# Program Requirements

## First Year
### Fall
- **CHEM 119**: Fundamentals of Chemistry I  
  Semester Credit Hours: 4
- **ENGL 104**: Composition and Rhetoric  
  Semester Credit Hours: 3
- **MATH 147** or **MATH 151**: Calculus I for Biological Sciences or Engineering Mathematics I  
  Semester Credit Hours: 4
- **MARS 102**: Earth and Ocean Science  
  Semester Credit Hours: 4

### Spring
- **BIOL 111**: Introductory Biology I  
  Semester Credit Hours: 4
- **CHEM 120**: Fundamentals of Chemistry II  
  Semester Credit Hours: 4
- **MARB 101**: Succeeding in Science  
  Semester Credit Hours: 3
- **Select one of the following:**
  - **MATH 148**: Calculus II for Biological Sciences  
    Semester Credit Hours: 4
  - **MATH 150**: Functions, Trigonometry and Linear Systems  
  - **MATH 152**: Engineering Mathematics II  

## Second Year
### Fall
- **BIOL 112** or **GEO 106**: Introductory Biology II or Historical Geology  
  Semester Credit Hours: 4
- **ECON 202**: Principles of Economics  
  Semester Credit Hours: 3
- **MARS 210**: Marine Geography  
  Semester Credit Hours: 3
- **MARS 280**: Coastal and Ocean Resources  
  Semester Credit Hours: 3
- **MARS 281**: Sophomore Seminar in Marine Sciences  
  Semester Credit Hours: 1
- **Professional elective**  
  Semester Credit Hours: 3

### Spring
- **ECON 203**: Principles of Economics  
  Semester Credit Hours: 3
- **MATH 251**: Engineering Mathematics II  
  Semester Credit Hours: 3
- **Select one of the following:**
  - **PHYS 201**: College Physics  
    Semester Credit Hours: 4
  - **PHYS 206** & **PHYS 226**: Newtonian Mechanics for Engineering and Science and Physics of Motion Laboratory for the Sciences  

## Third Year
### Fall
- **MARS 325**: Introduction to GIS for Marine Sciences  
  Semester Credit Hours: 3
- **MARS 420**: Biological Oceanography  
  Semester Credit Hours: 3

## Fourth Year
### Fall
- **MARS 363**: The Management Process  
  Semester Credit Hours: 3
- **MARS 491**: Research in Marine Sciences  
  Semester Credit Hours: 1
- **Professional elective**  
  Semester Credit Hours: 3
- **Professional elective**  
  Semester Credit Hours: 3
- **General elective**  
  Semester Credit Hours: 3

## Total Semester Credit Hours: 120

1. Indicates required courses in the major. These courses will be used to compute the major GPR.
2. Designated writing intensive course.
3. Recommended professional electives include, but are not limited to:
   - **ATMO 363**: Introduction to Meteorology  
   - **CHEM 227**: General Chemistry II  
   - **CHEM 228**: General Chemistry III  
   - **CHEM 318**: Physical Chemistry  
   - **FSCI 360**: Fundamentals of Geophysics  
   - **GEOG 321**: Introduction to Geographic Information Systems  
   - **GEOG 370**: Introduction to Environmental Science  
   - **MARS 303**: Oceanography  
   - **MARS 305**: Marine Geology  
   - **MARS 310**: Introduction to Marine Geology  
   - **MARS 330**: Oceanography Laboratory  
   - **MARS 408**: Field Methods in Marine Geology  
   - **MARS 410**: History of the Earth  
   - **MARS 412**: History of the Earth  
   - **MARS 415**: History of the Earth  
   - **MARS 425**: History of the Earth  
   - **MARS 430**: History of the Earth  
   - **MARS 432**: History of the Earth  
   - **MARS 435**: History of the Earth  
   - **MARS 440**: History of the Earth  
   - **MARS 450**: History of the Earth  
   - **MARS 460**: History of the Earth  
   - **MARS 470**: History of the Earth  
   - **MARS 481**: History of the Earth  
   - **MARS 484**: History of the Earth  
   - **MARS 489**: History of the Earth  
   - **MARS 491**: History of the Earth  
   - **MATH 251**: Calculus I for Biological Sciences  
   - **MATH 308**: Calculus II for Biological Sciences  
   - **POLS 347**: American National Government  
   - **STAT 303**: Statistical Methods or Biostatistics  
   - **STAT 403**: Statistical Methods or Biostatistics  

The total hours may be increased if the student is required to take remedial math, remedial English, foreign language, or the 3-hour University Core Curriculum requirement for International and Cultural Diversity and the 3-hour requirement for Cultural Discourse.
All electives must be chosen in consultation with, and approved by, the student's academic advisor. Unless courses are specifically listed, see University Core Curriculum for a listing of course options for Communication, Mathematics, Life and Physical Sciences, Language Philosophy and Culture, Creative Arts, American History, Government and Political Sciences and Social and Behavioral Sciences. The Graduation requirements include a requirement for 3 hours of I (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/) International and Cultural Diversity courses and 3 hours of C (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/) Cultural Discourse courses. A course satisfying a Core category, a college/department requirement, or a free or directed elective can be used to satisfy this requirement. See academic advisor.