Carroll University offers access to majors in marine biology and oceanography via a cooperative arrangement with Hawaii Pacific University (HPU). The objective of the Marine Science Program at HPU is to help students gain a scientific understanding of the world's oceans and the life they contain, and a sense of appreciation for their beauty and fragility. Students are given a theoretical framework in the basic and applied sciences as well as ample opportunities to get hands-on experience conducting laboratory and field observations and experiments. Lecture and laboratory facilities are located on the Hawaii Loa Campus of Hawaii Pacific University. The campus is only a twenty-minute drive from Kaneohe Bay, a large natural embayment protected from the open ocean by the only true barrier reef in the Hawaiian Islands. This bay serves as one of the finest natural laboratories in the world for studying the marine sciences, and its protected nature allows HPU students to do field work in almost any type of weather.

Students desiring to major in marine biology or oceanography will spend two years at Carroll University taking basic science and liberal arts courses. After the two years, students transfer to Hawaii Pacific University and complete the requirements for a Marine Biology/Oceanography degree from Hawaii Pacific University.

**Marine Biology or Oceanography Major**

*Bachelor of Science*

Science and mathematics courses taken at Carroll University

- Biology 120, General Biology I
- Biology 125, General Biology II
- Chemistry 109, Principles of Inorganic Chemistry
- Chemistry 110, Principles of Analytical Chemistry
- Computer Science 107, Problem Solving Using Information Technology
- Environmental Science 105, Earth Science (required for Oceanography majors only)
- Mathematics 112, Introduction to Statistics
- Mathematics 160, Calculus I
- Mathematics 161, Calculus II
- Physics 101 or 203, Physics I (may be taken at HPU)
- Physics 102 or 204, Physics II (may be taken at HPU)
Additional Courses to fulfill HPUs General Education Curriculum (contact a Marine Biology advisor for a listing of all approved general education courses)

Communication Skills: English 170, Writing Seminar; plus 1 additional course, e.g. Spanish 101 or Communication 101
Global Systems: 1 course, e.g., Environmental Science 138 or History 104
Research and Epistemology: Requirements are completed at HPU
Values and Choices: CCS 100, Cultural Seminar; plus 2 additional courses, e.g., Environmental Ethics 292 or Philosophy 101
World Cultures: 3 courses, e.g. Art 103, Politics 101, or Theater 101

Sample program at Carroll University

<table>
<thead>
<tr>
<th>Freshman</th>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td></td>
<td>CCS 100, Cultural Seminar</td>
<td>ENG 170, Writing Seminar</td>
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<tr>
<td></td>
<td>BIO 120, General Biology I</td>
<td>BIO 125, General Biology II</td>
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<td>COM 101, Prin. of Comm.</td>
<td>ART 103, History of Art</td>
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<td>MAT 130, Elem. Functions</td>
<td>MAT 160, Calculus I</td>
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<tr>
<td>Sophomore</td>
<td>CHE 109, Prin. of Inorganic Chem</td>
<td>CHE 110, Prin. of Analytical Chem</td>
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<td></td>
<td>MAT 161, Calculus II</td>
<td>ENV 105, Earth Science</td>
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<tr>
<td></td>
<td>CSC 107, Prob. Solving</td>
<td>(Oceanography majors only)</td>
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<tr>
<td></td>
<td>PHI 101, Intro. to Philosophy</td>
<td>MAT 112, Intro. to Statistics</td>
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<td>HIS 104, Europe and the Modern World</td>
<td>SOC 110, Social Anthropology</td>
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Sample program for Marine Biology at Hawaii Pacific University

Summer at CU or HPU before Junior Year
PHY 101, Intro Physics I and PHY 102, Intro Physics II or HPU Physics I and HPU Physics II

Fall and Spring Junior Year
Oceanographic Field Techniques
Ecology
General Oceanography I and II
Argument, Research, Writing
Marine Biology
Cell and Molecular Biology
plus Elective

Senior Year
Marine Ecology
Evolutionary Genetics
Plant Biology
Marine Invertebrate Zoology
Seminar: Marine Biology Seminar
The World Problematique
Sample program for Oceanography at Hawaii Pacific University

Summer at CU or HPU before Junior Year
PHY 101, Intro Physics I and PHY 102, Intro Physics II or
   HPU Physics I and HPU Physics II

Fall and Spring Junior Year
Oceanographic Field Techniques
General Oceanography I
Marine Biology
Argument, Research, Writing
Physical Geology
Ecology
Aquatic Chemistry
Geological Oceanography
plus Elective

Senior Year
Environmental Microbiology
Chemical Oceanography
Descriptive Regional Oceanography
Oceanography
Hydrogeology
Dynamic Physical Oceanography
The World Problematique
Organic Chemistry
plus Elective