Bachelor of Science Degree in Marine Biology

A. Major Requirements *("C" Grade minimum, not C-)*

Biology Core Courses (20 credits):

- **BIOL 171 & 171L Introduction to Biology I & Lab, 3/1 credits [Fall, Summer]**
- **BIOL 172 & 172L Introduction to Biology II & Lab, 3/1 credits [Spring, Summer]**
- **BIOL 265 & 265L Ecology & Evolution Biology & Lab, 3/1 credits [Fall]**
- **BIOL 275 & 275L Cell & Molecular Biology & Lab, 3/1 credits [Spring, Summer]**
- **BIOL 375 & 375L Concepts of Genetics & Lab, 3/1 credits [Fall]**

Additional Required Courses (27 credits):

- **Science of the Sea (OCN 201) 3 credits [Fall, Spring]**
- **Marine Ecology and Evolution (BIOL 301 & 301L) 3/1 credits [Spring]**
- **Animal Ecology (ZOOL 439) 3 credits [Fall]**
- **Algal Diversity & Evolution (BOT 480, lecture/lab) 4 credits [Spring]**
- **Biology of Invertebrates (ZOOL 475/475L) 3/2 credits [Fall]**
- **Biochemistry (BIOL 402 or BIOC 441) 4 credits [Fall, Spring]**
- **Marine Microbiology (MICR 401 & 401L) 3/1 credits [Spring]**

Field Problems in Marine Biology (BIOL 403) (4 credits) [Summer]

- **Directed research can be substituted with approval**
  Note: For substituting BIOL 403 with (BIOL 499, BOT 399, CMB 499, MICR 499, ZOOL 499, or approved research 399 or 499) Research project proposal must be submitted and approved by the Biology Director BEFORE starting project and registering for credit. Refer to the guidelines for Directed Research.

Directed Research: minimum 2 credits [All terms]

- *(BIOL 499, BOT 399, CMB 499, MICR 499, ZOOL 499, or approved research 399 or 499) Note: Research project proposal must be submitted and approved by the Biology Director BEFORE starting project and registering for credit. Refer to the guidelines for Directed Research.*

Capstone Course: Advanced Topics in Marine Biology (BIOL 404) 3 credits [Spring]

Elective Courses – 6 credits from the courses below:

BIOL 331/331L (3/2)	Marine Mammal Biology/Lab [F/S]	**ZOOL 340/340L (2/2)**	Parasitology/Lab [S]
BOT 351/351L (3/1)	Inside Tropical Ecosystems/Lab [F]	**ZOOL 410 (3)**	Corals and Coral Reef [S]
BOT 456 (3)	Plant-Animal Interactions [F]	**ZOOL 420 (3)**	Developmental Biology [F]
BOT 470/470L (3/1)	Plant Physiology/Lab [S]	**ZOOL 430/430L (3/2)**	Animal Physiology/Lab [S]
MICR 485/485L (3/2)	Microbes and Their Environ./Lab [F]	**ZOOL 432 (3)**	Comparative Physiology [F]
MICR 490/490L (3/2)	Animal Virology/Lab [S]	**ZOOL 439L (2)**	Animal Ecology Lab [F]
OCN 310/310L (3/2)	Global Environ. Change/Lab [F]	**ZOOL 465/465L (3/1)**	General Ichthyology [F]
OCN 331 (3)	Living Resources of the Sea [F]	**ZOOL 466 (3)**	Fishery Science [S]
OCN 450 (3)	Aquaculture Production [S]	**ZOOL 467 (3)**	Ecology of Fishes
ZOOL 306/306L (2/1)	Ethology/Lab [S]	**ZOOL 470/470L (2/1)**	Limnology/Lab [S]
ZOOL 320/320L (3/2)	Vertebrate Zoology/Lab [F]	**ZOOL 480 (3)**	Animal Evolution [S]

B. Related Requirements *("C" Grade minimum, not C-)*

- **1 Year Calculus:** *MATH 215 and 216 or MATH 241 and 242*
- **1 Statistics course:** *ECON 321*
- **1 Year General Chemistry:** *CHEM 161/161L and 162/162L or CHEM 181A/181L*
- **1 Year Organic Chemistry:** *CHEM 272/272L and 273 (273L recommended*)
- **1 Year Physics:** *151/151L and 152/152L or 170/170L and 272/L*

C. Graduation Requirements

Note: All inquiries for General Education should consult an Arts and Sciences Advisor
Sign up at Hawaii Hall Rm. 108 or call (808) 956-8755

Overall GPA for the major MUST be at least 2.5

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