

# Florida International University

## Academic Learning Compact



### Name of the undergraduate degree program

**Marine Biology**

### Mission Statement

The aim of the Marine Biology degree program is to provide a strong foundation in structural and developmental biology, physiology, organismal diversity, and ecology, within an evolutionary framework. Emphasis will be placed on marine organisms and ecosystems, taking advantage of ready access to the diverse marine environments of Florida and the Caribbean. This field of study will prepare students for further graduate and professional studies, as well as for employment in areas that require university-level training in marine biology and oceanography.

### Student Learning Outcomes

**FIU Marine Biology graduates should be able to do the following:**

#### Content/Discipline Knowledge

1. Describe how structural complexity in marine organisms is built up by combining simpler subunits into complex, adaptive combinations.
2. Explain how cells and organisms use integrated regulatory processes to maintain homeostasis.
3. Explain the principles of genetics that determine how species exist as populations that share a gene pool and how species evolve.
4. Explain the principles that govern the interaction of marine organisms and their environments.

#### Critical Thinking

1. Apply the scientific method in laboratory and field settings to solve problems in marine biology and oceanography.
2. Select and use appropriate analysis strategies including, when applicable, statistical analyses.
3. Demonstrate the ability to gather and evaluate information critically, including the use of library and online research resources.
4. Analyze and synthesize information to draw scientifically valid conclusions.

#### Oral and Written Communication

1. Use marine biological terms and concepts accurately and effectively in written form.
2. Communicate marine biological information in oral form employing appropriate presentation technologies.

### Direct and Indirect Measures of Student Learning Outcomes

#### Content/Discipline Knowledge

1. In the undergraduate capstone seminar, taken in the senior year, all Marine Biology students will take the ETS field examination in Biology.
2. As a supplement to the ETS field examination, all Marine Biology students will be required to take a special departmental examination in Marine Biology and Oceanography.

**Critical Thinking**

1. A standard scoring rubric will be used to assess students' written and oral presentations for critical thinking skills in the capstone seminar course.

**Oral and Written Communication**

1. A standard scoring rubric will be used to assess students' written and oral presentations for communication skills in the capstone seminar course.

