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 cell biology; molecular biology and genetics; organismal biology; and population biology, evolution, and ecology. 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. Explain the principles of cell biology.
2. Explain the principles of molecular biology and genetics.
3. Explain the principles of organismal biology.
4. Explain the principles of population biology, evolution, and ecology.
5. Apply the principles of biology to marine organisms and ecosystems.

Critical Thinking
1. Identify and summarize a problem or question in marine biology.
2. Analyze and examine ideas and research findings in marine biology.
3. Assess the influence of context in marine biology.
4. Construct and interpret information within marine biology.

Written and Oral Communication
1. Demonstrate effective written communication skills by explaining content and developing ideas in marine biology.
2. Demonstrate effective written communication skills by effectively organizing information in marine biology.
3. Demonstrate a command of the written language and use the conventions of language and documentation appropriately in biology.
4. Demonstrate effective oral communication skills through subject knowledge of marine biology and organization of ideas.
5. Demonstrate effective oral communication skills through adequate connection to an audience, efficient delivery, and appropriate use of technology.

Direct and Indirect Measures of Student Learning Outcomes

Content/Discipline Knowledge
1. All students will be assessed in the capstone course, BSC 4931 Senior Seminar, each semester.
2. Students will take the ETS Major Field Test in Biology that assesses four indicators of subject knowledge.
3. Graduates will score at or above the 50th percentile for each indicator (subscore) and for the total score.
4. Students will also take a departmental marine biology exit examination comprised of 30 questions.
5. Graduates will score at or above 70% on the departmental exit examination.

Critical Thinking

1. All students will be assessed in the capstone course, BSC 4931 Senior Seminar, each semester.
2. A three-member faculty panel will use a rubric describing 4 indicators of critical thinking (5 point rating scale; 20 point maximum) to assess the research paper required in the capstone course.
3. A mean score for each student will be obtained from the faculty ratings. Graduates will attain an average maximum score of 12 on the critical thinking rubric.

Written and Oral Communication

1. All students will be assessed in the capstone course, BSC 4931 Senior Seminar, each semester.
2. A three-member faculty panel will use a rubric describing 4 indicators of written communication skills (5 point rating scale; 20 point maximum) to assess the research paper required in the capstone course.
3. A three-member faculty panel will use a rubric describing 5 indicators of oral communication skills (5 point rating scale; 25 point maximum) to assess the oral presentation required in the capstone course.
4. Mean scores for each student will be obtained from the faculty ratings. Graduates will attain an average minimum score of 12 points on the written communication rubric and 15 points on the oral communication rubric.