Are you interested in studying marine biology at the University of Washington (UW)? The UW currently offers a minor in marine biology. Students are encouraged to declare the marine biology minor during their freshmen or sophomore years and immediately join a community of researchers and students interested in marine organisms, ecosystems, and conservation. All marine biology minors participate in hands-on learning in tandem with their coursework through labs and fieldtrips, research with faculty, and other exciting opportunities. The minor combines courses from three UW departments and our marine station on San Juan Island:

**OCEANOGRAPHY** studies the marine environment and its interactions with the earth, the biosphere, and the atmosphere. The field examines the larger picture of the marine world, the global processes governing the distribution, abundances, and interactions of life, chemicals, geological formations, and motion in the seas.

**AQUATIC & FISHERY SCIENCES** studies aquatic environments, the distribution and abundance of marine and freshwater species, and the sustainable use of ocean resources. Students explore the biology of aquatic organisms, the ecology of aquatic communities and habitats, and the issues surrounding resource conservation and management.

**BIOLOGY** studies life from molecular, cellular, organismal, community, and global perspectives. The field examines the origins and evolution of organisms, as well as chemical and cellular processes, physiology, behavior, and relationships to the environment and to larger populations across ecosystems.

**FRIDAY HARBOR LABORATORIES** (FHL), UW’s world-renowned marine station located on San Juan Island, offers marine biology courses and apprenticeships in a range of topics. Students live on-site for spring, summer, and autumn quarter programs. Marine biology minors are strongly encouraged to incorporate a quarter of study at FHL into their academic plans.

### OVERVIEW
- 35 credits minimum
- Core coursework (19 credits)
- Approved electives (13 credits)
- Integrative experience (3 credits, may not be used for student's major requirements)
- Minimum of 2.0 cumulative GPA in all minor coursework
- Minimum 15 credits at the 300—400 level
- At least 18 credits may overlap with student's major requirements; 5 credits may overlap with other minor requirements

### DECLARING A MINOR IN MARINE BIOLOGY
Students can declare the minor at any time, even if they have fewer than 45 credits. Students can declare the minor by emailing the marine biology adviser: marbiol@uw.edu

### VISIT
marinebiology.uw.edu
### Core Coursework (19 credits)

- FISH/OCEAN/BIOL 250 Marine Biology (5; A, Su)
- OCEAN 210 Integrative Oceans (Physics 114 or 121 recommended) (4; A, W)
- BIOL 180 Introductory Biology (5; A, W, Sp, Su)
- Q SCI 381 Introduction to Probability and Statistics (5; A, W, Sp, Su)

### Approved Electives (13+ credits)

Students must take a least 13 credits from the following approved electives lists:

Additional marine biology courses may be petitioned to count.

#### 1 course from Aquatic & Fishery Sciences (FISH):

- 310 Biology of Shellfishes (5; Sp)
- 311 Biology of Fishes (3/5; W)
- 312 Fisheries Ecology (3/5; Sp)
- 323 Conservation and Management of Aquatic Resources (5; A)
- 324 Aquatic Animal Physiology and Reproduction (3/5; W)
- 370 Marine Evolutionary Biology (5; Sp)
- 423 Aquatic Invasion Ecology (4; A)
- 424 Biology and Culture of Aquatic Organisms (5; Sp-odd years)
- 437 Fisheries Oceanography (4; W)
- 441 Integrative Environmental Physiology (3/5; A)
- 464 Arctic Marine Vertebrate Ecology (4; W-odd years)
- 475 Marine Mammalogy (5; Sp)

#### 1 course from Oceanography (OCEAN):

- 330 Marine Biogeochemical Cycles (5; Sp)
- 409 Marine Pollution (3; A)
- 431 Special Topics in Biological Oceanography (3; Sp)
- 454 Hydrothermal Systems: An Interdisciplinary View (3; W)
- 455 Introduction to Ocean Modeling (3; A)
- 481 Puget Sound & Estuarine Oceanography (3; W, even years)
- 482 The Changing Arctic Ocean (3; Sp-even years)

#### 1 course from either Biology or Friday Harbor Labs:

- Biology (BIOL)
  - 311 Biology of Fishes (3/5; W)
  - 423 Marine Ecological Processes (3; W)
  - 433 Marine Ecology (5; Sp-odd yrs)
  - 434 Invertebrate Zoology (5; W, Su)

- Friday Harbor Labs (FHL)
  - 305 Biology of Fishes (5; A)
  - 375 Marine Mammals of the Salish Sea (5; Sp)
  - 430 Marine Zoology (5; Sp)
  - 432 Marine Invertebrate Zoology (9; Su)
  - 440 Marine Botany (5; Sp)
  - 446 Marine Botany: Diversity and Ecology (9; Su)
  - 492 Ecology & Conservation of Marine Birds & Mammals (9; Su)

### Integrative Experience (3+ credits)

Integrative experience credits cannot count toward students' majors. Students may take the Seattle campus seminar (477) or use research credits from FHL for their integrative experiences. Occasionally, students arrange to do independent projects, but they must work in a lab for at least two quarters beforehand.

- FISH/BIOL/OCEAN 477 Seminar in Marine Biology (3; W)
- FHL 450, 460, or 470 Research Experience in Marine Biology (FHL) (6; A, Sp)
- OCEAN 492 Research Apprenticeship in Marine Biology (FHL) (15; A)
- FISH/BIOL/OCEAN 479 independent Research in Marine Biology (3+; A, W, Sp, Su)

* List 18 credits you plan to use for this minor that will not overlap with your major

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