

# OCEANOGRAPHY (BS)

## Degree Requirements and Curriculum

In addition to the program requirements listed on this page, students must also satisfy requirements outlined in more detail in the Minimum Requirements for Graduation (<https://catalog.calpoly.edu/academic-standards-policies/general-requirements-bachelors-degree/>) section of this catalog, including:

- 40 units of upper-division courses
- 2.0 GPA
- Graduation Writing Requirement (GWR)
- U.S. Cultural Pluralism (USCP)

Note: No Major or Support courses may be selected as credit/no credit. In addition, no more than 12 units of cooperative or internship courses can count towards your degree requirements.

Code	Title	Units
<b>MAJOR COURSES</b>		
OCN 1100 & 1100L	Marine Biology and Marine Biology Laboratory (5B & 5C) <sup>1</sup>	4
OCN 1110 & 1110L	Marine Ecology and Marine Ecology Laboratory	4
OCN 2200 & 2200L	Oceanography I: Geology and Chemistry and Introduction to Oceanography Laboratory	4
OCN 2210 & 2210L	Oceanography II: Physics and Biology and Introduction to Oceanography Laboratory II	4
OCN 3305	Introduction to Ocean Science Research	1
OCN 3310 & 3310L	Oceanographic Instruments and Analysis and Oceanographic Instruments and Analysis Laboratory	3
OCN 3320	Oceans and Climate (Upper-Division 2/5) <sup>1</sup>	3
OCN 3330	Marine Microbial Ecology	3
OCN 3340	Chemical Oceanography	3
OCN 3350	Physical Oceanography	3
OCN 3360	Marine Geology	3
OCN 3380 & 3380L	Directed Research/Cooperative Education Experience and Directed Research Cooperative Education Laboratory	3
Select any Upper-Division OCN Electives Courses		9
<b>SUPPORT COURSES</b>		
CHE 1110 & 1110L	General Chemistry and General Chemistry Laboratory (5A) <sup>1</sup>	4
CHE 2210 & 2210L	General Chemistry II and General Chemistry II Laboratory	4
COM 1107	Programming in R	1
COM 2210 & 2210L	Engineering Computer Programming and Oceanography Computer Programming Laboratory	3
EGL 1100	English Composition (1A) <sup>1</sup>	3
EGL 1110	Speech Communication (1C) <sup>1</sup>	3
EGL 2220	Critical Thinking (1B) <sup>1</sup>	3
EGL 3301	Project Based Writing for Science (GWR)	3
GMA 3320	Ocean Environmental Management (Upper-Division 4) <sup>1</sup>	3
GOV 2200	American Government (4A) <sup>1</sup>	3
HIS 1100 or HIS 1101	Survey of American History to 1877: Precontact Through the Civil War (4B) Survey of American History from 1877: Civil War Through Civil Rights	3
MTH 1107	Elementary Statistics (2) <sup>1</sup>	3
MTH 2210	Calculus I	4
PE 1101	Swim Competency Exam <sup>2</sup>	0

PHY 1100 & 1100L	General Physics I and General Physics I Laboratory	4
PHY 1105 & 1105L	General Physics II and General Physics II Laboratory	4
<b>GENERAL EDUCATION (GE)</b>		
(See GE program requirements below)		12
<b>FREE ELECTIVES</b>		
Free Electives		13
<b>Total Units</b>		<b>120</b>

<sup>1</sup> Required in Major or Support; also satisfies General Education (GE) requirement.

<sup>2</sup> Swim assessments are required of all cadets during Orientation week. If PE 1101 is not passed with a grade CR, then enrollment in PE 1102 will be required.

## General Education (GE) Requirements

### General Education (GE) Requirements

- 43 units required, 31 of which are specified in Major and/or Support.
- If any of the remaining 12 Units is used to satisfy a Major or Support requirement, additional units of Free Electives may be needed to complete the total units required for the degree.
- See the complete GE course listing (<https://catalog.calpoly.edu/academic-standards-policies/general-requirements-bachelors-degree/#generaleducationtext>).
- A grade of C- or better is required in one course in each of the following GE Areas: 1A (English Composition), 1B (Critical Thinking), 1C (Oral Communication), and 2 (Mathematics and Quantitative Reasoning).

#### Lower-Division General Education

<b>Area 1</b>	<b>English Communication and Critical Thinking</b>	
1A	Written Communication (3 units in Support) <sup>1</sup>	0
1B	Critical Thinking (3 units in Support) <sup>1</sup>	0
1C	Oral Communication (3 units in Support) <sup>1</sup>	0
<b>Area 2</b>	<b>Mathematics and Quantitative Reasoning</b>	
2	Mathematics and Quantitative Reasoning (3 units in Support) <sup>1</sup>	0
<b>Area 3</b>	<b>Arts and Humanities</b>	
3A	Arts	3
3B	Humanities: Literature, Philosophy, Languages other than English	3
<b>Area 4</b>	<b>Social and Behavioral Sciences (Area 4 courses must come from at least two different course prefixes.)</b>	
4A	American Institutions (Title 5, Section 40404 Requirement) (3 units in Support) <sup>1</sup>	0
4B	Social and Behavioral Sciences (3 units in Support) <sup>1</sup>	0
<b>Area 5</b>	<b>Physical and Life Sciences</b>	
5A	Physical Sciences (3 units in Support) <sup>1</sup>	0
5B	Life Sciences (3 units in Support) <sup>1</sup>	0
5C	Laboratory (may be embedded in a 5A or 5B course) (1 units in Support) <sup>1</sup>	0
<b>Area 6</b>	<b>Ethnic Studies</b>	
6	Ethnic Studies	3

#### Upper-Division General Education

Upper-Division 2/5	Mathematics and Quantitative Reasoning or Physical and Life Sciences (3 units in Major) <sup>1</sup>	0
Upper-Division 3	Arts and Humanities	3
Upper-Division 4	Social and Behavioral Sciences (Area 4 courses must come from at least two different course prefixes.) (3 units in Support) <sup>1</sup>	0

<b>Total Units</b>		<b>12</b>
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<sup>1</sup> Required in Major or Support; also satisfies General Education (GE) requirement.