEO 322 Urban Geography (3 cr)

**Environmental Courses** Select 1 course:

- GEO 301 Introduction to Biogeography (3 cr)
- GEO 402 Medical Geography (3 cr)
- GEO 404 Hydrogeology (3 cr)
- ESS 404 Applied Meteorology/Climatology (3 cr)
- ESS 442 Environmental Geology (3 cr)
- GEO 444 Environmental Land Use Planning (3 cr)
- GEO 446 Water Resource Management (3 cr)

**Regional Courses** Select 1 course:

- GEO 305 Geography of Europe (3 cr)
- GEO 308 Geography of Latin America (3 cr)
- GEO 313 Geography of S. and S.E. Asia (3 cr)
- GEO 316 Geography of Africa (3 cr)
- GEO 317 Geography of East Asia (3 cr)
- GEO 415 Regional Geographic Studies (3 cr)
- GEO 450 Geography-Geology Field Study (3 cr)

**Technique Course Electives** Select 1 course:

- GEO 339 Remote Sensing (3 cr)
- GEO 352 Cartography (3 cr)
- GEO 363 GIS II (3 cr)
- GEO 420 GIS III (3 cr)
- GEO 425 Image Processing (3 cr)
- GEO 440 Field Techniques (3 cr)
- GEO 441 Quantitative Methods (3 cr)

**Allied Courses**

**Mathematics**

Select one:

- MAT 117 Applied Statistics (4 cr)
- MAT 175 Pre-Calculus (3 cr)

**Social Sciences**

Select one:

- PLS 231 State and Local Government (3 cr) (Pre-req: PLS 100)
- PLS 341 International Law and Organization (3 cr) (Pre-req: PLS 141)

**Select one: (each course has pre-requisites)**

- ECO 321 International Economics (3 cr)
- ECO 325 Globalization (3 cr)
- ECO 340 Intro. to Regional Economics (3 cr)
- ECO 355 Environmental Economics (3 cr)

**Select one:**

- ANT 211 Comparative Cultures (3 cr)
- ANT 220 Anthropology for International Studies (3 cr)

**Select one: (each course has pre-requisites)**

- SOC 220 Social Stratification (3 cr)
- SOC 241 Contemporary Problems (3 cr)
- SOC 363 Population Problems (3 cr)

**Geography Internship**

- GEO 360 Internship Junior Status, 60 cr - 2.0 Required

**Free Electives**

- 25+ cr

*Major Requirement Fulfills General Education Credits*

**Total Graduation Requirements**

120 cr

**GPA Needed to Declare:** 2.0

Helpful Hints for Advising:

**Semester I**

- GEO 101 World Geography or GEO 103 Geography of U.S. & Canada
- GEO 140 Cultural Geography

**Semester II**

Core Course
### General Education Requirements

**I. Required Skills and Competencies**

- ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)
- May need ENG 050 Basic Writing first, based on test results
- HCS 100 Intro to Human Communication (3 cr)
- Math Competency-Required
- MAT 117 Applied Statistics (4 cr)
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge**

- **A: Logic/Numbers for Rational Thinking** (3 cr)
- **B: Literary, Artistic & Cultural Traditions** (9 cr)
- **C: Biological & Physical Sciences** (9 cr)
- **D: Political, Economic & Geographic Science** (6 cr)
- **E: Social & Behavioral Science** (6 cr)

**III. Library Skills Completed as part of the College Writing or Advanced Writing course**

**Applied Courses**

- Computer Science/Math Requirement
  - Select Course:
  - MAT 117 Applied Statistics (4 cr)
  - CSC 103 Overview of Computer Science (3 cr)
  - CSC 180 Microcomputer Basic (3 cr)
- HIS 106 Thinking Historically in a Global Age AND CSC 110 Computer Science I (3 cr)

**Political Science Requirement**

- Select 2 courses: (each course has pre-requisites)
  - PLS 231 State and Local Government (3 cr)
  - PLS 331 Municipal Gov. & Administration (3 cr)
  - PLS 431 Pennsylvania Local Government (3 cr)
  - PLS ### Political Science course by advisement (3 cr)

**Research Methods Requirement**

- PSY 105 Research Design & Statistics (3 cr) OR GEO 441 Quantitative Methods (3 cr)

**General Education Electives**

- For Background-Recommend the following:
  - GEO 101 World Geography (3 cr)
  - GEO 103 Geography of the U.S. and Canada (3 cr)
  - GEO 140 Cultural Geography (3 cr)

**Geographic Information Systems GIS Letter of Completion** (optional)

- GEO 202 GIS I (3 cr)
- GEO 363 GIS II (3 cr)

- Select any 2 courses:
  - GEO 339 Remote Sensing (3 cr)
  - GEO 352 Cartography (3 cr)
  - GEO 420 GIS III (3 cr)
  - GEO 425 Image Processing (3 cr)
  - GEO 440 Field Techniques (3 cr)
  - GEO 441 Quantitative Methods (3 cr)

**Free Electives**

- 20+ cr

*Major Requirement Fulfills General Education Credits*

**Total Graduation Requirements**

- 120 cr

**GPA Needed to Declare:** 2.0
### A 4-year template is available at www.ship.edu/undeclared

---

**GEOGRAPHY-SECONDARY EDUCATION CERTIFICATION-B.S.Ed.**

**Social Studies**

#### General Education Requirements

**I. Required Skills and Competencies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr) May need ENG 050 Basic Writing first, based on test results</td>
<td>16 cr</td>
</tr>
<tr>
<td>MAT 117 Applied Statistics</td>
<td></td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**II. Categories of Knowledge**

**A: Logic/Numbers for Rational Thinking (3 cr)**

- Any math course under Category A. Must be a different course than that used for Required Skills

**B: Literary, Artistic & Cultural Traditions (9 cr)**

- Any course under Category B.

**C: Biological & Physical Sciences (9 cr)**

- ESS 110 Conservation of Natural Resources OR BIO 145 Environmental Biology

**D: Political, Economic & Geographic Science (6 cr)**

- ECO 101 Principles of Macroeconomics
- GEO 101 World Geography

**E: Social & Behavioral Science (6 cr)**

- PSY 101 General Psychology
- GEO 140 Cultural Geography

**III. Library Skills Completed as writing course**

**Geography Requirement**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 101 World Geography (3 cr)*</td>
<td>12 cr</td>
</tr>
<tr>
<td>ESS 111 Introduction to Geology (3 cr)* OR ESS 111 Introduction to Atmosphere (3 cr)*</td>
<td></td>
</tr>
<tr>
<td>GEO 140 Cultural Geography (3 cr)*</td>
<td></td>
</tr>
<tr>
<td>GEO 230 Economic Geography (3 cr)**</td>
<td></td>
</tr>
</tbody>
</table>

**Electives in Geography**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO Geo: Regional Course:</td>
<td></td>
</tr>
<tr>
<td>GEO Geo: Regional Course:</td>
<td></td>
</tr>
<tr>
<td>GEO Geo: Topical Course:</td>
<td></td>
</tr>
<tr>
<td>GEO Geo: Topical Course:</td>
<td></td>
</tr>
</tbody>
</table>

Choose electives in areas of specialization which may either serve a future teaching purpose or establish a basis for future graduate study.

**Economics Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 101 Principles of Macroeconomics (3 cr) *</td>
<td>6 cr</td>
</tr>
<tr>
<td>ECO 102 Principles of Microeconomics (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**History Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) *</td>
<td>9 cr</td>
</tr>
<tr>
<td>HIS 106 Thinking Historically in a Global Age (3 cr) *</td>
<td></td>
</tr>
<tr>
<td>HIS 202 Recent History of the United States (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Mathematics Requirement**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 117 Applied Statistics (4 cr)</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

**Political Science Requirement**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLS 100 U.S. Government and Politics (3 cr)</td>
<td>9 cr</td>
</tr>
<tr>
<td>PLS 141 Intro. to International Relations (3 cr)</td>
<td></td>
</tr>
<tr>
<td>PLS See Department for appropriate courses (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**Professional Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCH 207 Org. &amp; Psych. Foundations of Secondary Education (3 cr)</td>
<td>33 cr</td>
</tr>
<tr>
<td>EDU 412 Teaching of Social Studies I (3 cr)**</td>
<td></td>
</tr>
<tr>
<td>EDU 413 Teaching of Social Studies II (3 cr)**</td>
<td></td>
</tr>
<tr>
<td>EDU 495 Student Teaching &amp; Professional Practicum (12 cr)**</td>
<td></td>
</tr>
<tr>
<td>EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3 cr)**</td>
<td></td>
</tr>
<tr>
<td>EEC 423 Effective Instructional Strategies (3 cr)</td>
<td></td>
</tr>
<tr>
<td>RDG 413 Teaching Reading to English Language Learners (3 cr)**</td>
<td></td>
</tr>
</tbody>
</table>

**Cognate Field**

- Two 200 level or above courses from History, Political Science, or Economics. History is recommended for best PAPA exam results.

**Geographic Information Systems GIS Letter of Completion**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 202 GIS I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>GEO 363 GIS II (3 cr)</td>
<td></td>
</tr>
<tr>
<td>Select any two courses:</td>
<td></td>
</tr>
<tr>
<td>GEO 339 Remote Sensing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>GEO 352 Cartography (3 cr)</td>
<td></td>
</tr>
<tr>
<td>GEO 420 GIS III (3 cr)</td>
<td></td>
</tr>
<tr>
<td>GEO 425 Image Processing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>GEO 440 Field Techniques (3 cr)</td>
<td></td>
</tr>
<tr>
<td>GEO 441 Quantitative Methods (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

A field experience is required—see your advisor

*Major requirement double counts as General Education Credits

**Double counts as both a Geography and Economics Requirement

**Total Graduation Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA Needed to Declare:</td>
<td>3.0</td>
</tr>
</tbody>
</table>

**Helpful Hints for Advising:**

**Year 1**

- GEO101 World Geography
- ESS 111 Intro to Atmosphere OR ESS 110 Intro to Geology
- SOC 101 Introduction to Sociology
- PLS 100 U.S. Government and Politics
- PSY 101 General Psychology

Economics should not be taken until the sophomore year.

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

Program is under revision. Contact the department of Geography/Earth Science for additional information.
### HISTORY-B.A. **
**Public History Concentration**

#### General Education Requirements

<table>
<thead>
<tr>
<th>I. Required Skills and Competencies</th>
<th>15 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results</td>
<td></td>
</tr>
<tr>
<td>__ HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>__ Mathematical Competency-Any math listed under Category “A” in the Gen Ed Program</td>
<td></td>
</tr>
<tr>
<td>__ HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

#### II. Categories of Knowledge (Including diversity requirement) 33 cr

| A: Logic/Numbers for Rational Thinking (3 cr) | |
| B: Literary, Artistic & Cultural Traditions (9 cr) | |
| C: Biological & Physical Sciences (9 cr) | |
| D: Political, Economic & Geographic Science (6 cr) | |
| E: Social & Behavioral Science (6 cr) | |

#### III. Library Skills Completed as part of the College Writing or Advanced Writing course

<table>
<thead>
<tr>
<th>History Requirements 18 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ HIS 105 Historical Foundations of Global Cultures (3 cr) *</td>
</tr>
<tr>
<td>__ HIS 106 Thinking Historically in a Global Age (3 cr) *</td>
</tr>
<tr>
<td>__ HIS 201 Early History of the United States (3 cr)</td>
</tr>
<tr>
<td>__ HIS 202 Recent History of the United States (3 cr)</td>
</tr>
<tr>
<td>__ HIS 203 Theory and Practice of History (3 cr)</td>
</tr>
<tr>
<td>__ HIS 397 Seminar in Comparative History (3 cr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Restricted Electives: 200 level or above 12 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ HIS American History Course (3 cr)</td>
</tr>
<tr>
<td>__ HIS European History Course (3 cr)</td>
</tr>
<tr>
<td>__ HIS Africa/Asia/Latin America Course (3 cr)</td>
</tr>
<tr>
<td>__ HIS Africa/Asia/Latin America Course (3 cr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History Electives: 300 level or above 6 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>__ HIS (3 cr)</td>
</tr>
<tr>
<td>__ HIS (3 cr)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Free Electives 42 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Graduation Requirements 120 cr</td>
</tr>
</tbody>
</table>

GPA Needed to Declare: 2.0

Helpful Hints for Advising:

- **Year 1**
  - HIS 105 World History I
  - HIS 106 World History II

A history minor is available 18 credits.
A philosophy minor is available 18 credits.

**Portfolio Requirement**: For assessment and career development purposes, all history majors are required to assemble and submit a portfolio documenting their academic growth and their major accomplishments.

---

**Public History Methods 6 cr**

- HIS 319 Introduction to Applied History (3 cr)

Select one:

- HIS 430 U.S. Cultural History (3 cr) OR
- HIS 433 Oral History (3 cr)

Required Internship 6 cr

**Free Electives 36 cr**

---

**Total Graduation Requirements 120 cr**

GPA Needed to Declare: 2.0

Helpful Hints for Advising:

- **Year 1**
  - HIS 105 Historical Foundations of Global Cultures
  - HIS 106 Thinking Historically in a Global Age

A 4-year template is available at www.ship.edu/undeclared
## HISTORY-SECONDARY EDUCATION CERTIFICATION- B.S.Ed.

### Social Studies

**Required Skills and Competencies**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing</td>
<td>3 cr</td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results</td>
<td></td>
</tr>
<tr>
<td>___  HCS 100 Intro to Human Communication</td>
<td>3 cr</td>
</tr>
<tr>
<td>___  Mathematical Competency Any math listed under Category “A” of the Gen Ed Program</td>
<td></td>
</tr>
<tr>
<td>___  HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

### Categories of Knowledge

- **A: Logic/Numbers for Rational Thinking (3-4 cr)**
  - MAT 117 Applied Statistics

- **B: Literary, Artistic & Cultural Traditions (9 cr)**
  - ENG 248 or 250 Literature Requirement

- **C: Biological & Physical Sciences (9 cr)**
  - ___

- **D: Political, Economic & Geographic Science (6 cr)**
  - GEO 101 World Geography
  - ECO 101 Principles of Macroeconomics

- **E: Social & Behavioral Science (6 cr)**
  - ___
  - PSY 101 General Psychology
  - SOC 101 Introduction to Sociology

### Library Skills

Completed as part of the College Writing or Advanced Writing course

### History Requirements

Includes World History I and II

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  HIS 201 Early History of the United States (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___  HIS 202 Recent History of the United States (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

Restricted Electives: 300 level or above

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  HIS American History (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___  HIS European History (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___  HIS African/Asia/Latin American History (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___  HIS African/Asia/Latin American History (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

History Electives: 300 level or above

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  HIS</td>
<td>3 cr</td>
</tr>
<tr>
<td>___  HIS</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

### Social Studies Certification Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  GEO 103 Geography of the U.S. &amp; Canada (3 cr)*</td>
<td>3 cr</td>
</tr>
<tr>
<td>___  PLS 100 U.S. Government and Politics (3 cr)*</td>
<td></td>
</tr>
<tr>
<td>___  PLS Elective (3 cr) [PLS 141, or a 200/300 level course]</td>
<td></td>
</tr>
<tr>
<td>___  Social Science Elective (3 cr) +</td>
<td></td>
</tr>
<tr>
<td>___  Social Science Elective (3 cr) +</td>
<td></td>
</tr>
</tbody>
</table>

+ ANT 111, ECO 102, INT 200, or any 200/300 GEO course, any 200/300 level PLS course or any PHL course.

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**Professional Education Requirements**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  TCH 207 Org. &amp; Psych. Foundations of Secondary Education (3 cr)</td>
<td>3 cr</td>
</tr>
<tr>
<td>___  RDG 413: Teaching Reading to English Language Learners (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___  EEC 423: Effective Instructional Strategies for Children w/Exceptionalities PK-8 (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___  EEC 483: Assessing Children w/ Exceptionalities for Curricular Decision Making (3 cr)</td>
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</tr>
</tbody>
</table>

Must be taken simultaneously

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>___  EDU 412 Teaching of Social Studies I (3 cr)**</td>
<td></td>
</tr>
<tr>
<td>___  EDU 413 Teaching of Social Studies II (3 cr)**</td>
<td></td>
</tr>
<tr>
<td>___  EDU 495 Student Teaching &amp; Professional Practicum (12cr)**</td>
<td></td>
</tr>
<tr>
<td>___  EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3 cr)**</td>
<td></td>
</tr>
</tbody>
</table>

Required: 50 Level I hours Field Experience – see BSED advisor

*Major requirement fulfills General Education credits

**Total Graduation Requirements**

121 cr

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GPA Needed to Declare:

3.0

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**Helpful Hints for Advising:**

Year I

- HIS 105 Historical Foundations of Global Cultures
- HIS 106 Thinking Historically in a Global Age
- GEO 101 World Geography or GEO 103 Geography of U.S. & Canada

Do not begin economics courses until the sophomore year.

**Portfolio Requirement:** For assessment and career development purposes, all history majors are required to assemble and submit a portfolio documenting their academic growth and their major accomplishments.

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

---

A 4-year template is available at www.ship.edu/undeclared
HUMAN COMMUNICATION STUDIES-B.A.

I. Required Skills and Competencies 15 cr

- ENG 106 Writing Intensive First Year Seminar OR
  ENG 110 Advanced Placement Writing (3 cr)
  May need ENG 050 Basic Writing first, based on test results.
- HCS 100 Intro to Human Communication (3 cr)
- Mathematical Competency-Any math listed under Category A of the General Education Program
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND
- HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 33 cr

A: Logic/Numbers for Rational Thinking (3 cr)

B: Literary, Artistic & Cultural Traditions (9 cr)

C: Biological & Physical Sciences (9 cr)

D: Political, Economic & Geographic Science (6 cr)

E: Social & Behavioral Science (6 cr)

- HCS 125 Survey of Human Communication Studies (prereq for HCS 200)

III. Library Skills Completed as part of the College Writing or Advanced Writing course

Required Human Communication Courses 24 cr

- HCS 200 Human Communication Theory (3 cr) (prereq HCS 125)
- 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)

Concentrations: 21 Credits - A minimum of one course in each area, plus nine additional credits. Internships credits are recommended, but not required, to fulfill a portion of these requirement.

Rhetoric & Symbolism

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

Organizational Communication

- HCS 230 Small Group Communication (3 cr)
- HCS 260 Computer Mediated Communication (3 cr)
- HCS 350 Theories of Organizational Communication (3 cr)
- HCS 372 Communication for Training and Instruction (3 cr)
- HCS 381 Professional Communication & Multi Media Presentation (3 cr)
- HCS 351 Selected Topics in Organizational Communication (3 cr)

Cultural Perspectives

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

Interpersonal Communication

- 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 385 Resolving Conflict through Communication (3 cr)
- HCS 430 Advanced Interpersonal Communication (3 cr)
- HCS 393 Selected Topics in Interpersonal Communication (3 cr)

Internships

- HCS 391 Internship I (3 cr)
- HCS 392 Internship II (3 cr)
- HCS 393 Internship III (3 cr)

# B.A. students must satisfy the Novice level competency in a foreign language. This is accomplished via 3 years of the same language in high school, an AP score of at least 2, or the completion of a 103 level course. Three credits of a foreign language may count under category B.

Free Electives 33 cr

Total Graduation Requirements 120 cr

GPA Needed to Declare: 2.0

Helpful Hints for Advising:

Year 1 HCS 100 Intro to Human Communication
       HCS 200 Human Communication Theory

Each student must select at least four 4 courses at or above the 300 level.

Human Communication Studies Minor is available 18 cr.

A 4-year template is available at www.ship.edu/undeclared
### General Education Requirements

**I. Required Skills and Competencies**
- **15 cr**
  - ENG 106 Writing Intensive First Year Seminar [OR]
  - ENG 110 Advanced Placement Writing (3 cr)
    - May need ENG 050 Basic Writing first, based on test results
  - HCS 100 Intro to Human Communication (3 cr)
  - Mathematical Competency-Any math listed under Category “A” in the Gen Ed Program
  - HIS 105 Historical Foundations of Global Cultures (3 cr) [AND]
  - HIS 106 Thinking Historically in a Global Age (3 cr)

**II. Categories of Knowledge**
- **33 cr**
  - **A: Logic/Numbers for Rational Thinking (3 cr)**
  
  - **B: Literary, Artistic & Cultural Traditions (9 cr)**
    - IAP 111 Introduction to Interdisciplinary Arts
    - Select ONE Literature course:
      - ENG 243 or ENG 248 or ENG 250
    - Select ONE course from the list below:
      - ART 101 Art Appreciation OR
      - ART 274 Intro. to Cultural Studio OR
      - MUS 121 Intro to Music OR
      - THE 121 Intro to Theatre
  
  - **C: Biological & Physical Sciences (9 cr)**
  
  - **D: Political, Economic & Geographic Science (6 cr)**
  
  - **E: Social & Behavioral Science (6 cr)**
  
**III. Library Skills Completed as part of writing course**

### IAP Major Requirements:
- **48 cr**

**Foundation Courses:**
- **IAP 111 Introduction to Interdisciplinary Arts (3 cr)**

One of the following:
- **ENG 243 or ENG 248 or ENG 250 (3 cr)**

Three of the following:
- ART 101 Art Appreciation or ART 274 Intro. to Cultural Studio (3 cr)
- COM111 Introduction to Mass Communications (3 cr)
- MUS 121 Intro to Music (3 cr)
- THE 121 Intro. to Theatre (3 cr)

Nine of the above credits can double count as Cat. B Gen. Ed. courses.

### Curriculum Tracks

#### Primary Concentration
- **18 cr**
  
  - 
  - 
  - 
  - 
  - 
  - 

#### Secondary Concentration 1
- **12 cr**
  
  - 
  - 
  - 
  - 
  - 

#### Secondary Concentration 2
- **12 cr**
  - 
  - 
  - 
  - 

Note: Courses above must include at least one selection from each of the 4 categories of the IAP curriculum track:

A. History and Culture  
B. Theory and Criticism  
C. Arts Praxis  
D. Professional Skills

A list of the courses that satisfy this requirement is available to majors, and on request by students interested in the major.

### Senior Capstone
- **6 cr**

- IAP 449 Interdisciplinary Arts Senior Thesis  
- IAP 451 Interdisciplinary Arts Showcase or  
- IAP 452 Interdisciplinary Arts Internship and/or  
- IAP 453 Interdisciplinary Arts Internship 2

### Free Electives
- **24 cr**

Total Graduation Requirements: 120 cr

GPA Needed to Declare: 2.0

Helpful Hints for Advising:

Year 1 or 2  
IAP 111 Intro to Interdisciplinary Arts  
Two Category B courses

# B.A. students must satisfy the Novice level competency in a foreign language. This is accomplished via 3 years of the same language in high school, an AP score of at least 3, or the completion of a 103 level course. Three credits of a foreign language may count under category B.
### INTERNATIONAL STUDIES-B.A. ##

<table>
<thead>
<tr>
<th>General Education Requirements</th>
<th>16 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Skills and Competencies</td>
<td></td>
</tr>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR</td>
<td>3 cr</td>
</tr>
<tr>
<td>ENG 110 Advanced Placement Writing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results.</td>
<td></td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>Mathematical Competency- Any math listed under Category A of the General Education Program.</td>
<td></td>
</tr>
<tr>
<td>NOTE: MAT 117 Applied Statistics required for Global Business Concentration (4 cr)</td>
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</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND</td>
<td></td>
</tr>
<tr>
<td>HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Categories of Knowledge</th>
<th>33 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Logic/Numbers for Rational Thinking (3 cr)</td>
<td></td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td></td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences (9 cr)</td>
<td></td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science (6 cr)</td>
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</tr>
<tr>
<td>GEO 101 World Geography</td>
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<tr>
<td>PLS 141 World Politics</td>
<td></td>
</tr>
</tbody>
</table>

For Global Business Concentration: GEO 101 or PLS 141 and ECO 101, 102, or 113

| E: Social & Behavioral Science (6 cr) |       |
| ANT 111 Cultural Anthropology or |       |
| GEO 140 Cultural Geography |       |

| III. Library Skills Completed as part of the College Writing or Advanced Writing course |       |
| Required International Studies Courses | 6 cr |
| INT 200 Introduction to International Studies (3 cr) |       |
| INT 300 International Studies Seminar (3 cr) |       |

| Global Perspectives Concentration | 12 cr |
| Six credits must be at 300-level or higher. Courses from two or more disciplines. |       |

| Area Studies Concentration | 12 cr |
| Six credits must be at 300-level or higher. Courses from two or more disciplines. |       |

### Foreign Language or Free Electives (Based on language requirements) | 9-18 cr |
<table>
<thead>
<tr>
<th></th>
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</tbody>
</table>

### Study Abroad/Internship | 3 cr min |

### Free Electives | 24 cr |

### Total Graduation Requirements | 120 cr |

### GPA Needed to Declare: | 2.0 |

Helpful Hints for Advising:

- **Year 1**
  - General Education
  - Modern Language
  - MAT 117 Applied Statistics

- **Year 2**
  - INT 200 Introduction to International Studies
  - Begin planning for study abroad or internship

---

**## B.A. students must satisfy the Novice level competency in a foreign language. This is accomplished via 3 years of the same language in high school, an AP score of at least 2, or the completion of a 103 level course. Three credits of a foreign language may count under category B.**

---

A 4-year template is available at [www.ship.edu/undeclared](http://www.ship.edu/undeclared)
I. Required Skills and Competencies

A: Logic/Numbers for Rational Thinking (4 cr)
   - MAT 211 Calculus I
   - HCS 100 Intro to Human Communication (3 cr)
   - Mathematical Competency MAT 225 Discrete Math
Student may need to take Pre-Calculus first
   - HIS 105 Historical Foundations of Global Cultures (3 cr) AND
   - HIS 106 Thinking Historically in a Global Age (3 cr)

B: Literary, Artistic & Cultural Traditions (9 cr)
   - ______________________________
   - ______________________________
   - ______________________________
   - ______________________________

C: Biological & Physical Sciences (9 cr)
   - ______________________________
   - ______________________________
   - ______________________________
   - ______________________________
   - Environmental Science (Sec. Ed.req.; see depart. for list) ***

D: Political, Economic & Geographic Science (6 cr)
   - ______________________________
   - ______________________________
   - ______________________________
   - ______________________________

E: Social & Behavioral Science (6 cr)
   - ______________________________
   - ______________________________
   - ______________________________

III. Library Skills Complete via College/Writing course

Mathematics and Computer Science Requirements

32-33 cr
   - MAT 185 First Year Seminar in Mathematics OR
   - 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 313 Statistics I (4 cr)
   - MAT 318 Elementary Linear Algebra (3 cr)
   - MAT 320 Introduction to Abstract Algebra (3 cr)
   - MAT 430 Complex Analysis (3 cr) OR
   - MAT 441 Real Analysis (3 cr)
   - CSC 180 Microcomputer Basic (3 cr) OR
   - CSC 104 Python Programming (3 cr) OR
   - CSC 110 Computer Science I (3 cr) AND
   - CSC 106 Computer Science I Lab (1 cr)

Concentration Requirements

29-45 cr

Students are encouraged to choose one of the following concentrations: Statistics, Applied Mathematics Concentrations and Secondary Education Certification; also “No Concentration” option

Applied Mathematics Concentration* 29 cr minimum
   - MAT 322 Differential Equations (3 cr)
   - MAT 326 Mathematical Modeling (3 cr)
   - MAT 400 Level Applied Elective (3 cr)
   - [Choose from MAT 410, 413, 422, 476 or 491.]
   - MAT 400 Level Math Elective (3 cr)
   - MAT 400 Level Math Elective (3 cr)
   - Allied electives (3 courses) 9 cr minimum or minor

B.S. in Mathematics without Concentration* 24 cr minimum
   - MAT 300/400 Level Math Elective (3 cr)
   - MAT 300/400 Level Math Elective (3 cr)
   - MAT 400 Level Math Elective (3 cr)
   - MAT 400 Level Math Elective (3 cr)
   - Allied electives (3 courses) 9 cr minimum or minor

Secondary Education Certification *** 45 cr
   - MAT 326 Mathematical Modeling (3 cr)
   - MAT 333 Geometry (3 cr)
   - MAT 400 History of Mathematics (3 cr)
   - MAT 400 Level Math Elective (3 cr)

Professional Sequence:
   - TCH 207 Org. & Psych. Found. in Secondary Education (3 cr)
   - EEC 273 Introduction to Exceptionalities (3 cr)**
   - EEC 423 Effective Instructional Strategies (3 cr)
   - EEC 483 Assessing Students for Curricular Decision Making (3 cr)
   - RDG 413 Teaching Reading to English Language Learners (3 cr)
   - EDU 371 Technology in the Classroom (3 cr)
   - EDU 434 Teaching of Math. in the Secondary School I (3 cr)
   - EDU 435 Teaching of Math. in the Secondary School II (3 cr)
   - EDU 495 Student Teaching & Professional Practicum (12cr)

Total Graduation Requirements 120 cr

GPA Needed to Declare: 2.0 3.0 for secondary education

Semester I
   - MAT 211 Calculus I (4 cr)
   - MAT 225 Discrete Math (4 cr)
   - NOTE: Recommended Course Load: 16 credits

Semester II
   - MAT 212 Calculus II (4 cr)
   - NOTE: Recommended Course Load: 14 or 17 credits

* May replace Allied Electives (or Allied Electives/Interdisciplinary Sequence combination) by a minor in any discipline.

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

#### I. Required Skills and Competencies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106</td>
<td>Writing Intensive First Year Seminar (OR)</td>
<td>3</td>
</tr>
<tr>
<td>ENG 110</td>
<td>Advanced Placement Writing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>HCS 100</td>
<td>Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 211</td>
<td>Calculus I —if necessary, student may need MAT 175 Pre-Calculus first</td>
<td></td>
</tr>
<tr>
<td>HIS 105</td>
<td>Historical Foundations of Global Cultures (3 cr)</td>
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</tr>
<tr>
<td>HIS 106</td>
<td>Thinking Historically in a Global Age (3 cr)</td>
<td></td>
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</table>

#### II. Categories of Knowledge

<table>
<thead>
<tr>
<th>Category</th>
<th>Required Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Logic/Numbers for Rational Thinking</td>
<td>4 cr</td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions</td>
<td>9 cr</td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences</td>
<td>11 cr</td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science</td>
<td>6 cr (**)</td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science</td>
<td>6 cr (**)</td>
</tr>
</tbody>
</table>

**Must include a sequence in one discipline, either CAT D or E**

#### III. Library Skills Completed as part of the College Writing or Advanced Writing course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 107</td>
<td>Freshman Seminar Physics I (2 cr)</td>
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</tr>
<tr>
<td>PHY 221</td>
<td>Fundamentals of Physics I (5 cr)</td>
<td></td>
</tr>
<tr>
<td>PHY 301</td>
<td>Math and Numerical Techniques (4 cr)</td>
<td></td>
</tr>
<tr>
<td>PHY 311</td>
<td>Quantum I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>PHY 321</td>
<td>Electricity and Magnetism I (4 cr)</td>
<td></td>
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<tr>
<td>PHY 331</td>
<td>Mechanics I (4 cr)</td>
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<tr>
<td>PHY 341</td>
<td>Classical and Statistical Thermo (4 cr)</td>
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</tr>
</tbody>
</table>

### Physics' Core Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 211</td>
<td>Fundamentals Physics I</td>
<td></td>
</tr>
<tr>
<td>PHY 222</td>
<td>Fundamentals of Physics II</td>
<td></td>
</tr>
<tr>
<td>PHY 301</td>
<td>Math and Numerical Techniques (4 cr)</td>
<td></td>
</tr>
<tr>
<td>PHY 311</td>
<td>Quantum I (4 cr)</td>
<td></td>
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<tr>
<td>PHY 321</td>
<td>Electricity and Magnetism I (4 cr)</td>
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<td>Mechanics I (4 cr)</td>
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<tr>
<td>PHY 341</td>
<td>Classical and Statistical Thermo (4 cr)</td>
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</tbody>
</table>

### Mathematics/Computer Science Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 211</td>
<td>Calculus I (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 212</td>
<td>Calculus II (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 213</td>
<td>Calculus III (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 318</td>
<td>Elementary Linear Algebra (3 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 322</td>
<td>Differential Equations (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 110</td>
<td>Computer Science I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CSC 106</td>
<td>Computer Science I lab (1 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**A 3-year template is available at www.ship.edu/undeclared.**
Advanced Physics Track Requirements               30 cr

Concentration Requirements               29-30 cr

Chemistry Requirements             4 cr

Mathematics/Computer Science Requirements       19 cr

Physics Core Requirements             32cr

course                                    15 cr

General Education Requirements

I. Required Skills and Competencies

___ ENG 106 Writing Intensive First Year Seminar OR
___ ENG 110 Advanced Placement Writing (3 cr)

May need ENG 100 Basic Writing first, based on test results.

___ HCS 100 Intro to Human Communication (3 cr)

___ Mathematical Competency-Required

MAT 211 Calculus I — if necessary, student may need to take

MAT 175 Pre-Calculus first

___ HIS 105 Historical Foundations of Global Cultures (3 cr)

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

II. Categories of Knowledge                   35 cr

A: Logic/Numbers for Rational Thinking (4 cr)

___ MAT 212 Calculus II

B: Literary, Artistic & Cultural Traditions (9 cr)

C: Biological & Physical Sciences (10 cr)

___ CHM121 Chemical Bonding

___ PHY 221 Fundamentals of Physics I

D: Political, Economic & Geographic Science (6 cr)

E: Social & Behavioral Science (6 cr)

III. Library Skills Completed as part of the College Writing or Advanced Writing

block at the Penn State Nanofabrication Laboratory.     18 cr

The Nanofabrication courses are taught as a one-semester block at the Penn State Nanofabrication Laboratory.     18 cr

See the Physics Department for admission requirements and registration procedures.

GPA Needed to Declare:      2.0

*****************************************************************************

Total Graduation Requirements                         120 cr

*****************************************************************************

Free Electives**                     18 cr

*Major requirement fulfills General Education Credits

## Computational Physics Track Requirements

31 cr

Computational Physics Track Requirements

___ MAT 318 Elementary Linear Algebra (3 cr)

___ MAT 410 Numerical Analysis (3 cr)

___ CSC 111 Computer Science II (4 cr)

___ CMPE 322 Embedded Systems (4 cr)

___ CMPE 220 Computer Organization OR

___ PHY 471 Computational Physics (4 cr)

___ PHY 4xx Level Physics Class

___ PHY 4xx Level Physics Class

___ PHY 499 Research Project (3cr) or PHY395 Internship (3 cr)

___ CSC 211 Data Structures (4 cr) [Optional]

Taking this course allows the student to earn Computer Science Minor.

GPA Needed to Declare:      2.0

Nanofabrication Concentration:

** Replace free electives with the following:

Physics Requirements

___ PHY 325 Semiconductor Devices (4 cr)

___ PHY 450 Quantum Materials (4 cr)

See the Physics Department for admission requirements and registration procedures.

GPA Needed to Declare:      2.0

Recommended Sequence of Courses:

Semester I

MAT 211 Calculus I

PHY 107 Physics First Year Seminar

Three Gen Ed Courses

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.

A 4-year template is available at www.ship.edu/undeclared
**PHYSICS-B.S.Ed.**

### General Education Requirements

<table>
<thead>
<tr>
<th>I. Required Skills and Competencies</th>
<th>15 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR</td>
<td>ENG 110 Advanced Placement Writing (3 cr)</td>
</tr>
<tr>
<td>May need ENG 100 Basic Writing first, based on test results.</td>
<td></td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td>Mathematical Competency-Required</td>
</tr>
<tr>
<td>MAT 175 Pre-Calculus first</td>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND</td>
</tr>
<tr>
<td>HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. Categories of Knowledge</th>
<th>35 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Logic/Numbers for Rational Thinking (4 cr)</td>
<td></td>
</tr>
<tr>
<td>MAT 212 Calculus II</td>
<td></td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
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<tr>
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<td>___</td>
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</tr>
</tbody>
</table>

| C: Biological & Physical Sciences (10 cr) |  |
| CHM 121 Chemical Bonding |  |
| ESS 110 Intro to Geology OR ESS 210 Physical Geology |  |
| BIO 162 Principles of Biology: Organismal Diversity |  |

| D: Political, Economic & Geographic Science (6 cr) |  |
| ___ |  |
| ___ |  |

| E: Social & Behavioral Science (6 cr) |  |
| ___ |  |
| ___ |  |

III. Library Skills Completed as part of the College Writing or Advanced Writing course

### Physics Core Requirements

- PHY 107 Freshman Seminar Physics I (2 cr)
- PHY 221 Fundamentals of Physics I (5 cr)
- PHY 222 Fundamentals of Physics II (5 cr)
- PHY 301 Math and 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 Thermo (4 cr)

### Physics Requirements

- PHY 3xx Physics Elective 300 level or higher (3 cr)
- PHY 4xx Physics Elective (3 cr)

### Mathematics Requirements

- MAT 211 Calculus I (4 cr)*
- MAT 212 Calculus II (4 cr)*
- MAT 213 Calculus III (4 cr)
- MAT 322 Differential Equations (3 cr)
- CSC 110 Computer Science I (3 cr)
- CSC 106 Computer Science I (1 cr)

### Chemistry Requirements

<table>
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<tr>
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<tbody>
<tr>
<td>CHM 121 Chemical Bonding (3 cr)</td>
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<tr>
<td>CHM 125 Lab IB (1 cr)</td>
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<tr>
<td>CHM 122 Chemical Dynamics (3 cr)</td>
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<td>CHM 126 Lab IIB (3 cr)</td>
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### Professional Education Requirements

<table>
<thead>
<tr>
<th>30 cr</th>
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<tbody>
<tr>
<td>TCH 207 Org. &amp; Psych. Foundations of Secondary Education (3 cr)</td>
</tr>
</tbody>
</table>

The following must be taken together:

- EDU 440 Teaching Science In Secondary School (3 cr)
- EDU 441 Curriculum & Evaluation/Secondary Science Classroom I (3 cr)
- EDU 495 Student Teaching & Professional Practicum (12 cr)
- EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3 cr)
- EEC 423 Effective Instructional Strategies for Children w/ Exceptionalities PK-8 (3 cr)
- EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3 cr)

*Major requirement fulfills General Education Credits

### Total Graduation Requirements

<table>
<thead>
<tr>
<th>134 cr</th>
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GPA Needed to Declare: 3.0

Recommended Sequence of Courses:

<table>
<thead>
<tr>
<th>Semester I</th>
<th>MAT 211 Calculus I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHY 107 Physics First Year Seminar*</td>
</tr>
<tr>
<td></td>
<td>Three Gen Ed Courses</td>
</tr>
</tbody>
</table>

*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.
### General Education Requirements

I. Required Skills and Competencies  
16 cr

- ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)  
  May need ENG 050 Basic Writing first, based on test results  
- HCS 100 Intro to Human Communication (3 cr)  
- Mathematical Competency-Required  
  MAT 117 Applied Statistics (4 cr)  
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge  
33 cr  
- A: Logic/Numbers for Rational Thinking (3 cr)  
- B: Literary, Artistic & Cultural Traditions (9 cr)  
  (Literature Req)  
- C: Biological & Physical Sciences (9 cr)  
- D: Political, Economic & Geographic Science (6 cr)  
  ECO 101 Principles of Macroeconomics OR ECO 102 Principles of Microeconomics OR ECO 113 Principles of Economics  
  GEO 101 World Geography* OR GEO 103 Geography of U.S. and Canada

III. Library Skills Completed via College/Advanced Writing course

### Political Science Core Requirements  
18 cr  
Students must earn a grade of "C" or better in each core course

- PLS 100 U.S. Government and Politics (3 cr)  
- PLS 141 World Politics (3 cr)  
- PLS 201 Foundations of Political Science: Concepts and Critical Analysis (3 cr)  
- PLS 202 Applications in Public Affairs (3 cr)  
- PLS 300 Adv. U.S. Gov't: Institutions and Public Policy (3 cr)  
- PLS 301 Political Science Research Methods (3 cr)  
- PLS 399 Senior Seminar (3 cr)

### Political Science - International Track  
39 cr  

- PLS 307 Applied Research in Political Science (3 cr)  
- PLS 342 American Foreign Policy (3 cr)  
- PLS 343 Global Economic and Political Conflict (3 cr)  
- PLS 347 Applied Diplomacy (3 cr)  
- PLS 348 Applied Diplomacy (3 cr)  
- PLS 351 European Politics (3 cr)  
- PLS 355 Politics of Developing Regions (3 cr)  
- PLS 357 Comparative Revolutions (3 cr)  
- PLS 358 European Political Economy and Security (3 cr)  
- PLS 359 European Political Integration and Identity (3 cr)  
- PLS 394 Special Topics in International Politics (3 cr)

Any Study Abroad course in any discipline  
* Students on International Track should take GEO 101, World Geography

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.

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

#### Foreign Language
  All students completing a Bachelor of Arts degree are required to 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 or CLEP testing. Three credits of a foreign language may count under Category B.

---

In addition to the required core, students must take courses in four applied competency areas.

Courses selected from Applied Competencies  
9 - 15 cr  
(see p. 80 for list of courses)

---

A 4-year template is available at www.ship.edu/undeclared
In addition to the required core, students must take courses in four applied competency areas. To meet this requirement students need 9-15 credits, depending on whether a course counts for more than one applied competency.

### Applied Competency: Oral Communication
- **3 cr**
- PLS 252 Cost Rica: Politics, Economy and 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 through the 19th Century (3)
- PLS 373 Public Financial Administration (3 cr)

### Applied Competency: Written Communication
- **3 cr**
- PLS 231 State and Local Government (3 cr)
- PLS 307 Applied Research in Political Science (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 and 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 Constitutional Law: The Federal System (3 cr)
- PLS 366 Constitutional Law: First Amendment Freedom (3 cr)
- PLS 367 Constitutional Law: Criminal Law and Equal Protection (3 cr)
- PLS 371 Public Management (3 cr)
- PLS 372 Public Personnel Administration (3 cr)
- PLS 381 Principles of Labor Relations (3 cr)

### Applied Competency: Problem Solving
- **3 crs**
- PLS 271 Introduction to Public Administration (3 cr)
- PLS 325 African American Politics (3 cr)
- PLS 331 Urban Politics and 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 through the 19th Century (3 cr)
- PLS 362 Contemporary Political Ideologies (3 cr)
- PLS 365 Constitutional Law: The Federal System (3 cr)
- PLS 366 Constitutional Law: First Amendment Freedom (3 cr)
- PLS 367 Constitutional Law: Criminal Law and Equal Protection (3 cr)
- PLS 374 Public Service Ethics (3 cr)

### Applied Competency: Experiential Learning
- **6 crs**
- PLS 251 Introduction to Comparative Politics (3 cr)
- PLS 252 Costa Rica: Politics, Economy, and Society (3 cr)
- PLS 307 Applied Research in Political Science (3 cr)
- PLS 313 The Judicial Process (3 cr)
- PLS 323 Campaigns, Elections, and Political Parties (3 cr)
- PLS 333 Applications in State and 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 and Security (3 cr)
- PLS 359 European Political Integration and Identity (3 cr)
- PLS 395 Internship I (3 cr)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PSY 101 OR</td>
<td></td>
</tr>
<tr>
<td>PSY 102 Foundations of Psychology (3 cr)</td>
<td>Not needed if PSY 101 General Psychology has been taken</td>
</tr>
<tr>
<td>PSY 240 Psychology of Personality (3 cr)</td>
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<tr>
<td>PSY 270 Social Psychology (3 cr)</td>
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<tr>
<td>PSY 330 Abnormal Psychology (3 cr)</td>
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<tr>
<td>PSY 265 Child and Adolescent Psychology (3 cr)</td>
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<tr>
<td>PSY 352 Adulthood and Aging (3 cr)</td>
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</tr>
<tr>
<td>PSY 440 History &amp; Systems of Psychology (3 cr) (Prereq: At least Junior Standing)</td>
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<tr>
<td>PSY 235 Conditioning and Learning (3 cr)</td>
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<tr>
<td>PSY 320 Behavioral Neuroscience (3 cr)</td>
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<tr>
<td>PSY 325 Psychology of Human Cognition (3 cr)</td>
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<tr>
<td>PSY 397 Human Cognition Development (3 cr)</td>
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<tr>
<td>PSY 430 Sensation and Perception (3 cr)</td>
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<tr>
<td>PSY 445 Psychology of Thinking (3 cr) (Prereq: PSY 325)</td>
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<tr>
<td>PSY 105 Research Design &amp; Statistics I (3 cr) (Prereq. PSY 105)</td>
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<tr>
<td>PSY 301 Experimental Psychology (3 cr) OR PSY 305 Applied Research Methods in Psych. (3 cr) (Prereq. PSY 301 &amp; 305 have Prereq of PSY 205)</td>
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<tr>
<td>PSY 340 Intro to Clinical Psychology (3 cr) (Prereq. PSY 330 &amp; 240)</td>
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<tr>
<td>PSY 361 Psychology of Group Interaction (3 cr)</td>
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<tr>
<td>PSY 384 Person to Person Interaction (3 cr)</td>
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<tr>
<td>PSY 420 Health Psychology (3 cr)</td>
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</tr>
<tr>
<td>PSY 432 Psychology of Computers &amp; Internet (3 cr)</td>
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</tr>
<tr>
<td>PSY 435 Psychopharmacology (3 cr) (Prereq. PSY 330)</td>
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</tr>
<tr>
<td>PSY 450 Crisis Intervention (3 cr) (Prereq. PSY 384)</td>
<td></td>
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<tr>
<td>PSY 470 Legal Psychology (3 cr)</td>
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</tr>
<tr>
<td>PSY 475 Industrial &amp; Organizational Psychology (3 cr)</td>
<td></td>
</tr>
<tr>
<td>PSY 485 Tests and Measurement (3 cr) (Student must have completed at least one statistics course)</td>
<td></td>
</tr>
</tbody>
</table>

**GOAL: Social Awareness**

Select at least two of the following:

- PSY 315 Prejudice and the Minority Experience (3 cr)
- PSY 335 Psychology of Social Influence (3 cr) (Prereq. PSY 270)
- PSY 352 Psychology of Adulthood and Aging (3 cr) *
- PSY 355 Psychology of the Exceptional Child (3 cr)
- PSY 365 Multicultural Psychology (3 cr)
- PSY 410 Psychology and Women (3 cr)
- PSY 422 Social Psychology of Aging (3 cr)
- PSY 447 Multicultural Health Psychology (3 cr)

* PSY 352 satisfies either Knowledge Base or Social Awareness GOAL, not both.

**Psychology Electives**

Students can take any 6 credits from any combination of:

- PSY 375 Advanced Research I (3 cr) | Registration requires faculty approval
- PSY 379 Capstone Seminar in Psychology
- PSY 393 Selected Topics in Psychology (1-3 cr)
- PSY 395 Seminar in Select Topics (3 cr)
- PSY 490 Selected Topics in Psychology (3 cr)

**Capstone**

Can be fulfilled in one of the following ways:

- PSY 379 Capstone Seminar in Psychology (3 cr)
- PSY 374 Advanced Research I (3 cr)
- PSY 375 Advanced Research II (3 cr)
- PSY 385 Internship I (3cr)
- PSY 386 Internship II (3 cr)
- PSY 389 Internship III (3 cr)

**Free Electives or Minor**

All Psychology majors are strongly encouraged to take a minor in a related field [18 - 21 credits].

If you know the area of psychology you are interested in, you can select courses consistent with your specific interest. See the Psychology Dept. for appropriate course listings.

**Behavioral Neurosciences**

- Clinical Psychology
- Cognitive Psychology
- Conditioning and Learning
- Developmental Psychology
- Industrial-Organizational Psychology
- Personality Psychology
- Social Psychology
- Statistical-Mathematical

**Total Graduation Requirements**

- 120 cr

**GPA Needed to Declare:**

- 2.3

**Admission is competitive and a screening interview is required. Apply to the Psychology Department within the first three weeks of each semester. You will be contacted regarding the screening meeting.**

**Helpful Hints for Advising:**

**Year I**

- PSY 102 Foundations of Psychology
  - Not needed if PSY 101 has been taken

**Year II**

- PSY 105 Research Design & Statistics I
  - PSY 205 Research Design & Statistics II
  - Begin Foundation Courses

**Year III**

- PSY 301 Experimental Psychology OR PSY 305 Applied Research Methods in Psychology

A psychology minor is available [18 - 21 credits].

**Courses consistent with your specific interest. See the Psychology Dept. related field.**
**PUBLIC ADMINISTRATION-B.S.**

### General Education Requirements

<table>
<thead>
<tr>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Skills and Competencies</td>
<td>16 cr</td>
</tr>
<tr>
<td>___ ENG 106 Writing Intensive First Year Seminar OR</td>
<td></td>
</tr>
<tr>
<td>___ ENG 110 Advanced Placement Writing (3 cr)</td>
<td></td>
</tr>
<tr>
<td>May need ENG 050 Basic Writing first, based on test results counter</td>
<td></td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ Mathematical Competency-Required</td>
<td></td>
</tr>
<tr>
<td>MAT 117 Applied Statistics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND</td>
<td></td>
</tr>
<tr>
<td>HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
<tr>
<td>II. Categories of Knowledge</td>
<td>33 cr</td>
</tr>
<tr>
<td>A: Logic/Numbers for Rational Thinking (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td></td>
</tr>
<tr>
<td>___ (Literature Req.)</td>
<td></td>
</tr>
<tr>
<td>___ C: Biological &amp; Physical Sciences (9 cr)</td>
<td></td>
</tr>
<tr>
<td>___ D: Political, Economic &amp; Geographic Science (6 cr)</td>
<td></td>
</tr>
<tr>
<td>___ ECO 101 Principles of Macroeconomics AND</td>
<td></td>
</tr>
<tr>
<td>___ ECO 102 Principles of Microeconomics OR</td>
<td></td>
</tr>
<tr>
<td>___ ECO 113 Principles of Economics</td>
<td></td>
</tr>
<tr>
<td>___ GEO 101 World Geography OR</td>
<td></td>
</tr>
<tr>
<td>___ GEO 103 Geography of US and Canada</td>
<td></td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science (6 cr)</td>
<td></td>
</tr>
<tr>
<td>___ SOC 101 Introduction to Sociology</td>
<td></td>
</tr>
<tr>
<td>III. Library Skills Completed as part of the College Writing or Advanced Writing course</td>
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**Public Administration Requirements***

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>CORE COURSES</td>
<td>27 cr</td>
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<tr>
<td>___ PLS 100 U. S. Government and Politics (3 cr)</td>
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</tr>
<tr>
<td>___ PLS 202 Applications in Public Affairs (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 231 State and Local Government (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 271 Introduction to Public Administration (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 300 Adv. U.S. Gov't: Institutions and Public Policy (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 301 Political Science Research Methods (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 302 Public Policy Analysis (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 371 Public Management (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 372 Public Personnel Administration (3 cr)</td>
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</tr>
<tr>
<td>___ PLS 373 Public Financial Administration (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 395 Internship I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 396 Internship II (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 397 Internship III (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 431 Pennsylvania Local Government (3 cr)</td>
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</table>

***Students must earn a "C" or better in each Required Core Course***

**Public Administration Electives**

<table>
<thead>
<tr>
<th>Description</th>
<th>12 cr</th>
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<tbody>
<tr>
<td>___ PLS 307 Applied Research in Political Science (3 cr)</td>
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</tr>
<tr>
<td>___ PLS 331 City Politics and Administration (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 333 Applications in State and Local Public Policy (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 365 Constitutional Law: The Federal System (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 374 Public Service Ethics (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 381 Principles of Labor Relations (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 389 Special Topics in Public Administration (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 395 Internship I (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 396 Internship II (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ PLS 397 Internship III (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**At least 6 credits must be taken at the 300-level or above. Substitution for an elective course may be made with the prior permission of the department chair.**

**Allied Fields**

<table>
<thead>
<tr>
<th>Description</th>
<th>16 cr</th>
</tr>
</thead>
</table>

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**Economics Requirement**

<table>
<thead>
<tr>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>___ ECO 101 Principles of Macroeconomics (3 cr) ***</td>
<td>6 cr</td>
</tr>
<tr>
<td>___ ECO 102 Principles of Microeconomics (3 cr)</td>
<td></td>
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<tr>
<td>or</td>
<td></td>
</tr>
<tr>
<td>___ ECO 113 Principles of Economics (4 cr)</td>
<td></td>
</tr>
<tr>
<td>___ Any Economics course at or above the 200 level (3 cr)</td>
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</tbody>
</table>

**Sociology Requirement**

<table>
<thead>
<tr>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ SOC 101 Introduction to Sociology (3 cr) ***</td>
<td>6 cr</td>
</tr>
<tr>
<td>An additional Sociology course from the following</td>
<td></td>
</tr>
<tr>
<td>___ SOC 241, 243, 258, 346, 351, 354, 363, 365, or 425</td>
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</table>

**Math and Computer Competency***

<table>
<thead>
<tr>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>___ MAT 117 Applied Statistics (4 cr)</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

***Major requirement fulfills General Education Credits***

**Free Electives**

<table>
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<tr>
<th>Description</th>
<th>Credits</th>
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<td></td>
<td>23 cr</td>
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</table>

**Total Graduation Requirements**

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<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td>120 cr</td>
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</tbody>
</table>

---

GPA Needed to Declare: 2.0

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Helpful Hints for Advising:

**YEAR I**

- PLS 100 U.S. Government and Politics

**YEAR 2**

- PLS 271 Introduction to Public Administration
- MAT 117 Applied Statistics

PLS 271 and MAT 117 are prerequisites for PLS 301.

PLS 301 is a prerequisite for PLS 302.

PLS 302 is only offered during the Spring semester.

Students are strongly encouraged to complete an internship.

A student may count a maximum of six internship credits toward the Major. To qualify for an internship, students must have a 2.0 overall GPA and a 2.3 in the Public Administration major. Students must have completed the following courses to be eligible for an internship: PLS 100, PLS 202, PLS 271, PLS 300, and PLS 301.

PLS 395 and 396 fulfill a major requirement. PLS 397 can count as part of a student’s 120 credit hour requirement.

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A 4-year template is available at [www.ship.edu/undeclared](http://www.ship.edu/undeclared)
## General Education Requirements

### I. Required Skills and Competencies

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td>16 cr</td>
</tr>
</tbody>
</table>

May need ENG 050 Basic Writing first, based on test results.

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<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
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</tr>
<tr>
<td>Mathematical Competency-Required</td>
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</tr>
<tr>
<td>MAT 117 Applied Statistics (4 cr)</td>
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</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

### II. Categories of Knowledge

#### A: Logic/Numbers for Rational Thinking (3 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHL 100 U.S. Government and Politics</td>
<td>3 cr</td>
</tr>
<tr>
<td>ECO 101 Principles of Macroeconomics</td>
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</tr>
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</table>

#### B: Literary, Artistic & Cultural Traditions (9 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSY 101 General Psychology</td>
<td>3 cr</td>
</tr>
<tr>
<td>AN 111 Cultural Anthropology</td>
<td>3 cr</td>
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</table>

#### C: Biological & Physical Sciences (9 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIO 101 General Biology</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHYS 101 General Physics</td>
<td>3 cr</td>
</tr>
<tr>
<td>CHEM 101 General Chemistry</td>
<td>3 cr</td>
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</table>

#### D: Political, Economic & Geographic Science (6 cr)

Recommended:

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PLS 100 U.S. Government and Politics</td>
<td>3 cr</td>
</tr>
<tr>
<td>ECO 101 Principles of Macroeconomics</td>
<td></td>
</tr>
</tbody>
</table>

#### E: Social & Behavioral Science (6 cr)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101 General Psychology</td>
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</tr>
<tr>
<td>AN 111 Cultural Anthropology</td>
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</table>

### III. Library Skills Completed as part of the College Writing or Advanced Writing course

### Sociology Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOC 101 Introduction to Sociology</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOC 201 Sociological Practice</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOC 220 Social Stratification</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOC 380 Classical Social Theory</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOC 385 Introduction to Social Research</td>
<td>3 cr</td>
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<tr>
<td>SOC 415 Senior Seminar (3 cr)</td>
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All SOC courses listed above must be passed with a grade of "C" or higher.

### Philosophy/Psychology Requirement

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>PSY 101 General Psychology</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHL 100 Philosophy Elective</td>
<td>3 cr</td>
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</table>

## Political Science Requirement sequence

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PLS 100 U.S. Government and Politics</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 101 Principles of Macroeconomics</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

## Economics Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 101 Principles of Macroeconomics</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

## Anthropology Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN 111 Cultural Anthropology</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

## Math Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 117 Applied Statistics</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

## Geography Requirement

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO Elective</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

## Free Electives

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology Elective</td>
<td>6 cr</td>
</tr>
</tbody>
</table>

A 6 cr Sociology internship may count toward the major. A student needs a 2.5 cumulative GPA to be eligible for internships.

### Special Interest Areas Available

- Anthropology
- Gerontology
- Culture and Social Change
- Human Relations
- Family and Marriage
- Social Institutions/Organizations
- Social Problems

Students interested in these areas should see the Department for more information.

### B.A. students must satisfy the Novice level competency in a foreign language.

This is accomplished via 3 years of the same language in high school, an AP score of at least 2, or the completion of a 103 level course. Three credits of a foreign language may count under category B.

### *Major requirement double counts as General Education Credits

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101 General Psychology</td>
<td>3 cr</td>
</tr>
<tr>
<td>PHL 100 Philosophy Elective</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

Total Graduation Requirements: 120 cr

GPA Needed to Declare: 2.0

### Helpful Hints for Advising:

**YEAR 1**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 101 Introduction to Sociology</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOC 241 Contemporary Social Problems</td>
<td></td>
</tr>
<tr>
<td>MAT 117 Applied Statistics</td>
<td>4 cr</td>
</tr>
</tbody>
</table>

**YEAR 2**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 220 Social Stratification</td>
<td>3 cr</td>
</tr>
<tr>
<td>SOC 385 Introduction to Social Research</td>
<td>3 cr</td>
</tr>
<tr>
<td>2 Sociology Electives</td>
<td></td>
</tr>
</tbody>
</table>

A sociology minor is available 21 cr.

A anthropology minor is available 18 cr.
**SOFTWARE ENGINEERING B.S.**

**General Education Requirements**

I. Required Skills and Competencies 16 cr

- ENG 106 Writing Intensive First Year Seminar OR
- ENG 110 Advanced Placement Writing (3 cr)
- May need ENG 050 Basic Writing first, based on test results
- HCS 100 Intro to Human Communication (3 cr)
- MAT 211 Calculus I (4 cr)
- If necessary, student may need MAT 175 Pre-Calculus first.
- HIS 105 Historical Foundations of Global Cultures (3 cr)
- HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 35 cr

A: Language/Numbers for Rational Thinking (3 cr)

B: Literary, Artistic & Cultural Traditions (9 cr)

C: Biological & Physical Sciences (11 cr)
- Students can choose from BIO161/162 CHM 121&125/122&126, or PHY 205&123/206&125. The first course in the sequence can count as a Category C General Education course.

D: Political, Economic & Geographic Science (6 cr)

E: Social & Behavioral Science (6 cr)

III. Library Skills: Complete via College/Advanced Writing

**Computer Science Major Core Requirements** 57 cr

- CSC 107 Computer Science I Lab (1 cr)
- CSC 110 Computer Science I (4 cr)
- CSC 111 Computer Science II (4 cr)
- CSC 210 Data Structures (4 cr)
- CMPE 220 Computer Organization (4 cr)
- CSC 310 Design & Analysis of Algorithms (4 cr)
- CMPE 320 Operating Systems (4 cr)
- CSC 371 Database Management (4 cr)
- SWE 310 Software Metrics/Process Management (4 cr)
- SWE 300 Crafting Quality Code (4 cr)
- CSC 431 Computer Networks (4 cr)
- SWE 420 Extreme Programming (4 cr)
- CSC 498 Senior Research Methods (2 cr)
- CSC 499 Research and Development Project (2 cr)
- CSC XXX Computer Science Elective** (4 cr)
- SWE 400 Large Scale Architectures (4 cr)

**Other Required Courses** 15 cr

- MAT 211 Calculus I (4 cr)
- MAT 225 Discrete Mathematics (4 cr)
- MAT 313 Statistics I (4 cr)
- MAT 318 Elementary Linear Algebra (3 cr)

*Software Engineering majors must complete a two-semester science sequence. Students can choose from BIO161/162 CHM 121&125/122&126, or PHY 205&123/206&125. The first course in the sequence can count as a Category C General Education course.

** Computer Science Elective is any CSC course at the 300-level or above. Check with advisor or bulletin board for frequency of required courses.

** Free Electives 9 cr

** Total Graduation Requirements 120 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.

Students pursuing this major should have strong math skills.

Helpful Hints for Advising:

Semester I  
- CSC 110 Computer Science I (3 cr)  
- CSC 107 Computer Science I Lab (1 cr)  
- Calculus I (4 cr)****  
- Two Gen Ed courses (6 cr)

Semester II  
- CSC 111 Computer Science II (4 cr)  
- MAT 225 Discrete Mathematics (4 cr)**  
- Two General Education Classes (6 cr)

**** Depending on math placement.

** Students not qualified to take Calculus I may be required to first complete MAT 175 Pre-Calculus.

A Computer Science minor is available 20-21 cr.

A 4-year template is available at www.ship.edu/undeclared
# SPANISH & SPANISH SECONDARY EDUCATION CERTIFICATION-B.A.

## General Education Requirements

### I. Required Skills and Competencies

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106</td>
<td>Writing Intensive First Year Seminar OR</td>
<td>3 cr</td>
</tr>
<tr>
<td>ENG 110</td>
<td>Advanced Placement Writing</td>
<td>3 cr</td>
</tr>
<tr>
<td>HCS 100</td>
<td>Intro to Human Communication</td>
<td>3 cr</td>
</tr>
<tr>
<td>HIS 105</td>
<td>Historical Foundations of Global Cultures</td>
<td>3 cr</td>
</tr>
<tr>
<td>HIS 106</td>
<td>Thinking Historically in a Global Age</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**Total:** 15 credits

---

### II. Categories of Knowledge

#### A: Logic/Numbers for Rational Thinking (3 cr)

- [ ]

#### B: Literary, Artistic & Cultural Traditions (9 cr)

- [ ]
- [ ]
- [ ]

#### C: Biological & Physical Sciences (9 cr)

- [ ]
- [ ]
- [ ]

#### D: Political, Economic & Geographic Science (6 cr)

- [ ]
- [ ]

#### E: Social & Behavioral Science (6 cr)

- [ ]
- [ ]

**Total:** 33 credits

---

### III. Library Skills Completed as part of the College Writing or Advanced Writing course

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN 202</td>
<td>Intermediate Spanish Conversation</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 204</td>
<td>Ideas &amp; Cultures from the Spanish-Speaking World</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 211</td>
<td>Intermediate Grammar</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 302</td>
<td>Advanced Spanish Conversation</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 309</td>
<td>Spanish Phonetics</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 312</td>
<td>Spanish Grammar</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 313</td>
<td>Advanced Composition &amp; Stylistics</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 343</td>
<td>Introduction to Literary Studies</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 360</td>
<td>Masterpieces of Spanish Literature</td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 361</td>
<td>Masterpieces of Spanish-Am. Literature</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**Total:** 30 credits

---

### Spanish Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN 300-level</td>
<td></td>
<td>3 cr</td>
</tr>
<tr>
<td>SPN 400-level</td>
<td></td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**Total:** 6 credits

---

## Professional Education Requirements

### If planning to teach Spanish

**Total:** 30 credits

---

## Secondary Education majors in Spanish

- Must take a math course to satisfy the Category A requirement. This cannot be the same course used for Required Skills. They must also take an English course. If any exceptions are made, they must be approved by the Teacher Education Office.

- Spanish major/elective requirements for secondary education majors are the same as for the Spanish B.A.

- Replace free electives with the following:
  - [ ]
  - [ ]
  - [ ]
  - [ ]
  - [ ]

**Total:** 120 credits

---

## GPA Needed to Declare

- 2.0

## Helpful Hints for Advising:

- **YEAR I** Any introductory language courses necessary

## All Spanish & Spanish Secondary Education Certification B.A. students

- Must pass the ACTFL Oral Proficiency Interview prior to graduation and reach the advanced low level minimum.

---

### Other requirements for teacher certification are available from the Department of Modern Languages.

**Total:** 6 credits

---

**Total Graduation Requirements**

**120 cr**

---

**GPA Needed to Declare:**

- 3.0

---

## Advising Hints: YEAR I: Any introductory language courses necessary

Spanish minor is available 18 credits
College of Education & Human Services

CRIMINAL JUSTICE
EXERCISE SCIENCE
SOCIAL WORK
TEACHER EDUCATION
College of Education & Human Services

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
Academic Advising
Students Interested in the Teaching Profession

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) 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 undeclared 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.

Both 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. 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 Pre-Professional Skills Test and required course work 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.


Hockersmith, P.E., School of Education and Human Services, June 2005.

Updated: Royce, C., Teacher Education, Shippensburg University, July, 2009.
Entry Requirements for Teacher Education

For admission into one of the program areas in the Department of Teacher Education:

1. Declare the major during the first two weeks of the semester.

2. Obtain an application at Shippen Hall 214 during the first week of the semester.

3. Data used in the selection process include: your completed application form which includes a Statement of Commitment, high school and college GPA.

4. 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 prior to submitting the application.

---

Academic Advising

**Students Interested in Secondary Teaching Profession** (i.e. Art, Biology, Business, Chemistry, Earth Science, English, French, Math, Physics, Social Studies (history, geography, economics or political science) or Spanish)

Any undeclared major interested in teaching grades 7 through 12 or k-12 in public schools must be certified to teach those grades. 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 programs.
### General Education Requirements

<table>
<thead>
<tr>
<th>Section</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Required Skills and Competencies</td>
<td>15 cr</td>
</tr>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing (3 cr)</td>
<td>May need ENG 050 Basic Writing first, based on test results.</td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication (3 cr)</td>
<td>Mathematical Competency** Any Category A math course.</td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
<td></td>
</tr>
<tr>
<td>II. Categories of Knowledge</td>
<td>33 cr</td>
</tr>
<tr>
<td>A: Logic/Numbers for Rational Thinking (3 cr)</td>
<td>Recommend a Computer Science Course</td>
</tr>
<tr>
<td>B: Literary, Artistic &amp; Cultural Traditions (9 cr)</td>
<td>Recommend a Spanish Course, but no language requirement</td>
</tr>
<tr>
<td>C: Biological &amp; Physical Sciences (9 cr)</td>
<td></td>
</tr>
<tr>
<td>D: Political, Economic &amp; Geographic Science (6 cr)</td>
<td>PLS 100 U.S. Government and Politics</td>
</tr>
<tr>
<td>E: Social &amp; Behavioral Science (6 cr)</td>
<td>PSY 101 General Psychology</td>
</tr>
<tr>
<td>SOC 101 Introduction to Sociology</td>
<td></td>
</tr>
<tr>
<td>III. Library Skills Completed in ENG 106 or 110</td>
<td></td>
</tr>
<tr>
<td>Criminal Justice Core Courses</td>
<td>21 cr</td>
</tr>
<tr>
<td>CRJ 100 Introduction to Criminal Justice (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 211 Criminal Law and Procedures (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 221 Policing a Democracy (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 241 Survey of Corrections (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 309 Theories of Crime and Crime Control (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 310 Research Methods (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 452 Race, Ethnicity, &amp; Crime (3 cr) approved diversity course</td>
<td></td>
</tr>
<tr>
<td>Required Capstone Courses</td>
<td>3 cr</td>
</tr>
<tr>
<td>CRJ 454 Policy, Professionalism, and Ethics (3 cr)</td>
<td></td>
</tr>
<tr>
<td>Criminal Justice Electives</td>
<td>21 cr</td>
</tr>
<tr>
<td>CRJ 321 Criminal Investigation (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 326 Victimology: The Victim and the Law (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 336 Introduction to Forensic Science (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 345 Organization &amp; Management of CJ Agencies (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 348 Clinical Intervention and Treatment (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 351 Juvenile Justice (3 cr)</td>
<td></td>
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<tr>
<td>CRJ 356 Organized Crime (3 cr)</td>
<td></td>
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<tr>
<td>CRJ 363 Intimate Partner Violence (3 cr)</td>
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<tr>
<td>CRJ 365 White-Collar Crime (3 cr)</td>
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<tr>
<td>CRJ 370 Mock Trial (3 cr)</td>
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<tr>
<td>CRJ 390 Selected Topics in Criminal Justice (3 cr)</td>
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<tr>
<td>CRJ 393 Selected Topics in Criminal Justice (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 396 Selected Topics in Criminal Justice (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 397 Selected Topics in Criminal Justice (3 cr)</td>
<td></td>
</tr>
<tr>
<td>CRJ 398 Selected Topics in Criminal Justice (3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

**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.**

### Interdisciplinary Courses
15 cr
Students must select any five courses, 200 level or above, not Criminal Justice courses, and not being used to meet General Education or major requirements.

### Free Electives
12 cr
(Not to include any Criminal Justice Courses)

**Major requirement fulfills General Education Credits**

** Students who test at the advanced level on the placement test will have 12 credits under the Required Skills and Competencies—the remaining three (3) credits move to the General Education Electives 12 to 15 credits

### Total Graduation Requirements
120 cr

GPA Needed to Declare: **2.75**

Students are required to achieve "C" grades or above in all CRJ courses.

Helpful Hints for Advising: Semester I/II: CRJ 100

Criminal Justice majors are limited to 45 credits of CRJ courses. CRJ courses cannot be used for Free Electives or for Interdisciplinary Courses.
EXERCISE SCIENCE B.S.

General Education Requirements
I. Required Skills and Competencies          16 cr
   ___ ENG 106 Writing Intensive First Year Seminar OR
   Eng 110 Advanced Placement Writing (3 cr)
   May need ENG 050 Basic Writing first, based on test results
   ___ HCS 100 Intro to Human Communication (3 cr)
   ___ Mathematical Competency-Required
   MAT 117 Applied Statistics (4 cr)
   ___ HIS 105 Historical Foundations of Global Cultures (3 cr) AND
   ___ HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge                   34 cr
   A: Logic/Numbers for Rational Thinking (3 cr)
   ___
   B: Literary, Artistic & Cultural Traditions (9 cr)
   ___
   ___
   ___
   ___
   C: Biological & Physical Sciences (10 cr)
   ___ BIO 161 Principles of Biology: Cell Structure & Function (4 cr) OR
   ___ BIO 162 Principles of Biology: Organismal Diversity (4 cr)
   ___ CHM105 Chemistry: An Observational Approach (3 cr)
   ___ PHY 121 Introductory Physics (3 cr) fall only
   ___ PHY 123 Introductory Physics I Lab (1 cr)
   D: Political, Economic & Geographic Science (6 cr)
   ___
   ___
   ___
   ___
   E: Social & Behavioral Science (6 cr)
   ___ PSY 101 General Psychology (3 cr)
   ___ SOC 101 Intro to Sociology: Society and Diversity* (3 cr) OR
   ___ WST 100 Intro to Women's Studies* (3 cr)

III. Library Skills Completed as part of the First Year Writing Seminar or Advanced Writing course

Biology Minor Requirements         16 cr
   ___ BIO 161 Principles of Biology: Cell Structure & Function (4 cr) OR
   ___ BIO 162 Principles of Biology: Organismal Diversity (4 cr)
   ___ BIO 371 Human Anatomy (4 cr) fall only
   ___ BIO 350 Human Physiology (4 cr)
   ___ BIO 220, 260, 240, OR 224 (3 cr)

Exercise Science Requirements                 45-51 cr
   ___ ESC 244 Mechanical Analysis of Sport Skills (3 cr)
   ___ ESC 250 Introduction to Kinesiology (3 cr)
   ___ ESC 321 Exercise Physiology (4 cr)
   ___ ESC 333 Biomechanics (3 cr) Spring Only
   ___ ESC 336 Motor Behavior (3 cr)
   ___ ESC 340 Prevention and Care of Athletic Injuries (3 cr)
   ___ ESC 350 Nutrition for Sport and Fitness (3 cr)
   ___ ESC 352 Psychology of Physical Activity (3 cr)
   ___ ESC 353 Research Design and Stats for Ex. Sci. (3 cr)
   ___ ESC 420 Cardiac Rehabilitation & Special Populations (4 cr)
   ___ ESC 421 Exercise Physiology II (4 cr)
   ___ ESC 422 Exercise Testing and Prescription (3 cr)
   ___ ESC 424 Internship flexible credits (6 - 12 cr)

Free Electives (depends on Internship credits and professional track)   6-12 cr
   All students are required to acquire certifications by attending an American Red Cross ARC or American Heart Association AHA workshop at the student's expense.
   All students doing an internship must hold current certifications at the student's expense: 1 First Aid, 2 CPR Certification, 3 Child Abuse Clearance, 4 Criminal Record Clearance, and 5 TB Test.
   Also, all internship students must have liability insurance.

Total Graduation Requirements                             120 cr

GPA Needed to Declare:               2.75

Admission to this major is competitive. Students must have earned a grade of "C" or better in Principles of Biology 161 or 162 and must have a 2.75 GPA.

Students are eligible for a Biology minor. See department for specifics.

*Fulfills University diversity requirements

Helpful Hints for Advising:

Students should begin their Biology sequence in the freshman year and must take 16 credits each semester during the freshman year.

Semester I        BIO 161 Principles of Biology: Cell Structure & Function
Semester II       BIO 162 Principles of Biology: Organismal Diversity
Semester III      BIO 371 Human Anatomy
                  PHY 250 Introduction to Kinesiology
                  PHY 121 & 123 Introductory Physics I and Lab
Semester IV       BIO 350 Human Physiology
                  ESC 244 Mechanical Analysis of Sport Skills

General Education courses should be completed in the first 2 years.

Physics is normally taken in the junior year.

Internship should be taken during the spring or summer semester of the senior year.

Any student may enroll and complete any course in the Department of Exercise Science. Prerequisites for any course must be complete prior to enrollment.

Students may complete no more than 3 Exercise Science major courses within the Department of Exercise Science without admission into the Exercise Science major.

A 4-year template is available at www.ship.edu/undeclared.
A Guidebook for Undergraduate Students 2015-2016

GENERAL EDUCATION REQUIREMENTS

I. Required Skills and Competencies 16 cr
- ENG 106 Writing Intensive First Year Seminar OR
- ENG 110 Advanced Placement Writing (3 cr)
  May need ENG 050 Basic Writing first, based on test results.
- HCS 100 Intro to Human Communication (3 cr)
- Mathematical Competency-Required
  MAT 117 Applied Statistics (4 cr)
- HIS 105 Historical Foundations of Global Cultures (3 cr) AND
- HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 33 cr
A: Logic/Numbers for Rational Thinking (3 cr)
B: Literary, Artistic & Cultural Traditions 9 cr
C: Biological & Physical Sciences 9 cr
  BIO 150 Human Biology
D: Political, Economic & Geographic Science 6 cr
  PLS 100 U.S. Government and Politics [required]
  ECO 102 Macroeconomics [recommended] *** OR
  ECO 101 Microeconomics OR
  GEO 101
E: Social & Behavioral Science 6 cr
  SOC 101 Introduction to Sociology
  PSY 101 General Psychology

III. Library Skills Completed as part of the College Writing or Advanced Writing course

SOCIAL WORK-B.S.W.

CORE COURSES 55 cr
- SWK 102 Social Work in Social Welfare (3 cr)
- SWK 150 Human Relations Lab (3 cr)
- SWK 250 Assessing Individ. in the Social Environment (3 cr)
- SWK 265 Understanding Diversity (3 cr)
- SWK 270 Social Work Practice with Individuals (3 cr)
- SWK 275 Social Worker Skills for Working with Groups (3 cr)
- SWK 327 Social Work Skills for Practice with Families (3 cr)
- SWK 340 Assessing Organizations & Communities (3 cr)
- SWK 350-359 Special Fields (3 cr) [See Dept.]
  OR
- SWK 360 Research Techniques/Social Workers (3 cr)
- SWK 370 Social Work Practice w/ Orgs. & Communities (3 cr)
- SWK 420 Gender Issues for Helping Professions (3 cr)
- SWK 450 Social Welfare Policies & Service (3 cr)
- SWK 391 Seminar in Social Work Methods (3 cr)
- SWK 388 Preparation for Practicum (1 cr)
- SWK 389/390 Field Work in Social Work (12 cr)

Sociology Requirement 3 cr
  SOC 101 Intro. to Sociology: Society and Diversity (3 cr)

Psychology Requirement 3 cr
  PSY 101 General Psychology (3 cr)

Math Requirement 4 cr
  MAT 117 Applied Statistics (4 cr)
  Does NOT count under Category 'A' unless you tested at the advanced level on the placement test or your SATs satisfy the university's math competency.

Political Science Requirement 3 cr
  PLS 100 U.S. Government and Politics (3 cr)

Biology Requirement 3 cr
  BIO 150 Human Biology (3 cr)

Free Electives 16 - 17 cr

Total Graduation Requirements 120 cr

GPA Needed to Declare: 2.2 0 - 30 credits
  2.4 31 - 59 credits
  2.5 60 and above

**Professional standing will only be granted after students successfully complete a formal admission process which occurs during the semester they are enrolled in SWK270. A 2.5 GPA is needed for professional standing.

Note: All students declaring Social Work must follow the department program guide sheet in effect at the time they declared the major. Pick up a current program from the department when the major is declared.

***Economics course required for joint Shippensburg/Millersville MSW program.

Helpful Hints for Advising:

Semester I
- SWK 102 Social Work in Social Welfare
- BIO 150 Human Biology
- PSY 101 Gen. Psych. or SOC 101 Intro. to Soc.
- ENG 106 Writing Intensive First Year Seminar OR
- HCS 100 Intro to Human Communication
- HIS 105 Historical Foundations of Global Cultures

Semester II
- SWK 150 Human Relations Lab
- PSY 101 General Psych. or SOC 101 Prin. of Soc.
- ENG 106 Writing Intensive First Year Seminar OR
- HCS 100 Intro to Human Communication
- HIS 105 Historical Foundations of Global Cultures

Semester III
- SWK 250 Assess. Ind. in the Social Environment
- SWK 265 Understanding Human Diversity
- MAT 117 Applied Statistics

Semester IV
- **SWK 270 SW Practice with Individuals
- SWK 360 Research Techniques for Social Workers

Gerontology minor is available.

A 4-year template is available at www.ship.edu/undeclared.
### TEACHER EDUCATION (Early Childhood Education/PK-4th Grade)-B.S.Ed.

#### General Education Requirements

**I. Required Skills and Competencies**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 106 Writing Intensive First Year Seminar OR ENG 110 Advanced Placement Writing</td>
<td>3 cr</td>
</tr>
<tr>
<td>HCS 100 Intro to Human Communication</td>
<td>3 cr</td>
</tr>
<tr>
<td>MAT 111 Fundamentals of Mathematics II</td>
<td>3 cr</td>
</tr>
<tr>
<td>HIS 105 Historical Foundations of Global Cultures</td>
<td>3 cr</td>
</tr>
<tr>
<td>HIS 106 Thinking Historically in a Global Age</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

**II. Categories of Knowledge**

<table>
<thead>
<tr>
<th>Categories</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: Logic/Numbers for Rational Thinking</td>
<td>3 cr</td>
</tr>
<tr>
<td>MAT 110 Fundamentals of Mathematics I</td>
<td>3 cr</td>
</tr>
</tbody>
</table>

| B: Literary, Artistic & Cultural Traditions                               | 9 cr     |
| Select ONE Literature course:                                            |         |
| ENG 243 OR ENG 248 OR ENG 250 OR a Modern Language literature course    |         |

**C: Biological & Physical Sciences**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 100 Basic Biology OR</td>
<td></td>
</tr>
<tr>
<td>BIO 162 Principles of Biology: Organismal Diversity * OR</td>
<td></td>
</tr>
<tr>
<td>BIO 142 Introduction to Ecology * OR</td>
<td></td>
</tr>
<tr>
<td>BIO 242 Ecology * OR</td>
<td></td>
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<tr>
<td>BIO 150 Human Biology OR</td>
<td></td>
</tr>
<tr>
<td>BIO 208 Field Biology * OR</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Earth Sciences</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ESS 108 Conservation of Natural Resources OR</td>
<td></td>
</tr>
<tr>
<td>ESS 110 Introduction to Geology * OR</td>
<td></td>
</tr>
<tr>
<td>ESS 111 Introduction to Atmosphere * OR</td>
<td></td>
</tr>
<tr>
<td>ESS 210 Physical Geology * OR</td>
<td></td>
</tr>
<tr>
<td>BIO 145 Environmental Biology</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Sciences</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 108 Astronomy OR</td>
<td></td>
</tr>
<tr>
<td>PHY 110 Physics for Society OR</td>
<td></td>
</tr>
<tr>
<td>PHY 115 Physical Science: A Lab Approach* OR</td>
<td></td>
</tr>
<tr>
<td>PHY 121/123 Introductory Physics I and lab* OR</td>
<td></td>
</tr>
<tr>
<td>PHY 205 Intermediate Physics I* OR</td>
<td></td>
</tr>
<tr>
<td>CHM 103 Chemistry a Cultural Approach OR</td>
<td></td>
</tr>
<tr>
<td>CHM 105 Chemistry an Observational Approach* OR</td>
<td></td>
</tr>
<tr>
<td>CHM 121 Chemical Bonding* (lab not required)</td>
<td></td>
</tr>
</tbody>
</table>

**D: Political, Economic & Geographic Sciences**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 101 World Geography</td>
<td></td>
</tr>
<tr>
<td>PLS 100 U.S. Government and Politics</td>
<td></td>
</tr>
<tr>
<td>ECO 101 Principles of Macroeconomics OR</td>
<td></td>
</tr>
<tr>
<td>ECO 102 Principles of Microeconomics</td>
<td></td>
</tr>
</tbody>
</table>

**E: Social & Behavioral Science**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101 General Psychology (required) AND</td>
<td></td>
</tr>
<tr>
<td>SOC 101 Introduction to Sociology OR</td>
<td></td>
</tr>
<tr>
<td>GEO 140 Cultural Geography OR</td>
<td></td>
</tr>
<tr>
<td>ANT 111 Cultural Anthropology</td>
<td></td>
</tr>
</tbody>
</table>

### Other Major Course Requirements

<table>
<thead>
<tr>
<th>Professional Core</th>
<th>60 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECH 210 The Early Childhood Profession</td>
<td></td>
</tr>
<tr>
<td>ECH 220 The Developing Child I: Physical, Motor, Health &amp; Wellbeing</td>
<td></td>
</tr>
<tr>
<td>ECH 253 Early Literacy &amp; Literature for Children &amp; Families: Birth-5 years</td>
<td></td>
</tr>
<tr>
<td>ECH 260 The Developing Child II: Cognitive &amp; Language Development</td>
<td></td>
</tr>
<tr>
<td>ECH 320 The Developing Child III: Social &amp; Emotional Development &amp; Guiding Children’s Behavior</td>
<td></td>
</tr>
<tr>
<td>ECH 333 Social Studies Methods in P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 343 Math Methods I, P-1st</td>
<td></td>
</tr>
<tr>
<td>ECH 370 Assessing Young Children</td>
<td></td>
</tr>
<tr>
<td>ECH 373 Science &amp; Technology Methods in P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 393 Math Methods II, 2nd-grade</td>
<td></td>
</tr>
<tr>
<td>ECH 415 Professional Practicum in P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 440 Building Family &amp; Community Partnerships</td>
<td></td>
</tr>
<tr>
<td>ECH 453 Integrated Curriculum, P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 480 Early Childhood Professional Seminar</td>
<td></td>
</tr>
<tr>
<td>EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners</td>
<td></td>
</tr>
<tr>
<td>EEC 423 Effective Instructional Strategies for Children with Exceptionalities PK-8</td>
<td></td>
</tr>
<tr>
<td>EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making</td>
<td></td>
</tr>
<tr>
<td>RDG 323 Processes of Word/Text/Comprehension in Grades 1-4</td>
<td></td>
</tr>
<tr>
<td>RDG 363 Reading &amp; Writing in P-4</td>
<td></td>
</tr>
<tr>
<td>RDG 383 English Language Learners in P-4</td>
<td></td>
</tr>
<tr>
<td>RDG 443 Reading Measures and Interventions</td>
<td></td>
</tr>
</tbody>
</table>

**ECH 489 Early Childhood Student Teaching & Professional Pract.**

**Total Graduation Requirements**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECH 210 The Early Childhood Profession</td>
<td>12 cr</td>
</tr>
<tr>
<td>ECH 220 The Developing Child I: Physical, Motor, Health &amp; Wellbeing</td>
<td></td>
</tr>
<tr>
<td>ECH 253 Early Literacy &amp; Literature for Children &amp; Families: Birth-5 years</td>
<td></td>
</tr>
<tr>
<td>ECH 260 The Developing Child II: Cognitive &amp; Language Development</td>
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<tr>
<td>ECH 320 The Developing Child III: Social &amp; Emotional Development &amp; Guiding Children’s Behavior</td>
<td></td>
</tr>
<tr>
<td>ECH 333 Social Studies Methods in P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 343 Math Methods I, P-1st</td>
<td></td>
</tr>
<tr>
<td>ECH 370 Assessing Young Children</td>
<td></td>
</tr>
<tr>
<td>ECH 373 Science &amp; Technology Methods in P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 393 Math Methods II, 2nd-grade</td>
<td></td>
</tr>
<tr>
<td>ECH 415 Professional Practicum in P-4</td>
<td></td>
</tr>
<tr>
<td>ECH 440 Building Family &amp; Community Partnerships</td>
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<tr>
<td>ECH 453 Integrated Curriculum, P-4</td>
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<tr>
<td>ECH 480 Early Childhood Professional Seminar</td>
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<td>EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners</td>
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<tr>
<td>RDG 363 Reading &amp; Writing in P-4</td>
<td></td>
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<tr>
<td>RDG 383 English Language Learners in P-4</td>
<td></td>
</tr>
<tr>
<td>RDG 443 Reading Measures and Interventions</td>
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</tbody>
</table>

**GPA Needed to Declare:**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECH 489 Early Childhood Student Teaching &amp; Professional Pract.</td>
<td>12 cr</td>
</tr>
</tbody>
</table>

**Admission to this major is competitive.**

Students are considered for admission to Early Childhood Education (PK-4) during the first two weeks of each semester. Students are ranked by several factors including educational philosophy, current GPA, interviews, a writing sample, and grades in certain classes. An application requesting admission to the department is the first step in the application procedure. See “Admission to Elementary Education” for details. Students who plan to major in Early Childhood Education (PK-4) should maintain close contact with the department to insure that they meet program requirements.

A 4-year template is available at www.ship.edu/undeclared
A student selecting this option will only be certified to teach English/Language Arts at the middle level grades 4-8.

PDE Competency Areas
I. Content Knowledge: 80 credits including General Education Requirements. A total of 36 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

Concentration Area
A. Language Arts: 30 credits required
   ___ ENG 106 Writing Intensive Seminar (3)
   ___ or
   ___ ENG 110 Advanced Placement Writing (3)
   ___ ENG 190 Literacy in America (3)
   ___ or
   ___ ENG 248 Intro to Culturally Diverse Lit (3)
   ___ ENG 250 Intro to Literature (3)
   ___ ENG 366 History and Structure of the English Lang (3)
   ___ ENG 420 Studies in Writing (3)
   ___ or
   ___ ENG 419 Tutoring and Teaching of Writing (3)
   ___ ENG 426 Adolescent Literature (3)
   ___ HCS 100 Intro to Human Communication (3)
   ___ TCH 303 Books and Materials (3)
   ___ RDG 232 Reading in the Elementary School (3)
   ___ RDG 334 Reading Assessment (3) (Prerequisite RDG 232)
   ___ RDG 340 Seminar in Literacy Tutoring (3) (Prerequisite RDG 232 and RDG 334)

Cognate Areas
B. Math: 13 credits required
   ___ MAT 205 Survey of Middle Grades Mathematics (3)
   ___ MAT 175 Pre-Calculus (3) (See note on Prerequisites)
   ___ MAT 105 Math for Liberal Arts (3)
   ___ MAT 117 Applied Statistics (4)

C. Science: 12 credits required
   ___ BIO 100 Basic Biology (3)
   ___ CHM 105 An Observational Approach (3)
   ___ PHY 121 Physics I (3)
   ___ ESS 110 Introduction to Geology (3)

D. Social Studies: 12 credits required
   ___ GEO 101 World Geography (3)
   ___ ECO 101 Macroeconomics (3)
   ___ or
   ___ PLS 100 U.S. Government and Politics (3)
   ___ HIS 105 Historical Foundation of Global Cultures (3)
   ___ HIS 106 Thinking Historically in a Global Age (3)

E. Fine Arts: 6 credits
   __ (Select two from different disciplines)
   Music
   ___ MUS 110 Fundamental Music Skills (3)
   ___ or
   ___ MUS 121 Introduction to Music (3)
   ___ MUS 261 World Music (3)
   Art (ART 101 is recommended)
   ___ ART 101 Art Appreciation (3)
   ___ or
   ___ ART 231 Art History I (3)
   ___ or
   ___ ART 232 Art History II (3)
   ___ or
   ___ ART 274 Intro to Cultural Studio (3)
   ___ or
   ___ ART 339 History of American Art (3)
   Theatre
   ___ THE 121 Intro to Theatre (3)

F. Social and Behavioral Science: 6 credits
   ___ PSY 101 General Psychology (3)
   ___ Choose one of the following
   ___ ANT 111 Cultural Anthropology (3)
   ___ or
   ___ GEO 140 Cultural Geography (3)
   ___ or
   ___ SOC 101 Intro to Soc: Society & Div (3)

II. Professional Core & Student Teaching: 42 credits
A. Middle Level Cognitive Development
   ___ TCH 206 Social Found of Middle Level Educ (3)
B. Early Adolescent and Adolescent Learning Theory
   ___ TCH 261 Adolescent Dev and Lng Theory (3)
C. Assessments and Interventions
   ___ EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)
D. Adaptations and Accommodations for Diverse Learners
   ___ EEC 273 Introduction to Exceptionalities:
      Understanding Diverse Learners (3)
   ___ EEC 423 Effective Instructional Strategies for Students with Exceptionalities (3)
E. Middle Level Teaching Methods
   ___ TCH 322 Teaching Middle Level Language Arts (3)
   ___ TCH 251 Elements of Middle Level Instruction (3)
   ___ RDG 329 Reading in the Content Area (3)
F. English Language Learners (ELL)
   ___ RDG 413 Teach Read to English Lang Learners (3)
G. Student Teaching
   ___ EDU 495 Student Teaching Experience (15)

Note on Prerequisites
Pre-Calculus: MAT140A, MAT140B, math placement level 5, or permission of department chair.

Discrete Math: Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above.

Shippensburg University General Education Requirements
1 Satisfies a requirement for Required Skills and Competencies.
2 A Satisfies a requirement for a Category A General Education Course
3 B Satisfies a requirement for a Category B General Education Course
4 C Satisfies a requirement for a Category C General Education Course
5 D Satisfies a requirement for a Category D General Education Course
6 E Satisfies a requirement for a Category E General Education Course
A student selecting this option will only be certified to teach math and language arts at the middle level grades 4-8.

PDE Competency Areas

I. Content Knowledge: 81 credits including General Education Requirements. A total of 33 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

Concentration Areas

A. Math: 21 credits required
   - MAT 105 Math For Liberal Studies (3) ¹/A
   - MAT 205 Survey of Middle Grades Mathematics (3)
   - MAT 117 Applied Statistics (4) ¹/A
   - MAT 211 Calculus I (4) ¹/A (See note for Prerequisites)
   - MAT 225 Discrete Math (4) ¹
     (See note for Prerequisites)
   - MAT 333 Geometry (3)

B. Language Arts: 21 credits required
   - ENG 190 Literacy in America (3) B¹
     or ENG 248 Intro to Culturally Diverse Lit (3) B¹
     or ENG 250 Intro to Literature (3) B¹
   - ENG 420 Studies in Writing (3)
     or ENG 419 Tutoring and Teaching of Writing (3)
   - ENG 426 Adolescent Literature (when 426 is offered) (3)
   - RDG 232 Reading in the Elementary School (3)
   - RDG 334 Literacy Assessment (3) (Prerequisite RDG 232)
   - RDG 340 Seminar in Literacy Tutoring (3) (Prerequisite RDG 232)

Cognate Areas

C. Science: 12 credits required
   - BIO 100 Basic Biology (3) C
   - CHM 105 An Observational Approach (3) C
   - PHY 121 Physics I (3)
   - ESS 110 Introduction to Geology (3) C

D. Social Studies: 12 credits required
   - GEO 101 World Geography (3) D
   - ECO 101 Macroeconomics (3) D or
     PLS 100 U.S. Government and Politics (3) D
   - HIS 105 Historical Foundation of Global Cultures (3) D
   - HIS 106 Thinking Historically in a Global Age (3) D

E. Writing/Fluency Competencies: 3 credits
   - HCS 100 Intro to Human Communication¹ (3)

F. Fine Arts: 6 credits
   (Select two from different disciplines)
   - Music
     - MUS 110 Fundamental Music Skills¹ (3) or
     - MUS 121 Introduction to Music¹/B¹ (3) or
     - MUS 261 World Music (3) B²
     - ART 339 History of American Art (3) B²

   Art (ART 101 is recommended)
     - ART 101 Art Appreciation (3) B² or
     - ART 231 Art History I (3) B² or
     - ART 232 Art History II (3) B² or
     - ART 274 Intro to Cultural Studio (3) B²
     or
     - THE 121 Intro to Theatre (3) B²

G. Social and Behavioral Sciences: 6 credits
   - PSY 101 General Psychology (3) E
   Choose one of the following
   - ANT 111 Cultural Anthropology (3) E or
   - GEO 140 Cultural Geography (3) E or
   - SOC 101 Intro. to Soc: Society & Div (3) E

II. Professional Core & Student Teaching: 39 credits

A. Middle Level Cognitive Development
   - TCH 206 Social Found of Middle Level Educ (3)

B. Early Adolescent and Adolescent Learning Theory
   - TCH 261 Adolescent Dev and Lng Theory (3)

C. Assessments and Interventions
   - EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)

D. Adaptations and Accommodations for Diverse Learners
   - EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3)
   - EEC 423 Effective Instructional Strategies for Students with Exceptionalities (3)

E. Middle Level Teaching Methods
   - TCH 322 Teaching Middle Level Language Arts (3)
   - TCH 342 Teaching Middle Level Mathematics (3)
   - RDG 329 Reading in the Content Area (3)

F. English Language Learners (ELL)
   - RDG 413 Teaching Reading to English Language Learners (3)

G. Student Teaching
   - EDU 495 Student Teaching Experience (12)

Note on Prerequisites

Calculus I: Students must meet one of the following prerequisites: C. or better in MAT175 or math placement level 6. However, a prerequisite override could be granted based on a recommendation to the math department from the student’s advisor.

Discrete Math: Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above.

Shippensburg University General Education Requirements

¹ Satisfies a requirement for Required Skills and Competencies.
² Satisfies a requirement for a Category A General Education Course
³ Satisfies a requirement for a Category B General Education Course
⁴ Satisfies a requirement for a Category C General Education Course
⁵ Satisfies a requirement for a Category D General Education Course
⁶ Satisfies a requirement for a Category E General Education Course
## DEPARTMENT OF TEACHER EDUCATION

### PROGRAM PLANNING SHEET

Elementary/Middle Level Option #1 - Math – B.S.Ed.

A student selecting this option will only be certified to teach mathematics at the middle level grades 4-8

### PDE Competency Areas

#### I. Content Knowledge: 81 credits including General Education Requirements. A total of 33 credits are counted in a dual capacity.

See notes on Shippensburg University General Education Requirements, below.

#### II. Concentration Area

**A. Math: 30 credits required**

- MAT 105 Math for Liberal Studies (3)
- MAT 205 Survey of Middle Grades Mathematics (3)
- MAT 175 Pre-Calculus (3)\(^{1}A^{7}\) (See note on Prerequisites)
- MAT 211 Calculus I (4)\(^{1}A^{7}\) (See note on Prerequisites)
- MAT 225 Discrete Math \(^{1}(4)\) (See note Prerequisites)
- MAT 313 Statistics I (4)\(^{1}A^{7}\) (Prerequisite MAT 211)
- MAT 333 Geometry (3)

Two of the following:

- MAT 320 Introduction to Abstract Algebra (3) (See note on Prerequisites)
- MAT 326 Mathematical Modeling (3) (See note on Prerequisites)
- MAT 400 History of Mathematics (3) (See note on Prerequisites)

### Cognate Areas

#### B. Language Arts: 12 credits required

- ENG 106 Writing Intensive Seminar (3)
- ENG 110 Advanced Placement Writing (3)
- HCS 100 Intro to Human Communication (3)
- RDG 232 Reading in the Elementary School (3)
- RDG 340 Seminar in Literacy Tutoring (3)

#### C. Science: 12 credits required

- BIO 100 Basic Biology (3)
- CHM 105 An Observational Approach (3)
- PHY 121 Physics I (3)
- ESS 110 Introduction to Geology (3)

#### D. Social Studies: 12 credits required

- GEO 101 World Geography (3)
- ECO 101 Macroeconomics (3)\(^{1}\) or
- PLS 100 U.S. Government and Politics (3)\(^{1}\)
- HIS 105 Historical Foundation of Global Cultures (3)
- HIS 106 Thinking Historically in a Global Age (3)

### Additional Coursework

#### E. Literature: 3 credits

- ENG 248 Art of the Film (3)\(^{1}\) or
- ENG 248 Intro to Culturally Diverse Lit (3)\(^{1}\) or
- ENG 250 Intro to Literature (3)

#### F. Fine Arts: 6 credits

(Select two from different disciplines)

- MUS 110 Fundamental Music Skills (3)\(^{2}\) or
- MUS 121 Introduction to Music (3)\(^{2}\) or
- MUS 261 World Music (3)\(^{2}\)

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### Art (ART 101 is recommended)

- ART 101 Art Appreciation (3)\(^{2}\)
- ART 231 Art History I (3)\(^{2}\)
- ART 232 Art History II (3)\(^{2}\)
- ART 274 Intro to Cultural Studio (3)\(^{2}\)
- ART 339 History of American Art (3)\(^{2}\)

#### Theatre

- THE 121 Intro to Theatre (3)\(^{2}\)

#### G. Social and Behavioral Sciences: 6 credits

- PSY 101 General Psychology (3)\(^{E}\)

Choose one of the following:

- ANT 111 Cultural Anthropology (3)\(^{E}\) or
- GEO 140 Cultural Geography (3)\(^{E}\) or
- SOC 101 Intro. to Soc: Society & Div (3)\(^{E}\)

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### II. Professional Core & Student Teaching: 39 credits

#### A. Middle Level Cognitive Development

- TCH 206 Social Found of Middle Level Educ (3)

#### B. Early Adolescent and Adolescent Learning Theory

- TCH 261 Adolescent Dev and Lang Theory (3)

#### C. Assessments and Interventions

- EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)
- TCH 345 Assessment and Evaluation (3)

#### D. Adaptations and Accommodations for Diverse Learners

- EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3)
- EEC 423 Effective Instructional Strategies for Students with Exceptionalities (3)

#### E. Middle Level Teaching Methods

- TCH 342 Teaching Middle Level Mathematics (3)
- TCH 251 Elements of Middle Level Instruction (3)

#### F. English Language Learners (ELL)

- RDG 413 Teach Read to English Lang Learners (3)

#### G. Student Teaching

- EDU 495 Student Teaching Experience (12)

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**Note on Prerequisites**

**Pre-Calculus:** MAT140A, MAT140B, math placement level 5, or permission of department chair.

**Calculus I:** Students must meet one of the following prerequisites: C or better in MAT175 or math placement level 6. However, a prerequisite override could be granted based on a recommendation to the math department from the student’s advisor.

**Discrete Math:** Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above.

**Introduction to Abstract Algebra:** C or better in MAT 325 and MAT 318

**Mathematical Modeling:** Either CSC180 or CS110 and either MAT213 or MAT318, or by permission of the instructor

**History of Mathematics:** MAT320 or at least junior standing

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**Shippensburg University General Education Requirements**

1 Satisfies a requirement for Required Skills and Competencies.

2 Satisfies a requirement for a Category A General Education Course

3 Satisfies a requirement for a Category B General Education Course

4 Satisfies a requirement for a Category C General Education Course

5 Satisfies a requirement for a Category D General Education Course

6 Satisfies a requirement for a Category E General Education Course
A student selecting this option will only be certified to teach mathematics and science at the middle level grades 4-8.

A. Math: 21 credits required
___ MAT 105 Math For Liberal Studies (3)
___ MAT 205 Survey of Middle Grades Mathematics (3)
___ MAT 117 Applied Statistics (4)
___ MAT 211 Calculus I (4) *(See note for Prerequisites)*
___ MAT 225 Discrete Math (4) *(See note for Prerequisites)*
___ MAT 333 Geometry (3)

B. Science: 22-23 credits required
___ BIO 100 Basic Biology (3)
___ CHM 105 An Observational Approach (3)
___ PHY 108 Astronomy (3)
___ PHY 121 Physics I (3)
___ PHY 123 Physics I Lab (1)
___ ESS 110 Introduction to Geology (3)
___ ESS 111 Intro to the Atmosphere (3)
___ BIO 125 Intro to Ecology (3)
___ BIO 142 Intro to Ecology (3) or
___ BIO 145 Environmental Biology (3)

C. Social Studies: 12 credits required
___ GEO 101 World Geography (3)
___ ECO 101 Macroeconomics (3)
___ HIS 105 Historical Foundation of Global Cultures (3)
___ HIS 106 Thinking Historically in a Global Age (3)

D. Language Arts: 12 credits required
___ ENG 106 Writing Intensive Seminar (3)
___ ENG 110 Advanced Placement Writing (3)
___ HCS 100 Intro to Human Communication (3)
___ RDG 232 Reading in the Elementary School (3)
___ RDG 340 Seminar in Literacy Tutoring (3) *(Prerequisite RDG 232)*

E. Fine Arts: 6 credits
(Select two from different disciplines)
Music
___ MUS 110 Fundamental Music Skills (3)* or
___ MUS 121 Introduction to Music (3) or
___ MUS 261 World Music (3)

F. Literature: 3 credits
___ ENG 243 Art of the Film (3)*
___ ENG 245 Art of the Film (3) or
___ ENG 248 Intro to Culturally Diverse Lit (3)
___ ENG 250 Intro to Literature (3)

Note on Prerequisites
Calculus I: Students must meet one of the following prerequisites: C or better in MAT175 or math placement level 6. However, a prerequisite override could be granted based on a recommendation to the math department from the student’s advisor.

Discrete Math: Students must meet one of the following prerequisites:
MAT140A or math placement level 4 or above.

Shippensburg University General Education Requirements
1 Satisfies a requirement for Required Skills and Competencies.
2 Satisfies a requirement for a Category A General Education Course
3 Satisfies a requirement for a Category B General Education Course
4 Satisfies a requirement for a Category C General Education Course
5 Satisfies a requirement for a Category D General Education Course
6 Satisfies a requirement for a Category E General Education Course
DEPARTMENT OF TEACHER EDUCATION
PROGRAM PLANNING SHEET
Elementary/Middle Level Option #2: Math & Social Science – B.S.Ed.

A student selecting this option will only be certified to teach mathematics and social studies at the middle level grades 4-8.

PDE Competency Areas

I. Content Knowledge: 81 credits including General Education Requirements. A total of 33 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

Concentration Areas

A. Math: 21 credits required
   __ MAT 105 Math for Liberal Studies (3)\(^\text{A}\)
   __ MAT 205 Survey of Middle Grades Mathematics (3)
   __ MAT 117 Applied Statistics (4)
   __ MAT 211 Calculus I (4) \(^\text{B,C}\) (See note for Prerequisites)
   __ MAT 225 Discrete Math (4) \(^\text{B,C}\) (See note for Prerequisites)
   __ MAT 333 Geometry (3)

B. Social Studies: 21 credits required
   __ GEO 101 World Geography (3)
   __ ECO 101 Macroeconomics (3)\(^\text{B}\)
   __ PLS 100 US Govt & Politics\(^\text{E}\)
   __ HIS 105 Historical Foundation of Global Cultures (3)\(^\text{C}\)
   __ HIS 106 Thinking Historically in a Global Age (3)\(^\text{C}\)
   __ GEO 305 Geography of Europe (3) or GEO 308 Geography of Latin America (3) or GEO 313 Geography of South and South-East Asia(3) or GEO 317 Geography of East Asia (3) or GEO 415 Regional Geography Studies (3) or GEO 450 Field Studies (1-3)
   __ PLS 311 The Legislative Process (3) or PLS 312 The American Presidency (3) or PLS 313 The Judicial Process (3) or PLS 342 American Foreign Policy (3) or PLS 356 Politics of Developing Regions (3) or ECO 325 Globalization Issues and Policies (3) or ECO 345 Economics of Growth and Development (3)

Cognate Areas

C. Science: 12 credits required
   __ BIO 100 Basic Biology (3)\(^\text{C}\)
   __ CHM 105 An Observational Approach (3)\(^\text{C}\)
   __ PHY 121 Physics I (3)
   __ ESS 110 Introduction to Geology (3)\(^\text{C}\)

D. Language Arts: 12 credits required
   __ RDG 232 Reading in the Elementary School (3)
   __ RDG 340 Seminar in Literacy Tutoring (3) \(^\text{Prerequisite RDG 232}\)
   __ ENG 106 Writing Intensive Seminar (3)\(^\text{C}\) or ENG 110 Advanced Placement Writing (3)\(^\text{C}\)
   __ HCS 100 Intro to Human Communication (3)

Literature: 3 credits
   __ ENG 243 Art of the Film (3)\(^\text{B}\)
   __ ENG 248 Intro to Culturally Diverse Lit (3)\(^\text{B}\) or ENG 250 Intro to Literature (3)\(^\text{B}\)

F. Fine Arts: 6 credits
   (Select two from different disciplines)
   Music
   __ MUS 110 Fundamental Music Skills (3)\(^\text{B}\)
   __ MUS 112 Introduction to Music (3)\(^\text{B}\) or MUS 261 World Music (3)\(^\text{B}\)

Art (ART 101 is recommended)
   __ ART 101 Art Appreciation (3)\(^\text{B}\) or ART 231 Art History I (3)\(^\text{B}\) or ART 232 Art History II (3)\(^\text{B}\) or ART 274 Intro to Cultural Studio (3)\(^\text{B}\) or ART 339 History of American Art (3)\(^\text{B}\)

Theatre
   __ THE 121 Intro to Theatre (3)\(^\text{B}\)

G. Social and Behavioral Sciences: 6 credits
   __ ECO 345 Economics of Growth and Development (3)
   __ ECO 325 Globalization Issues and Policies (3)
   __ SOC 101 Intro. to Soc: Society & Div (3)\(^\text{E}\)

II. Professional Core & Student Teaching: 39 credits

A. Middle Level Cognitive Development
   __ TCH 206 Social Found of Middle Level Educ (3)

B. Early Adolescent and Adolescent Learning Theory
   __ TCH 261 Adolescent Dev and Lng Theory (3)

C. Assessments and Interventions
   __ EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)
   __ TCH 345 Assessment and Evaluation (3)

D. Adaptations and Accommodations for Diverse Learners
   __ EEC 273 Introduction to Exceptionalities:
     Understanding Diverse Learners (3)
   __ EEC 423 Effective Instructional Strategies for Students with Exceptionalities (3)

E. Middle Level Teaching Methods
   __ TCH 342 Teaching Middle Level Mathematics (3)
   __ TCH 348 Teaching Middle Level Social Studies (3)

F. English Language Learners (ELL)
   __ RDG 413 Teaching Reading to English Language Learners (3)

G. Student Teaching
   __ EDU 495 Student Teaching Experience (12)

Note on Prerequisites

Calculation I: Students must meet one of the following prerequisites: C or better in MAT175 or math placement level 6. However, a prerequisite override could be granted based on a recommendation to the math department from the student’s advisor.

Discrete Math: Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above

Shippensburg University General Education Requirements

\(^1\) Satisfies a requirement for Required Skills and Competencies.
\(^A\) Satisfies a requirement for a Category A General Education Course
\(^B\) Satisfies a requirement for a Category B General Education Course
\(^C\) Satisfies a requirement for a Category C General Education Course
\(^D\) Satisfies a requirement for a Category D General Education Course
\(^E\) Satisfies a requirement for a Category E General Education Course

99
A student selecting this option will only be certified to teach science and language arts at the middle level grades 4-8.

**PDE Competency Areas**

I. **Content Knowledge**: 84-85 credits including General Education Requirements. A total of 33 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

**Concentration Areas**

A. **Science: 22-23 credits required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 100</td>
<td>Basic Biology (3) or BIO 162 Principles of Biology: Organismal Diversity (4)</td>
</tr>
<tr>
<td>CHM 105</td>
<td>An Observational Approach (3)</td>
</tr>
<tr>
<td>PHY 108</td>
<td>Astronomy (3)</td>
</tr>
<tr>
<td>PHY 121</td>
<td>Physics I (3) and PHY 123 Physics I Lab (1)</td>
</tr>
<tr>
<td>ESS 110</td>
<td>Introduction to Geology (3)</td>
</tr>
<tr>
<td>BIO 142</td>
<td>Intro to Ecology (3) or BIO 145 Environmental Biology (3)</td>
</tr>
</tbody>
</table>

B. **Language Arts: 21 credits required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 248</td>
<td>Intro to Culturally Diverse Lit (3) or ENG 250 Intro to Literature (3)</td>
</tr>
<tr>
<td>ENG 420</td>
<td>Studies in Writing (3)</td>
</tr>
<tr>
<td>ENG 419T</td>
<td>Tutoring and Teaching of Writing (3)</td>
</tr>
<tr>
<td>ENG 426</td>
<td>Adolescent Literature (3)</td>
</tr>
<tr>
<td>RDG 323</td>
<td>Reading in the Elementary School (3)</td>
</tr>
<tr>
<td>RDG 334</td>
<td>Reading Assessment (3) (Prerequisite RDG 232)</td>
</tr>
<tr>
<td>RDG 340</td>
<td>Seminar in Literacy Tutoring (3) (Prerequisite RDG 232 and RDG 334)</td>
</tr>
<tr>
<td>ENG 106</td>
<td>Writing Intensive Seminar (3) or ENG 110 Advanced Placement Writing (3)</td>
</tr>
</tbody>
</table>

**Cognate Areas**

C. **Social Studies: 12 credits required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 101</td>
<td>World Geography (3)</td>
</tr>
<tr>
<td>ECO 101</td>
<td>Macroeconomics (3) or PLS 100 US Government and Politics (3)</td>
</tr>
<tr>
<td>HIS 105</td>
<td>Historical Foundation of Global Cultures (3)</td>
</tr>
<tr>
<td>HIS 106</td>
<td>Thinking Historically in a Global Age (3)</td>
</tr>
</tbody>
</table>

D. **Math: 13 credits required**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 205</td>
<td>Survey of Middle Grades Mathematics (3)</td>
</tr>
<tr>
<td>MAT 175</td>
<td>Precalculus (3) (See note on Prerequisites)</td>
</tr>
<tr>
<td>MAT 105</td>
<td>Math for Liberal Arts (3)</td>
</tr>
<tr>
<td>MAT 117</td>
<td>Applied Statistics (4)</td>
</tr>
</tbody>
</table>

E. **Writing/Fluency Competencies: 3 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCS 100</td>
<td>Intro to Human Communication (3)</td>
</tr>
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</table>

F. **Fine Arts: 6 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 110</td>
<td>Fundamental Music Skills (3)</td>
</tr>
<tr>
<td>MUS 121</td>
<td>Introduction to Music (3) or MUS 261 World Music (3)</td>
</tr>
</tbody>
</table>

**G. Social and Behavioral Sciences: 6 credits**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101</td>
<td>General Psychology (3)</td>
</tr>
</tbody>
</table>

Choose one of the following

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANT 111</td>
<td>Cultural Anthropology (3)</td>
</tr>
<tr>
<td>GEO 140</td>
<td>Cultural Geography (3)</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Intro to Soc: Society &amp; Div (3)</td>
</tr>
</tbody>
</table>

II. **Professional Core & Student Teaching: 39 credits**

A. **Middle Level Cognitive Development**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCH 206</td>
<td>Social Found of Middle Level Educ (3)</td>
</tr>
</tbody>
</table>

B. **Early Adolescent and Adolescent Learning Theory**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCH 261</td>
<td>Adolescent Dev and Lng Theory (3)</td>
</tr>
</tbody>
</table>

C. **Assessments and Interventions**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEC 483</td>
<td>Assessing Children with Exceptionalities for Curricular Decision Making (3)</td>
</tr>
</tbody>
</table>

D. **Adaptations and Accommodations for Diverse Learners**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEC 273</td>
<td>Introduction to Exceptionalities: Understanding Diverse Learners (3)</td>
</tr>
<tr>
<td>EEC 423</td>
<td>Effective Instructional Strategies for Students with Exceptionalities (3)</td>
</tr>
</tbody>
</table>

E. **Middle Level Teaching Methods**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCH 322</td>
<td>Teaching Middle Level Language Arts (3)</td>
</tr>
<tr>
<td>TCH 366</td>
<td>Teaching Middle Level Science (3)</td>
</tr>
<tr>
<td>RDG 329</td>
<td>Reading in the Content Area (3)</td>
</tr>
</tbody>
</table>

F. **English Language Learners (ELL)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>RDG 413</td>
<td>Teaching Reading to English (3)</td>
</tr>
</tbody>
</table>

**Student Teaching**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 495</td>
<td>Student Teaching Experience (12)</td>
</tr>
</tbody>
</table>

**Note on Prerequisites**

Precalculus: MAT140A, MAT140B, math placement level 5, or permission of department chair.

Discrete Math: Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above.

**Shippensburg University General Education Requirements**

1 Satisfies a requirement for Required Skills and Competencies.

A Satisfies a requirement for a Category A General Education Course

b Satisfies a requirement for a Category B General Education Course

C Satisfies a requirement for a Category C General Education Course

D Satisfies a requirement for a Category D General Education Course

E Satisfies a requirement for a Category E General Education Course
### A Guidebook for Undergraduate Students 2015-2016

**DEPARTMENT OF TEACHER EDUCATION**  
**PROGRAM PLANNING SHEET**  
Elementary/Middle Level Option #2: Science and Social Studies – B.S.Ed.

A student selecting this option will only be certified to teach science and social studies at the middle level grades 4-8.

#### PDE Competency Areas

**I. Content Knowledge:** 84-85 credits including General Education Requirements. A total of 33 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

**II. Concentration Areas**

**A. Science: 22-23 credits required**
- BIO 100 Basic Biology (3)*
- BIO 162 Principles of Biology (4)
- CHM 105 An Observational Approach (3)*
- PHY 108 Astronomy (3)
- PHY 121 Physics I (3)
- PHY 123 Physics I Lab (1)
- ESS 110 Introduction to Geology (3)*
- ESS 111 Intro to the Atmosphere (3)
- BIO 142 Intro to Ecology (3) or
- GEO 101 World Geography (3)D

**B. Social Studies: 21 credits required**
- GEO 100 Basic Economics (3)*
- GEO 101 World Geography (3)D
- PLS 100 U.S. Government and Politics (3)
- HIS 105 Historical Foundation of Global Cultures (3)*
- HIS 106 Thinking Historically in a Global Age (3)*
- GEO 308 Geography of Latin America or
- GEO 313 Geography of South and South-East Asia or
- GEO 317 Geography of East Asia or
- GEO 415 Regional Geography Studies or
- GEO 450 Field Studies
- PLS 311 The Legislative Process (3) or
- PLS 312 The American Presidency (3) or
- PLS 313 The Judicial Process (3) or
- PLS 342 American Foreign Policy (3) or
- PLS 356 Politics of Developing Regions (3)
- GEO 305 Geography of Europe (3) or
- GEO 308 Geography of Latin America or
- GEO 313 Geography of South and South-East Asia or
- GEO 317 Geography of East Asia or
- GEO 415 Regional Geography Studies or
- GEO 450 Field Studies

**C. Language Arts: 12 credits required**
- ENG 106 Writing Intensive Seminar (3)*
- ENG 110 Advanced Placement Writing (3)*
- HCS 100 Intro to Human Communication (3)*
- RDG 232 Reading in the Elementary School (3)
- RDG 340 Seminar in Literacy Tutoring (3) (Prerequisite RDG 232)

**D. Math: 13 credits required**
- MAT 205 Survey of Middle Grades Mathematics (3)
- MAT 175 Pre-Calculus (3) (See note on Prerequisites)
- MAT 105 Math for Liberal Arts (3)
- MAT 117 Applied Statistics (4)

**E. Literature – 3 credits**
- ENG 243 Art of the Film (3)*
- ENG 248 Intro to Culturally Diverse Lit (3)*
- ENG 250 Intro to Literature (3)*

**F. Fine Arts: 6 credits**
(Select two from different disciplines)
- MUS 110 Fundamental Music Skills (3)* or
- MUS 121 Introduction to Music (3)*
- MUS 261 World Music (3)*
- ART 101 Art Appreciation (3)*
- ART 231 Art History I (3)*
- ART 232 Art History II (3)*
- ART 274 Intro to Cultural Studio (3)*
- ART 339 History of American Art (3)*

**Theatre**
- THE 121 Intro to Theatre (3)*

**G. Social and Behavioral Sciences: 6 credits**
- PSY 101 General Psychology (3)*
  Choose one of the following
- ANT 111 Cultural Anthropology (3)*
- GEO 140 Cultural Geography (3)*
- SOC 101 Intro to Soc: Society & Div (3)*

**II. Professional Core & Student Teaching: 39 credits**

**A. Middle Level Cognitive Development**
- TCH 206 Social Found of Middle Level Edu (3)

**B. Early Adolescent and Adolescent Learning Theory**
- TCH 261 Adolescent Dev and Lng Theory (3)

**C. Assessments and Interventions**
- EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)
- TCH 345 Assessment & Evaluation (3)

**D. Adaptations and Accommodations for Diverse Learners and English Language Learners**
- EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3)
- EEC 423 Effective Instructional Strategies for Students with Exceptionalities (3)

**E. Middle Level Teaching Methods**
- TCH 348 Teaching Middle Level Social Studies (3)
- TCH 366 Teaching Middle Level Science (3)

**F. English Language Learners (ELL)**
- RDG 413 Teach Read to English Lang Learners (3)

**G. Student Teaching**
- EDU 495 Student Teaching Experience (12)

**Note on Prerequisites**

**Pre-Calculus:** MAT140A, MAT140B, math placement level 5, or permission of department chair.

**Discrete Math:** Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above

**Shippensburg University General Education Requirements**

1 Satisfies a requirement for Required Skills and Competencies.
A Satisfies a requirement for a Category A General Education Course
B Satisfies a requirement for a Category B General Education Course
C Satisfies a requirement for a Category C General Education Course
D Satisfies a requirement for a Category D General Education Course
E Satisfies a requirement for a Category E General Education Course

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1 Satisfies a requirement for Required Skills and Competencies.
A Satisfies a requirement for a Category A General Education Course
B Satisfies a requirement for a Category B General Education Course
C Satisfies a requirement for a Category C General Education Course
D Satisfies a requirement for a Category D General Education Course
E Satisfies a requirement for a Category E General Education Course
A Guidebook for Undergraduate Students 2015-2016

DEPARTMENT OF TEACHER EDUCATION
PROGRAM PLANNING SHEET
Elementary/Middle Level Option #1 - Science – B.S.Ed.
A student selecting this option will only be certified to teach Science at the middle level grades 4-8,

PDE Competency Areas

I. Content Knowledge: 84 credits including General Education Requirements. A total of 33 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

II. Concentration Area

A. Science: 31 credits required
   — BIO161 Principles of Biology: Cell Structure (4)
   — BIO162 Principles of Biology: Organismal Diversity (4)
   — BIO230 Field Biology (3) or BIO232 Ecology (3)
   — CHM105 An Observational Approach (3)
   — CHM121 Chemical Bonding (3) and CHM125 Chemical Bonding Lab (1) or PHY122 Intro to Physics II (3) and PHY125 Intro to Physics II Lab (1)
   — PHY121 Physics I (3) and PHY123 Physics I Lab (1)
   — ESS110 Introduction to Geology (3)
   — ESS111 Intro to Atmosphere (3)
   — ESS210 Physical Geography (3) or ESS220 Oceanography (3)
   — ESS355 Meteorology (3) or ESS404 Applied Meteorology and Climatology (3)

Cognate Areas

II. Social Studies: 12 credits required
   — GEO 101 World Geography (3)
   — ECO 101 Macroeconomics (3) or PLS 100 U.S. Government and Politics (3)
   — HIS 105 Historical Foundation of Global Cultures (3)
   — HIS 106 Thinking Historically in a Global Age (3)

C. Math: 13 credits required
   — MAT 205 Survey of Middle Grades Mathematics (3)
   — MAT 175 Pre-Calculus (3) (See note on Prerequisites)
   — MAT 105 Math for Liberal Arts (3)
   — MAT 117 Applied Statistics (4)

D. Language Arts: 12 credits required
   — ENG 106 Writing Intensive Seminar (3) or ENG 110 Advanced Placement Writing (3)
   — HCS 100 Intro to Human Communication (3)
   — RDG 232 Reading in the Elementary School (3)
   — RDG 340 Seminar in Literary Tutoring (3) (Prerequisite RDG 232)

Additional Coursework

E. Literature: 3 credits
   — ENG 243 Art of the Film (3) or ENG 248 Intro to Culturally Diverse LR (3) or ENG 250 Intro to Literature (3)

F. Fine Arts: 6 credits
   (Select two from different disciplines)
   Music
   — MUS 110 Fundamental Music Skills (3) or MUS 121 Introduction to Music (3) or MUS 261 World Music (3)
   Art (ART 101 is recommended)
   — ART 101 Art Appreciation (3) or ART 231 Art History I (3) or ART 232 Art History II (3) or ART 274 Intro to Cultural Studio (3) or ART 339 History of American Art (3)
   Theatre
   — THE 121 Intro to Theatre (3)

G. Social and Behavioral Sciences: 6 credits
   — PSY 101 General Psychology (3)
   Choose one of the following:
   — ANT 111 Cultural Anthropology (3) or GEO 140 Cultural Geography (3) or SOC 101 Intro to Soc: Society & Dv (3)

II. Professional Core & Student Teaching: 39 credits

A. Middle Level Cognitive Development
   — TCH 206 Social Found of Middle Level Educ (3)

B. Early Adolescent and Adolescent Learning Theory
   — TCH 261 Adolescent Dev and Life Span Theory (3)

C. Assessments and Interventions
   — EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)
   — TCH 345 Assessment & Evaluation (3)

D. Adaptations and Accommodations for Diverse Learners
   — EEC 273 Introduction to Exceptionalities: Understanding Diverse Learners (3)
   — ECE 423 Effective Instructional Strategies for Students with Exceptionalities (3)

E. Middle Level Teaching Methods
   — TCH 366 Teaching Science at the Middle Level (3)
   — TCH 251 Elements of Middle Level Instruction (3)

F. English Language Learners (ELL)
   — RDG 413 Teach Read to English Lang Learners (3)

F. Student Teaching
   — EDU 495 Student Teaching Experience (12)

Note on Prerequisites

Pre-Calculus: MAT140A, MAT140B, math placement level 5, or permission of department chair

Discrete Math: Students must meet one of the following prerequisites: MAT140A or math placement level 4 or above.

Shippensburg University General Education Requirements
1 Satisfies a requirement for Required Skills and Competencies.
2 Satisfies a requirement for a Category A General Education Course
3 Satisfies a requirement for a Category B General Education Course
4 Satisfies a requirement for a Category C General Education Course
5 Satisfies a requirement for a Category D General Education Course
6 Satisfies a requirement for a Category E General Education Course
DEPARTMENT OF TEACHER EDUCATION
PROGRAM PLANNING SHEET
Elementary/Middle Level Option #2- Social Studies Concentration – B.S.Ed.

A student selecting this option will only be certified to teach Social Studies at the middle level grades 4-8.

PDE Competency Areas

I. Content Knowledge: 83 credits including General Education
   Requirements. A total of 33 credits are counted in a dual capacity. See notes on Shippensburg University General Education Requirements, below.

II. Concentration Area

A. Social Studies: 33 credits required
   __ GEO 101 World Geography (3)
   __ GEO 140 Cultural Geography (3)
   __ GEO 305 Geography of Europe (3) or GEO 308 Geography of Latin America or GEO 313 Geography of South and South-East Asia or GEO 317 Geography of East Asia or GEO 415 Regional Geography Studies or GEO 450 Field Studies
   __ PLS 100 US Government and Politics (3)
   __ PLS 311 The Legislative Process (3) or PLS 312 The American Presidency (3) or PLS 313 The Judicial Process (3) or PLS 342 American Foreign Policy (3) or PLS 356 Politics of Developing Regions (3)
   __ ECO 101 Macroeconomics (3)
   __ ECO 325 Globalization Issues and Policies (3) or ECO 345 Economics of Growth and Development (3)
   __ HIS 105 Historical Foundation of Global Cultures (3)
   __ HIS 106 Thinking Historically in a Global Age (3)
   __ HIS 201 Early History of the US (3) or HIS 202 Recent History of the US
   __ HIS 301 The West in American History (3) or HIS 302 American Economic History (3) or HIS 304 American Diplomatic History (3) or HIS 305 The Civil War (3) or HIS 306 History of the South (3) or HIS 309 History of the American Worker (3) or HIS 314 Jacksonian America (3) or HIS 318 History of US Women (3) or HIS 338 Colonial America (3) or HIS 341 African American History (3) or HIS 342 US Immigration and Ethnicity (3) or HIS 345 Military History of the US (3) or HIS 402 Revolutionary America (3) or HIS 413 Pennsylvania History (3)

Cognate Areas

B. Math: 13 credits required
   __ MAT 205 Survey of Middle Grades Mathematics (3)
   __ MAT 175 Pre-Calculus (3) (See note on Prerequisites)
   __ MAT 105 Math for Liberal Arts (3)
   __ MAT 117 Applied Statistics (4)

C. Science: 12 credits required
   __ BIO 100 Basic Biology (3)
   __ CHM 105 An Observational Approach (3)
   __ PHY 121 Physics I (3)
   __ ESS 110 Introduction to Geology (3)

D. Language Arts: 12 credits required
   __ ENG 106 Writing Intensive Seminar (3) or ENG 110 Advanced Placement Writing (3)
   __ HCS 100 Intro to Human Communication (3)
   __ RDG 232 Reading in the Elementary School (3)
   __ RDG 340 Seminar in Literacy Tutoring (3) (Prerequisite RDG 232)

E. Literature – 3 credits
   __ ENG 243 Art of the Film (3) or ENG 248 Intro to Culturally Diverse Lit (3) or ENG 250 Intro to Literature (3)

F. Fine Arts – 6 credits
   (Select two from different disciplines)
   __ MUS 110 Fundamental Music Skills (3) or MUS 121 Introduction to Music (3) or MUS 261 World Music (3)
   __ ART 101 Art Appreciation (3) or ART 231 Art History I (3) or ART 232 Art History II (3) or ART 274 Intro to Cultural Studio (3) or ART 339 History of American Art (3)
   __ Theatre
   __ THE 121 Intro to Theatre (3)

G. Social and Behavioral Sciences: 3 credits
   __ PSY 101 General Psychology (3)

III. Professional Core & Student Teaching: 39 credits

A. Middle Level Cognitive Development
   __ TCH 206 Social Found of Middle Level Educ (3)

B. Early Adolescent and Adolescent Learning Theory
   __ TCH 261 Adolescent Dev and Lang Theory (3)

C. Assessments and Interventions
   __ EEC 483 Assessing Children with Exceptionalities for Curricular Decision Making (3)
   __ TCH 345 Assessment Evaluation (3)

D. Adaptations and Accommodations for Diverse Learners
   __ EEC 273 Introduction to Accommodations: Understanding Diverse Learners (3)
   __ EEC 423 Effective Instructional Strategies for Students with Exceptionalities (3)

E. Middle Level Teaching Methods
   __ TCH 348 Teaching Middle Level Social Studies (3)
   __ TCH 251 Elements of Middle Level Instruction (3)

F. English Language Learners (ELL)
   __ RDG 413 Teaching Reading to English (3)

G. Student Teaching
   __ EDU 495 Student Teaching Experience (12)

Note on Prerequisites
Pre-Calculus: MAT140A, MAT140B, math placement level 5, or permission of department chair.

Shippensburg University General Education Requirements
   ^Satisfies a requirement for General Education Course
   ^Satisfies a requirement for a Category B General Education Course
   ^Satisfies a requirement for a Category C General Education Course
   ^Satisfies a requirement for a Category D General Education Course
   ^Satisfies a requirement for a Category E General Education Course
   ^Satisfies a requirement for a Category F General Education Course
   ^Satisfies a requirement for a Category G General Education Course

1 Satisfies a requirement for Required Skills and Competencies.

Pre-Calculus: MAT140A, MAT140B, math placement level 5, or permission of department chair.
TEACHER EDUCATION - Pre-K - 4/Pre-K-8 Special Education Dual Certification - B.S.Ed.

General Education Requirements

I. Required Skills and Competencies 15 cr

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 102</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECO 101</td>
<td>Principles of Macroeconomics OR GEO 101 World Geography</td>
</tr>
<tr>
<td>MAT 111</td>
<td>Fundamentals of Mathematics II (3 cr)</td>
</tr>
<tr>
<td>HIS 105</td>
<td>Historical Foundations of Global Cultures (3 cr) AND HIS 106 Thinking Historically in a Global Age (3 cr)</td>
</tr>
</tbody>
</table>

II. Categories of Knowledge 33 cr

A: Language/Numbers for Rational Thinking (3 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAT 110</td>
<td>Fundamentals of Mathematics I</td>
</tr>
</tbody>
</table>

B: Literary, Artistic & Cultural Traditions (9 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 243</td>
<td>Art of the Film</td>
</tr>
<tr>
<td>ENG 250</td>
<td>Introduction to Literature</td>
</tr>
<tr>
<td>ENG 248</td>
<td>Introduction to Culturally Diverse Lit. of the U.S.</td>
</tr>
</tbody>
</table>

Select TWO courses from different disciplines with advisement

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 101</td>
<td>Art Appreciation (recommended) (3 cr)</td>
</tr>
<tr>
<td>ART 231</td>
<td>Art History I (3 cr)</td>
</tr>
<tr>
<td>ART 232</td>
<td>Art History II</td>
</tr>
<tr>
<td>ART 274</td>
<td>Intro to Cultural Studio</td>
</tr>
<tr>
<td>ART 339</td>
<td>History of American Art</td>
</tr>
<tr>
<td>MUS 110</td>
<td>Fundamentals of Music</td>
</tr>
<tr>
<td>MUS 121</td>
<td>Introduction to Music</td>
</tr>
<tr>
<td>MUS 261</td>
<td>World Music</td>
</tr>
</tbody>
</table>

C: Biological & Physical Sciences (9 cr)

Select one course from each of the 3 categories. One of the 3 courses must have a laboratory component (indicated with an asterisk [*])

**Biology (choose one)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 100</td>
<td>Basic Biology (3 cr)</td>
</tr>
<tr>
<td>BIO 162</td>
<td>Principles of Biology: Organismal Diversity [*] (4 cr)</td>
</tr>
<tr>
<td>BIO 150</td>
<td>Human Biology (3 cr)</td>
</tr>
<tr>
<td>BIO 208</td>
<td>Field Biology [*] (3 cr)</td>
</tr>
<tr>
<td>BIO 242</td>
<td>Ecology [*] (3 cr)</td>
</tr>
</tbody>
</table>

**Earth Sciences (choose one)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESS 108</td>
<td>Conservation of Natural Resources</td>
</tr>
<tr>
<td>ESS 110</td>
<td>Introduction to Geology *</td>
</tr>
<tr>
<td>ESS 111</td>
<td>Introduction to Atmosphere</td>
</tr>
<tr>
<td>ESS 210</td>
<td>Physical Geology *</td>
</tr>
<tr>
<td>BIO 145</td>
<td>Environmental Biology</td>
</tr>
</tbody>
</table>

**Physical Sciences (choose one)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 108</td>
<td>Astronomy</td>
</tr>
<tr>
<td>PHY 110</td>
<td>Physics for Society</td>
</tr>
<tr>
<td>PHY 115</td>
<td>Physical Science: A Lab Approach *</td>
</tr>
<tr>
<td>PHY 121/123</td>
<td>Introductory Physics I *</td>
</tr>
<tr>
<td>PHY 205</td>
<td>Intermediate Physics I *</td>
</tr>
<tr>
<td>CHM 103</td>
<td>Chemistry: A Cultural Approach</td>
</tr>
<tr>
<td>CHM 105</td>
<td>Chemistry: An Observational Approach *</td>
</tr>
<tr>
<td>CHM 121</td>
<td>Chemical Bonding</td>
</tr>
</tbody>
</table>

D: Political, Economic & Geographic Sciences - Choose two (6 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEO 101</td>
<td>World Geography</td>
</tr>
<tr>
<td>ECO 101</td>
<td>Principles of Macroeconomics OR ECO 102 Principles of Microeconomics</td>
</tr>
<tr>
<td>PLS 100</td>
<td>U.S. Government and Politics</td>
</tr>
</tbody>
</table>

E: Social & Behavioral Science (6 cr)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 101</td>
<td>General Psychology (Required) AND one of the following:</td>
</tr>
<tr>
<td>ANT 111</td>
<td>Cultural Anthropology</td>
</tr>
<tr>
<td>GEO 140</td>
<td>Cultural Geography</td>
</tr>
<tr>
<td>SOC 101</td>
<td>Introduction to Sociology</td>
</tr>
</tbody>
</table>

III. Library Skills: Complete via College Writing Competency

<table>
<thead>
<tr>
<th>Professional Core</th>
<th>60 cr</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECH 210</td>
<td>The Early Childhood Profession (3 cr)</td>
</tr>
<tr>
<td>ECH 280</td>
<td>The Developing Child: Cognitive, Language, Physical (3 cr)</td>
</tr>
<tr>
<td>ECH 253</td>
<td>Early Literacy &amp; Literature for Children &amp; Families: Birth-5 years (3 cr)</td>
</tr>
<tr>
<td>ECH 320</td>
<td>The Developing Child III: Social &amp; Emotional Development &amp; Guiding Children's Behavior (3 cr)</td>
</tr>
<tr>
<td>ECH 333</td>
<td>Social Studies Methods in P-4 (3 cr)</td>
</tr>
<tr>
<td>ECH 343</td>
<td>Math Methods I, P-1st (3 cr)</td>
</tr>
<tr>
<td>ECH 370</td>
<td>Assessing Young Children (3 cr)</td>
</tr>
<tr>
<td>ECH 373</td>
<td>Science &amp; Technology Methods in P-4 (3 cr)</td>
</tr>
<tr>
<td>ECH 393</td>
<td>Math Methods II, 2nd-4th grade (2 cr)</td>
</tr>
<tr>
<td>ECS 415</td>
<td>Professional Practicum in P-4/Special Ed (3 cr)</td>
</tr>
<tr>
<td>ECH 440</td>
<td>Building Family &amp; Community Partnerships (3 cr)</td>
</tr>
<tr>
<td>ECH 453</td>
<td>Integrated Curriculum, P-4th (3 cr)</td>
</tr>
<tr>
<td>ECH 480</td>
<td>Early Childhood Professional Seminar (3 cr)</td>
</tr>
<tr>
<td>EEC 273</td>
<td>Introduction to Exceptionalities: Understanding Diverse Learners (3 cr)</td>
</tr>
<tr>
<td>EEC 280</td>
<td>Best Practices in Collaboration: Educators, Families, Related Service Providers (3 cr)</td>
</tr>
<tr>
<td>EEC 320</td>
<td>Interventions for Students with Communication Impairments (3 cr)</td>
</tr>
<tr>
<td>EEC 335</td>
<td>Interventions for Students with Cognitive and/or Physical Impairments (3 cr)</td>
</tr>
<tr>
<td>EEC 325</td>
<td>Interventions for Students with Social/Emotional and Behavioral Impairments (3 cr)</td>
</tr>
<tr>
<td>EEC 330</td>
<td>Teaching Students with Exceptionalities in a Standards-Aligned System (3 cr)</td>
</tr>
<tr>
<td>EEC 423</td>
<td>Effective Instructional Strategies for Children with Exceptionalities, Pre-K-8 (3 cr)</td>
</tr>
<tr>
<td>EEC 483</td>
<td>Assessing Children with Exceptionalities for Curricular &amp; Guiding Children's Behavior (3 cr)</td>
</tr>
<tr>
<td>EEC 480</td>
<td>Early Childhood Professional Seminar (3 cr)</td>
</tr>
<tr>
<td>EEE 447</td>
<td>Special Education Processes (3 cr)</td>
</tr>
<tr>
<td>RDG 323</td>
<td>Processes of Word/Text/Comprehension in Grades 1-4 (3 cr)</td>
</tr>
<tr>
<td>RDG 363</td>
<td>Reading and Writing in P-4th (2 cr)</td>
</tr>
<tr>
<td>RDG 383</td>
<td>English Language Learners in P-4th (2 cr)</td>
</tr>
<tr>
<td>RDG 443</td>
<td>Reading Measures and Interventions (3 cr)</td>
</tr>
</tbody>
</table>

Early Childhood/Special Education Student Teaching 12 cr

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECS 489</td>
<td>Student Teaching &amp; Prof. Pract.</td>
</tr>
</tbody>
</table>

Total Graduation Requirements 4-year template is available at www.ship.edu/undeclared

GPA Needed to Declare 3.0

Students are considered for admission to Teacher Education during the first two weeks of each semester. Students are ranked by several factors including educational philosophy, current GPA, interview, a writing sample, and grades in certain classes. An application requesting admission to the department is the first step in the application procedure. See "Admission to Teacher Education" for details.

Students electing certain minors can be required to complete more credits to complete both the elementary program and the requirements of the select minor. All students are required to complete at least 120 credit hours for graduation. The final responsibility for scheduling and fulfilling program requirements belongs to the student. Majors failing to maintain department required QPA of 3.0 will not be permitted to schedule elementary courses until they have reached the required QPA.

Students who plan to major in Teacher Education should maintain close contact with the department to ensure that they meet program requirements.
John L. Grove
College of Business

ACCOUNTING  MANAGEMENT  MARKETING  SUPPLY CHAIN MANAGEMENT  ... AND MORE
John L. Grove College of Business

B.S.B.A.

Bachelor of Science in Business Administration
  Accounting
  Finance
    Personal Financial Planning
  Information Technology for Business Education
  Information Technology for Business Education w/ secondary certification
  Management
    Entrepreneurship
    International Management
    Human Resource Management
  Management Information Systems
  Marketing
  Supply Chain Management
  Logistics Management

Minor

Business Administration (For non-business majors)
# SUGGESTED PROGRAM PLAN FOR BSBA STUDENTS

## FIRST YEAR

**Fall Semester**  
- Writing Intensive First Year Seminar*  
- Historical Foundation of Global Cultures*  
- College Algebra (A/B)  
- General Education Elective (Paired Course)*  
- General Education Elective*  
- Foundations of Business Administration (2cr.)*

**Spring Semester**  
- Intro to Human Communication*  
- Thinking Historically in a Global Age*  
- Applied Calculus I  
- Business Computer Systems*  
- Principles of Economics (4 crs.)*  
  or a General Education Elective

## SECOND YEAR

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

**Spring Semester**  
- Managerial Accounting  
- Managerial Economics  
- Statistical Applications in Business*  
- General Education Elective  
- General Education Elective

## THIRD YEAR

**Fall Semester**  
- Financial Management*  
- Organizational Behavior*  
- Principles of Marketing*  
- Supply Chain Operations Mgt* or Gen. Ed. Elec.  
- Major Course, General Education Elective*

**Spring Semester**  
- Major Course*  
- Major Course*  
- General Education Elective*  
- Free Elective*  
- Free Elective*

## FOURTH YEAR

**Fall Semester**  
- Business and Society*  
- Major Course  
- Major Course  
- General Education Elective  
- Free Elective (Major course for ACC & PFP Majors)

**Spring Semester**  
- Strategic Management*  
- Major Course  
- Major Course  
- Free Elective  
- Free Elective

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

**Bolded Courses** are part of the business core curriculum as shown in a prerequisite flow chart on the back of this sheet.

**PLEASE NOTE**  
Sequencing of courses may vary depending upon the specific requirements within a particular major. For example, Accounting, Management Information Systems, Information Technology for Business Education, 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.

Rev. 5/17/11
**Requirements for Business Students:**
Complete ENG106 Writ Int First Yr Sm or equivalent with a "C" grade or better; Maintain a 2.0 cumulative average in the business core, the major, and a 2.0 cumulative average overall.

* Accounting majors should take ACC 200 in their first semester and ACC 201 in the second semester of their sophomore year and earn at least a "C" grade or higher in both courses.
### General Education Requirements

#### I. Required Skills and Competencies
- **15 cr**
  - ENG 106 Writing Intensive First Year Seminar
  - Min. grade of "C" required
  - ENG 110 Advanced Placement Writing (3 cr)
  - May need ENG 050 Basic Writing first, based on test results.
  - HCS 100 Intro to Human Communication (3 cr)
  - Mathematical Competency-Required
  - MAT 140 College Algebra (3 cr)
  - HIS 105 Historical Foundations of Global Cultures (3 cr) AND
  - HIS 106 Thinking Historically in a Global Age (3 cr)

#### II. Categories of Knowledge
- **34 cr**
  - **A: Logic/Numbers for Rational Thinking (3 cr)**
    - MAT 181 Applied Calculus I
  - **B: Literary, Artistic & Cultural Traditions (9 cr)**
    - Lit. Course:____________________
    - ______________________________
    - ______________________________
  - **C: Biological & Physical Sciences (9 cr)**
    - ______________________________
    - ______________________________
    - ______________________________
  - **D: Political, Economic & Geographic Science (7 cr)**
    - **Students who have started the 6 cr Economics sequence ECO 101 or 102 can complete the sequence or take ECO 113, however; it is recommended that they complete the 6 cr sequence. Business majors or students interested in business who have not completed an economics class will be required to complete ECO 113.**
    - ECO 113 Principles of Economics (4 cr)
    - ______________________________
  - **E: Social & Behavioral Science (6 cr)**
    - ______________________________
    - ______________________________

#### III. Library Skills Completed via College or Advanced Writing

### Business Core Requirements All B.S.B.A. Majors
- **38 cr**
  - ACC 200 Fundamentals of Financial Accounting (3 cr)$^1$
  - ACC 201 Managerial Accounting (3 cr)$^2$
  - BSL 261 American Legal Environment (3 cr)$^2$†
  - BSN 101 Foundations of Business Administration (2 cr)$^1$
  - ECO 113 Principles of Economics (4 cr)$^2$ $^3$ $^4$
  - ECO 280 Managerial Economics (3 cr)$^2$ $^3$ $^4$
  - FIN 311 Financial Management (3 cr)$^3$ $^4$
  - MAT 181 Applied Calculus (3 cr)$^3$ $^4$
  - MIS 142 Business Computer Systems (3 cr)$^3$
  - MGT 305 Organizational Behavior (3 cr)$^3$
  - MGT 447 Business & Society (3 cr)$^3$
  - MGT 497 Strategic Management (3 cr)$^3$
  - MKT 305 Principles of Marketing (3 cr)$^3$
  - SCM 200 Statistical Applications in Business (3 cr)$^3$
  - SCM 330 Supply Chain and Operations Management (3 cr)$^3$

*Major requirement fulfills General Education credits

### Accounting Major Requirements
- **21 cr**
  - Accounting Major Requirements: 21 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 & Analysis (3 cr)
    - ACC 404 Auditing (3 cr)
    - ACC Accounting Elective (3 cr)
    - MIS 300 Information Technology & Business Operations (3 cr)

Free Electives: **12 cr**

*Major requirement fulfills General Education credits

### Total Graduation Requirements
- **120 cr**

### GPA Needed to Declare
- **2.0**

**NOTE:** A grade of "C" or better in College Algebra and/or Applied Calculus is required. In addition, 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 Administration
- MAT 140 College Algebra

#### Semester II
- MAT 181 Applied Calculus I
- MIS 142 Business Computer Systems
- ECO 113 Principles of Economics

#### Semester III
- ACC 200 Fund. of Financial Accounting
- BSL 261 American Legal Environment
- ECO 113 Principles of Economics if not already taken
- SCM 200 Statistical Applications in Business

#### Semester IV
- ACC 201 Managerial Accounting
- ECO 280 Managerial Economics
- SCM 200 Statistical Apps in Bus. if not already taken

**General Advice:**
- MIS 142 is a prerequisite for SCM 200.
- SCM 200 is satisfied by successful completion of MAT 117

*Superscript numbers indicate year course should be taken
$^1$ = Freshman year See Business Prerequisite Flow Chart.

A 4-year template is available at www.ship.edu/undeclared
## General Education Requirements

### I. Required Skills and Competencies 15 cr

- ENG 106 Writing Intensive First Year Seminar
  
- ENG 110 Advanced Placement Writing (3 cr)
  
- HCS 100 Intro to Human Communication (3 cr)
  
- Mathematical Competency-Required
  - MAT 140 College Algebra (3 cr)  (Minimum grade of 'C' required)
  - HIS 105 Historical Foundations of Global Cultures (3 cr)  **AND**
  - HIS 106 Thinking Historically in a Global Age (3 cr)

### II. Categories of Knowledge 34 cr

#### A: Logic/Numbers for Rational Thinking (3 cr)

- MAT 181 Applied Calculus I

#### B: Literary, Artistic & Cultural Traditions (9 cr)

- Lit. Course:____________________
  
- ______________________________
  
- ______________________________

#### C: Biological & Physical Sciences (9 cr)

- ______________________________
  
- ______________________________
  
- ______________________________

#### D: Political, Economic & Geographic Science (7 cr)**

**Students who have started the 6 cr Economics sequence ECO 101 or 102 can complete the sequence or take ECO 113, however, it is recommended that they complete the 6 cr sequence. Business majors or students interested in business who have not completed an economics class will be required to complete ECO 113.

- ECO 113 Principles of Economics (4 cr)
  
- ______________________________

#### E: Social & Behavioral Science (6 cr)

- ______________________________
  
- ______________________________
  
- ______________________________

### III. Library Skills Completed via College or Advanced Writing

### Business Core Requirements All B.S.B.A. Majors 38 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)**
- MAT 181 Applied Calculus (3 cr)**
- MIS 142 Business Computer Systems (3 cr)*
- MGT 305 Organizational Behavior (3 cr)*
- MGT 447 Business & Society (3 cr)*
- MGT 497 Strategic Management (3 cr)*
- MKT 305 Principles of Marketing (3 cr)*
- SCM 200 Statistical Applications in Business (3 cr)*
- SCM 330 Supply Chain and Operations Management (3 cr)*

*Major requirement fulfills General Education credits

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The Business Administration-General option is designed for students entering the John L. Grove College of Business who are undecided about choosing a specific B.S.B.A. major. Since the course work in the B.S.B.A. degree program is basically the same for all majors through the sophomore year, this undecided option provides students with up to two years before declaring a specific major in the College of Business. You are encouraged to declare a major sooner than your junior year. At any given time, admission to specific majors may be limited.

If you have any questions about this program, call the College of Business at 717-477-1620

GPA Needed to Declare: **2.0**

NOTE: A grade of "C" or better in College Algebra and/or Applied Calculus is required. In addition, 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 Administration
  - MAT 140 College Algebra

- **Semester II**
  - MAT 181 Applied Calculus I
  - MIS 142 Business Computer Systems
  - ECO 113 Principles of Economics

- **Semester III**
  - ACC 200 Fund. of Financial Accounting
  - BSL 261 American Legal Environment
  - ECO 113 Principles of Economics if not already taken
  - SCM 200 Statistical Applications in Business

- **Semester IV**
  - ACC 201 Managerial Accounting
  - ECO 280 Managerial Economics
  - SCM 200 Statistical Apps in Bus. if not already taken

**General Advice:**

- MAT 140 and MIS 142 are prerequisites for SCM 200.
- ACC 200 is a prerequisite for ACC 201.
- ECO 113 and MAT 181 are prerequisites for ECO 280.

**Superscript numbers indicate year course should be taken**

| 1 | Accounting majors require a minimum grade of 'C' in ACC 200 and ACC 201 |

* = Freshman year See Business Prerequisite Flow Chart for Prerequisites and requirements.
### General Education Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
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<tr>
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<td>III. Library Skills Completed via College or Advanced Writing</td>
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### Finance Major Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
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<tbody>
<tr>
<td>Finance Major Requirements</td>
<td>18 cr</td>
</tr>
<tr>
<td>___ FIN 312 Investments (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ FIN 313 Advanced Financial Management (3 cr)</td>
<td></td>
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<tr>
<td>___ FIN 314 Financial Institutions (3 cr)</td>
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</tr>
<tr>
<td>___ FIN 333 Applied Company and Security Analysis (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ Finance Electives - see electives sheet or catalog</td>
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### Personal Financial Planning Concentration Requirements

<table>
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<tr>
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<tbody>
<tr>
<td>Personal Financial Planning Concentration Requirements</td>
<td>21 cr</td>
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<tr>
<td>___ ACC 306 Tax Accounting (3 cr)</td>
<td></td>
</tr>
<tr>
<td>___ FIN 312 Investments (3 cr)</td>
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<tr>
<td>___ FIN 320 Risk Management &amp; Insurance (3 cr)</td>
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<tr>
<td>___ FIN 322 Estate Planning (3 cr)</td>
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<tr>
<td>___ FIN 324 Retirement Planning &amp; Employee Benefits (3 cr)</td>
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<td>___ FIN 333 Applied Company and Security Analysis (3 cr)</td>
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<td>___ FIN 421 Personal Financial Planning Capstone (3 cr)</td>
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### Free Electives

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<tr>
<td>Free Electives</td>
<td>12-15 cr</td>
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</tbody>
</table>
### Entrepreneurship Concentration

- MGT 432 Entrepreneurship (3 cr)
- MGT 432 Small Business Management (3 cr)
- MGT 433 Entrepreneurship (3 cr)
- 1 Entrepreneurship elective—see catalog

### General Education Requirements

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</table>

| III. Library Skills Completed via College or Advanced Writing |  |

### Business Core Requirements All B.S.B.A. Majors

- ACC 200 Fundamentals of Financial Accounting (3 cr)²
- ACC 201 Managerial Accounting (3 cr)²
- BSL 261 American Legal Environment (3 cr)²³
- BSN 101 Foundations of Business Administration (2 cr)⁴
- ECO 113 Principles of Economics (4 cr)⁵ ²³
- ECO 280 Managerial Economics (3 cr)²⁵
- FIN 311 Financial Management (3 cr)² ¹
- MAT 181 Applied Calculus (3 cr)³¹
- MIS 142 Business Computer Systems (3 cr)¹
- MGT 305 Organizational Behavior (3 cr)³ ¹
- MGT 447 Business & Society (3 cr)⁴
- MGT 497 Strategic Management (3 cr)⁴
- MKT 305 Principles of Marketing (3 cr)²⁵
- SCM 200 Statistical Applications in Business (3 cr) ¹
- SCM 330 Supply Chain and Operations Management (3 cr)³

*Major requirement fulfills General Education credits

** Students must pass ACTFL Oral Competency Test at the intermediate level by the end of junior year (90 credits)

### Management Concentration

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MGT 340 Human Resource Management (3 cr)</td>
</tr>
<tr>
<td>MGT 370 International Business (3 cr)</td>
</tr>
<tr>
<td>MGT 394 Leadership &amp; Decision Making (3 cr)</td>
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<tr>
<td>MGT 431 Corporate Entrepreneurship (3 cr)</td>
</tr>
<tr>
<td>MGT 498 Strategy Implementation (3 cr)</td>
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| 1 Management Elective—see electives sheet or catalog |  |

### Human Resource Management Concentration

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<tr>
<td>MGT 340 Human Resource Management (3 cr)</td>
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<tr>
<td>MGT 342 Labor Relations &amp; Collective Bargaining (3 cr)</td>
</tr>
<tr>
<td>MGT 346 Human Resource Management Law (3 cr)</td>
</tr>
<tr>
<td>MGT 348 Compensation Administration (3 cr)</td>
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| 2 Human Resource electives—see catalog |  |
| MGT (3 cr) |
| MGT (3 cr) |

### International Management Concentration

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<td>MGT 340 Human Resource Management (3 cr)</td>
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<td>MKT 360 International Marketing (3 cr)</td>
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<td>MGT 370 International Business (3 cr)</td>
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<td>MGT 470 International Management (3 cr)</td>
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| 2 International Management electives—see catalog |  |
| MGT (3 cr) |
| MGT (3 cr) |

### Language Requirement

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<td>Language (3 cr)²*</td>
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** Students must pass ACTFL Oral Competency Test at the intermediate level by the end of junior year (90 credits)

### Free Electives

- ** 15 cr

** Satisfies University General Education Diversity Requirement

### Total Graduation Requirements

- 120 cr

### GPA Needed to Declare:

- 2.0

**Note:** A grade of “C” or better in College Algebra and/or Applied Calculus is required. In addition, 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 Administration
  - MAT 140 College Algebra

- **Semester II**
  - MAT 181 Applied Calculus I
  - MIS 142 Business Computer Systems
  - ECO 113 Principles of Economics

- **Semester III**
  - ACC 200 Fund. of Financial Accounting
  - BSL 261 American Legal Environment
  - ECO 113 Principles of Economics
  - If not already taken
  - SCM 200 Statistical Applications in Business

- **Semester IV**
  - ACC 201 Managerial Accounting
  - ECO 280 Managerial Economics
  - SCM 200 Statistical Apps in Bus. if not already taken

** General Advice: 
- MAT 140 and MIS 142 are prerequisites for SCM 200.

Superscript numbers indicate year course should be taken

¹ = Freshman year See Business Prerequisite Flow Chart.
**MANAGEMENT INFORMATION SYSTEMS B.S.B.A.**

### General Education Requirements

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### Management Information Systems Major Requirements

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<tr>
<td>MIS 240 Introduction to Programming Concepts (3 cr)</td>
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<td>MIS 340 Business Programming (3 cr)</td>
</tr>
<tr>
<td>MIS 344 Business Systems Analysis &amp; Design (3 cr)</td>
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<tr>
<td>MIS 355 Database Applications (3 cr)</td>
</tr>
<tr>
<td>MIS 420 Telecommunications/Distrib. Processing (3 cr)</td>
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<td>MIS 446 Information Systems project Development (3 cr)</td>
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### Free Electives

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*Major requirement fulfills General Education credits

### Total Graduation Requirements

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**GPA Needed to Declare: 2.0**

NOTE: A grade of “C” or better in College Algebra and/or Applied Calculus is required. In addition, 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 Administration
- MAT 140 College Algebra

**Semester II**
- MAT 181 Applied Calculus I
- MIS 142 Business Computer Systems
- ECO 113 Principles of Economics if not already taken

**Semester III**
- ACC 200 Fund. of Financial Accounting
- BSL 261 American Legal Environment
- ECO 113 Principles of Economics if not already taken
- SCM 200 Statistical Apps in Bus. if not already taken

**Semester IV**
- ACC 201 Managerial Accounting
- ECO 280 Managerial Economics
- SCM 200 Statistical Apps in Bus. if not already taken

**General Advice:**
- MAT 140 and MIS 142 are prerequisites for SCM 200.
- Superscript numbers indicate year course should be taken
- 1 = Freshman year See Business Prerequisite Flow Chart.

A 4-year template is available at www.ship.edu/undeclared
MARKETING-B.S.B.A.

General Education Requirements

I. Required Skills and Competencies 15 cr

___ ENG 106 Writing Intensive First Year Seminar
Min. grade of “C” required OR
ENG 110 Advanced Placement Writing (3 cr)
May need ENG 050 Basic Writing first, based on test results.
___ HCS 100 Intro to Human Communication (3 cr)
___ Mathematical Competency-Required
MAT 140 College Algebra (3 cr)
___ HIS 105 Historical Foundations of Global Cultures (3 cr) AND
___ HIS 106 Thinking Historically in a Global Age (3 cr)

II. Categories of Knowledge 34 cr

A: Logic/Numbers for Rational Thinking (3 cr)
___ MAT 181 Applied Calculus I
B: Literary, Artistic & Cultural Traditions (9 cr)
___ Lit. Course:
___ ______________________________
___ ______________________________
___ ______________________________
C: Biological & Physical Sciences (9 cr)
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___ ______________________________
D: Political, Economic & Geographic Science (7 cr)**
**Students who have started the 6 cr Economics sequence ECO 101 or 102 can complete the sequence or take ECO 113; however, it is recommended that they complete the 6 cr sequence. Business majors or students interested in business who have not completed an economics class will be required to complete ECO 113.
___ ECO 113 Principles of Economics (4 cr)
E: Social & Behavioral Science (6 cr)
___ ______________________________
___ ______________________________

III. Library Skills Completed via College or Advanced Writing

Marketing Requirements 18 cr

___ MKT 306 Buyer Behavior (3 cr)
___ MKT 430 Marketing Research (3 cr)
___ MKT 495 Marketing Analysis & Strategy Dev. (3 cr)
Three 3 Marketing Electives-see electives sheet or catalog
___ MKT (3 cr)
___ MKT (3 cr)
___ MKT (3 cr)

Free Electives 15 cr

Total Graduation Requirements 120 cr

GPA Needed to Declare: 2.0

Note: A grade of “C” or better in College Algebra and/or Applied Calculus is required. In addition, 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 Administration
MAT 140 College Algebra

Semester II
MAT 181 Applied Calculus I
MIS 142 Business Computer Systems
ECO 113 Principles of Economics

Semester III
ACC 200 Fund. of Financial Accounting
BSL 261 American Legal Environment
ECO 113 Principles of Economics if not already taken
SCM 200 Statistical Applications in Business

Semester IV
ACC 201 Managerial Accounting
ECO 280 Managerial Economics
SCM 200 Statistical Apps in Bus. if not already taken

General Advice:
MIS 142 is a prerequisite for SCM 200.

Superscript numbers indicate year course should be taken
Freshman year See Business Prerequisite Flow Chart.
### General Education Requirements

#### I. Required Skills and Competencies 15 cr

- ENG 106 Writing Intensive First Year Seminar
  - Min. grade of "C" required OR
  - ENG 110 Advanced Placement Writing (3 cr)
  - May need ENG 050 Basic Writing first, based on test results.
- HCS 100 Intro to Human Communication (3 cr)
- Mathematical Competency-Required
  - MAT 140 College Algebra (3 cr)
  - HIS 105 Historical Foundations of Global Cultures (3 cr) AND
  - HIS 106 Thinking Historically in a Global Age (3 cr)

#### II. Categories of Knowledge 34 cr

**A: Logic/Numbers for Rational Thinking (3 cr)**
- MAT 181 Applied Calculus I

**B: Literary, Artistic & Cultural Traditions (9 cr)**
- Lit. Course:____________________
- ______________________________
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**C: Biological & Physical Sciences (9 cr)**
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**D: Political, Economic & Geographic Science (7 cr)**

 **Students who have started the 6 cr Economics sequence ECO 101 or 102 can complete the sequence or take ECO 113, however, it is recommended that they complete the 6 cr sequence. Business majors or students interested in business who have not completed an economics class will be required to complete ECO 113.**
- ECO 113 Principles of Economics (4 cr)
- ______________________________

**E: Social & Behavioral Science (6 cr)**
- ______________________________
- ______________________________
- ______________________________

#### III. Library Skills Completed via College or Advanced Writing

### Business Core Requirements All B.S.B.A. Majors 38 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)
- MAT 181 Applied Calculus (3 cr)
- MIS 142 Business Computer Systems (3 cr)
- MGT 305 Organizational Behavior (3 cr)
- MGT 447 Business & Society (3 cr)
- MGT 497 Strategic Management (3 cr)
- MKT 305 Principles of Marketing (3 cr)
- SCM 200 Statistical Applications in Business (3 cr)
- SCM 330 Supply Chain and Operations Management (3 cr)

*Major requirement fulfills General Education credits

### Supply Chain Management Major 18 cr

- SCM 315 Strategic Procurement (3 cr)
- SCM 355 Quality Management and Continuous Improvement (3 cr)
- SCM 370 Integrated Supply Chain Systems (3 cr)
- SCM 380 Data Mining for Supply Chain Management (3 cr)
- SCM 420 Global Logistics Systems (3 cr)
- SCM Elective ___________________ (3 cr)

### Logistics Management Concentration 18 cr

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

### Two Logistics Management Electives: See Catalog

- ______________________________ (3 cr)
- ______________________________ (3 cr)

### Free Electives 15 cr

### Total Graduation Requirements 120 cr

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GPA Needed to Declare: 2.0

**NOTE:** A grade of "C" or better in College Algebra and/or Applied Calculus is required. In addition, 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 Administration
  - MAT 140 College Algebra
  - ECO 113 Principles of Economics if not already taken

- **Semester II**: ACC 200 Fund. of Financial Accounting
  - BSL 261 American Legal Environment
  - ECO 113 Principles of Economics if not already taken

- **Semester III**: ACC 200 Fund. of Financial Accounting
  - BSL 261 American Legal Environment
  - ECO 113 Principles of Economics if not already taken

- **Semester IV**: ACC 201 Managerial Accounting
  - ECO 280 Managerial Economics
  - SCM 200 Statistical Apps in Bus. if not already taken

**General Advice:**

SCM majors should have access to a computer by the beginning of their sophomore year.

MIS 142 Business Computer Systems is a prerequisite for SCM 200.

Superscript numbers indicate year course should be taken

1 = Freshman year See Business Prerequisite Flow Chart.

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*A 4-year template is available at www.ship.edu/undeclared*
V. Appendix
References


____ Students are. ACT National Center for the Advancement of Educational Practices.


Workshop conducted by Gurney Williams, national consultant, New York: NY. March 20, 1997.
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<th>Deans</th>
<th>Location</th>
<th>Office Associate</th>
<th>Tel #</th>
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<tbody>
<tr>
<td>Arts &amp; Sciences</td>
<td>Dr. James H. Mike</td>
<td>DHC 223</td>
<td>Pat L. Martin</td>
<td>1151</td>
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<tr>
<td>Business</td>
<td>Dr. John G. Kooti</td>
<td>GRH 124</td>
<td>Debra K. Booz</td>
<td>1435</td>
</tr>
<tr>
<td>Education/Human Services</td>
<td>Dr. James R. Johnson</td>
<td>SPH 350</td>
<td>Vickie E. Shaak</td>
<td>1373</td>
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<tr>
<td>School of Academic Programs &amp; Services</td>
<td>Dr. Sarah E. Stokely</td>
<td>HH 112</td>
<td>Terry A. Conyers</td>
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<tr>
<td>School of Graduate Studies</td>
<td>Dr. Tracy A. Schoolcraft</td>
<td>OM 308</td>
<td>Dynel L. Miracle</td>
<td>1371</td>
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<tr>
<td>Academic Outreach and Innovation</td>
<td>Dr. Christina M. Sax</td>
<td>HH 111</td>
<td>Sherry L. Dinsmore</td>
<td>1348</td>
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<tr>
<td>Library</td>
<td>Dr. Dennis H. Mathes</td>
<td>LL 110</td>
<td>Jennifer R. Hahn</td>
<td>1463</td>
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## Alphabetical Listing of Academic Departments

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<th>Dept./Div./Prog.</th>
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<tr>
<td>Accounting &amp; Mgmnt. Info. Systems</td>
<td>Dr. J. Jay Mackie</td>
<td>GRH 318</td>
<td>Kristina S. Commerer</td>
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<tr>
<td>Art &amp; Design</td>
<td>Mr. William G. Whiteley</td>
<td>HAC 209</td>
<td>(Vacant)</td>
<td>1530</td>
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<tr>
<td>Biology</td>
<td>Dr. Todd M. Hurd</td>
<td>FSC 240</td>
<td>Joan M. Carson</td>
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<tr>
<td>Chemistry</td>
<td>Dr. Joseph W. Shane</td>
<td>FSC 325</td>
<td>(Vacant)</td>
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<tr>
<td>Communication &amp; Journalism</td>
<td>Dr. Kim D. Garris</td>
<td>RLH 112</td>
<td>Loretta I. Sobrito</td>
<td>1521</td>
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<tr>
<td>Computer Science &amp; Engineering</td>
<td>Dr. Carol A. Wellington</td>
<td>MCT 156</td>
<td>Jody L. Burdge</td>
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<td>Criminal Justice</td>
<td>Dr. Melissa L. Ricketts</td>
<td>SPH 319</td>
<td>Bonnie G. Heming</td>
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<td>Economics</td>
<td>Dr. David E. Kalist</td>
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<td>Vickie M. Byers</td>
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<td>English</td>
<td>Dr. Shari L. Horner</td>
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<td>Patricia A. Hooper</td>
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<td>Exercise Science</td>
<td>Dr. Russell E. Robinson</td>
<td>HG 109</td>
<td>Colleen A. McQueeney</td>
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<td>Finance &amp; Supply Chain Mgmnt.</td>
<td>Dr. Ian M. Langella</td>
<td>GRH 117</td>
<td>Nancy E. Thomas</td>
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<td>Geography &amp; Earth Science</td>
<td>Dr. William L. Blewett</td>
<td>SRH 104</td>
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<td>History &amp; Philosophy</td>
<td>Dr. Steven B. Burg</td>
<td>WRI 232</td>
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<tr>
<td>Human Communication Studies</td>
<td>Dr. Kara A. Laskowski</td>
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<td>Tammy L. Myers</td>
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<td>Management &amp; Marketing</td>
<td>Dr. William D. Oberman</td>
<td>GRH 218</td>
<td>Karen S. Kelley</td>
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<tr>
<td>Mathematics</td>
<td>Dr. Douglas E. Ensley</td>
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<td>Military Science (ROTC)</td>
<td>LTC Matthew C. Sober</td>
<td>WRI 206</td>
<td>Byron C. Stouffer</td>
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<td>Modern Languages</td>
<td>Dr. Jose Ricardo-Osorio</td>
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<td>Music &amp; Theatre Arts</td>
<td>Mr. Trever R. Famulare</td>
<td>PAC 222</td>
<td>Karen S. Reath</td>
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<tr>
<td>Physics</td>
<td>Dr. Michael R. Cohen</td>
<td>FSC 209</td>
<td>(Vacant)</td>
<td>1570</td>
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<tr>
<td>Political Science</td>
<td>Dr. C. Nielsen Brasher</td>
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<td>Laurie A. Stader</td>
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<td>Psychology</td>
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<tr>
<td>Social Work</td>
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<td>Sociology &amp; Anthropology</td>
<td>Dr. Barbara J. Denison</td>
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<td>Lisa M. Dubbs</td>
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<tr>
<td>Teacher Education</td>
<td>Dr. Christine A. Royce</td>
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<td>Brandy J. Linn</td>
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## Academic Programs

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<tr>
<td>Academic Success Prog. (Act 101)</td>
<td>Dr. Chad H. Bennett</td>
<td>WRI 130</td>
<td>Judith P. Ferrell</td>
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<tr>
<td>Disability Studies</td>
<td>Dr. Allison C. Carey</td>
<td>WRI 102</td>
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<tr>
<td>Ethnic Studies</td>
<td>Dr. Ana N. Morana</td>
<td>HH 103</td>
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<td>Honors Program</td>
<td>Dr. Kim M. Klein</td>
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<td>Cindy M. Poe</td>
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<tr>
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<tr>
<td>International Studies</td>
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<td>Learning Center</td>
<td>Dr. Sabrina I. Marschall</td>
<td>LL 133</td>
<td>Kelly B. Miner</td>
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<td>Women's &amp; Gender Studies</td>
<td>Dr. Rebecca J. Ward</td>
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