

MARINE BIOLOGY

Mission Statement

In keeping with the University mission, the Department of Biology is dedicated to creation, transmission, application and preservation of knowledge. Within this framework, the primary mission of the Department of Biology is to develop, support and conduct high quality educational and research programs in the life sciences with emphasis on marine biology, environmental biology, biotechnology and pre-professional programs.

Student Learning Outcomes

Marine Biology graduates should be able to do the following:

Content

- Recognize appropriate classification of marine plants, invertebrates, and vertebrates
- Compare anatomical, physiological, and ecological characteristics among groups of plants and animals
- Identify the physical, chemical, geological characteristics of the marine environment that are most important to life in the oceans and estuaries
- Identify methods, equipment, and analyses used in gathering data in marine biology

Critical Thinking

- Interpret data sets from studies in marine biology
- Evaluate the physical, chemical, geological characteristics of the marine environment and how they relate to functioning of life in the oceans and estuaries
- Solve biological word problems using data

Communication

- Use biological and marine environmental terminology correctly
- Critique, in written form, presentations on a topic in marine biology
- Summarize and present, in oral form, a topic in marine biology

Integrity/Values

- Recognize ethical challenges in using marine animals in research, and in conducting manipulative experiments with potential environmental consequences in the field
- Describe methods and procedures to avoid, or minimize, ethical concerns
- Critique studies for adherence to ethical values

Project Management

- Form teams to summarize a topic in marine biology
- Evaluate original literature on topic by individual team members
- Collaborate on organizing an outline of the most salient points on the topic
- Collaborate on creating a PowerPoint presentation on topic

Assessment of Student Learning Outcomes

Students in the Marine Biology Program will be assessed for Discipline Knowledge and Skills, and Critical Thinking by taking an exam developed by the Biology faculty covering the field of Marine Biology to be administered twice, once in a required freshman level course (test outcome not related to the grading of the course) and again in a required senior level Bioseminar course (test outcome not related to the grading of the course). Exam results from beginning/ending time points in the program will allow the Biology Department to determine the proficiency level of students coming out of high school at the start of the program, and the degree to which the students have progressed through the program. Students in the Marine Biology Program will be assessed for Integrity/Values and Communication by writing a summary critique of a presentation that includes Integrity/Values given in a required senior level Bioseminar course. Students in the Marine Biology Program will be assessed for Project Management by assigning students to teams that will be required to review the primary literature on an appropriate topic and create a presentation to be given as part of a required upper division Marine Biology course. Biology faculty will review the outcome of all assessment procedures to evaluate the current status of the program, and make suggestions for further improvement.

Employment Opportunities for Marine Biology Graduates

Federal agencies:

U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency
U.S. Park Service
National Oceanographic and Atmospheric Administration

Private industry:

Aquaculture facilities
Environmental consulting
Firms zoo and aquarium
Facilities conservation
Organizations

State agencies:

FL. Department of Environmental Protection
FL. Fish and Wildlife Conservation Commission

Find Out More about Marine Biology at UWF:

<http://uwf.edu/cse/departments/biology/>