Your advisor will be able to assist with course planning to facilitate a second major, so please let your advisor know if you are considering a dual major.

**Minors in Other Disciplines**

Minors provide students the opportunity to pursue additional interests but generally do not require as many courses as a major. Minors generally range from five to eight required courses. To receive a minor, the student must complete at least 9 credit hours of coursework distinct from their other credentials (i.e., majors, other minors). The minors page (http://catalog.canisius.edu/undergraduate/minors/) provides a complete list of minors and provides links to each minor. Some majors and minors can be completed within the minimum 120 credit hour degree requirement, but in some cases additional coursework may be required. Students must complete the appropriate minor request form.

**Major Experiences**

All environmental science majors must complete two internship experiences. Recent internships have included Ecology and Environment, New York State Department of Environmental Conservation, U.S. Fish and Wildlife Service, TestAmerica Laboratories, Student Conservation Association of AmeriCorps, Erie County Department of Environmental Planning, Tifft Nature Preserve, and the Buffalo Museum of Science. We encourage students to work with any faculty member in the program to find internships that will best meet their goals and needs.

**Curriculum**

**An Ignatian Foundation**

All undergraduate students must complete either the Canisius Core Curriculum (http://catalog.canisius.edu/undergraduate/academics/core-curriculum/) or the All-College Honors Curriculum (http://catalog.canisius.edu/undergraduate/academics/core-curriculum/all-college-honors-program/). Many schools refer to their college-wide undergraduate requirements as “general education” requirements. We believe that the core curriculum and the honors curriculum are more than a series of required classes; they provide the basis for a Jesuit education both with content and with required knowledge and skills attributes that are central to our mission.

**Free Electives**

Students may graduate with a bachelor’s degree with more but not less than 120 credit hours. Free electives are courses in addition to the Canisius Core Curriculum or All-College Honors Curriculum and major requirements sufficient to reach the minimum number of credits required for graduation. The number of credits required to complete a bachelor’s degree may vary depending on the student’s major(s) and minor(s).

**Major Requirements**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 111 &amp; 111L</td>
<td>Introductory Biology I and Introductory Biology Laboratory I</td>
<td>4</td>
</tr>
<tr>
<td>BIO 112 &amp; 112L</td>
<td>Introductory Biology II and Introductory Biology Laboratory II</td>
<td>4</td>
</tr>
<tr>
<td>BIO 320 &amp; 320L</td>
<td>Field Ecology and Field Ecology Lab</td>
<td>4</td>
</tr>
<tr>
<td>BIO 360</td>
<td>Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td>CHM 111 &amp; 111L</td>
<td>General Chemistry I and General Chemistry I Laboratory</td>
<td>4</td>
</tr>
</tbody>
</table>
**Environmental Science Electives**

*Students must complete four of the following (at least three with labs):*

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABEC 345 &amp; 345L</td>
<td>Herpetology and Herpetology Lab (lab optional)</td>
<td>4</td>
</tr>
<tr>
<td>ABEC 341 &amp; 341L</td>
<td>Urban Ecology and Urban Ecology Lab (lab optional)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 211 &amp; 211L</td>
<td>Biochemistry and Cell Biology I and Biochemistry and Cell Biology Lab I (lab required)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 212 &amp; 212L</td>
<td>Biochemistry and Cell Biology II and Biochemistry and Cell Biology Lab II (lab required)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 305 &amp; 305L</td>
<td>Medical Microbiology and its Ecological Basis and Medical Microbiology and its Ecological Basis Lab (lab optional)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 307 &amp; 307L</td>
<td>Microbiology and Microbiology Laboratory (lab optional)</td>
<td>4</td>
</tr>
<tr>
<td>BIO 322</td>
<td>Conservation Biology</td>
<td>3</td>
</tr>
</tbody>
</table>
Learning Goal 3
Students will demonstrate mastery with respect to technical skills.
Students will:
• Objective A: Effectively communicate scientific material in written form;
• Objective B: Draw a graph;
• Objective C: Design a table.

Courses
Environmental Science Courses

ENV 200 Introductory Hydrology 3 Credits
Introduction to hydrologic processes, methods for quantifying hydrologic parameters and processes, and practical exposure to conducting and reporting hydrological studies.
Offered: Spring 2021.

ENV 200L Introductory Hydrology Laboratory 1 Credit
Introductory methods and applications of Hydrology.
Offered: occasionally.

ENV 352 Environmental Science Seminar I 1 Credit
Designed to provide environmental science students the opportunity to learn various methods of preparing scientific/experimental information for written format and oral presentation. Career preparations are also included.
Offered: every spring.

ENV 354 Environmental Science Seminar II 1 Credit
This course will provide Information about a variety of careers in the field of environmental science. Students will also give presentations on their internship experiences. Required in junior or senior year.
Prerequisite: ENV 352.
Offered: spring of odd-numbered years.

ENV 401 Independent Research 1-3 Credits
Independent laboratory research in environmental science conducted under the supervision of a faculty member. Arrangements must be made prior to registration.
Prerequisite: written permission of faculty member & program director.
Offered: fall & spring.

ENV 498 Environmental Science Internship I 1-3 Credits
Practical experiences in the environmental sciences. Students must complete two internships in different areas of environmental sciences. Internships require an application and approval by the associate dean.
Prerequisite: junior or senior standing, minimum GPA of 2.0 in the major, a positive recommendation from a faculty member, & a completed & approved internship application.
Offered: fall & spring.

ENV 499 Environmental Science Internship II 1-3 Credits
Practical experiences in the environmental sciences. Students must complete two internships in different areas of environmental sciences. Internships require an application and approval by the associate dean.
Prerequisite: junior or senior standing, minimum GPA of 2.0 in the major, a positive recommendation from a faculty member, & a completed & approved internship application.
Offered: fall & spring.

Geology Course

GEOL 120 Introductory Geology 3 Credits
Basic concepts, including uniformitarianism, the rock cycle, the hydrologic cycle, tectonics and surface processes. Also covers how humans affect and are affected by their environment. Lab required. Students may not receive credit for both GEOL 120 and PHY 130.
Corequisite: GEOL 120L.
Fulfills College Core: Field 6 (Natural Sciences)
Offered: Fall 2021.

GEOL 120L Introductory Geology Laboratory 1 Credit
Required lab for GEOL 120.
Corequisite: GEOL 120.
Offered: Fall 2021.