



# Academic Learning Compact

## Biology

### Program Mission Statement

The department serves the citizens of Northeast Florida and beyond by providing the insight into modern Biology through our teaching, research, and service. We prepare students seeking careers in the Health Sciences, Environmental Biology, and all areas within the modern science of Biology. Undergraduate and graduate students conduct research under faculty guidance in laboratory and field environments. Non-science majors are introduced to science through examination of science as a mechanism of inquiry.

### Student Learning Outcomes

#### Graduates will be able

##### Content/Discipline-Specific Knowledge/Skills

- Demonstrate knowledge of the fundamental principles that underly biological sciences.
- Demonstrate technical laboratory and field skills appropriate for a practitioner in biological sciences.
- Integration of statistical and analytical mathematics into Biological inquiry.
- Demonstrate knowledge of the fundamental principles that underlay the biological sciences.
- Demonstrate knowledge and ability to perform laboratory skills associated with biological studies.
- Demonstrate the ability to understand the scientific method and design and implement scientific experiments.

##### Communication Skills

- Demonstrate proper scientific writing style including citation of others' work.
- Demonstrate appropriate methods of presenting biological data and information.
- Demonstrate the ability to orally present scientific information.
- Demonstrate the ability to effectively communicate scientific information and properly present scientific data in both written and oral formats.

##### Critical Thinking Skills

- Demonstrate the ability to interpret scientific data.
- Demonstrate the ability to design a scientific study and collect appropriate data.
- Demonstrate the ability to apply the quantitative and statistical mathematics of biological inquiry and critically evaluate scientific data.
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### Assessment Approaches

Students are continually assessed in introductory and core courses as to their skills in communication, mastery of content, quantitative and laboratory techniques, and critical thinking. Improvement is expected within each course and throughout the student's tenure in the department. Samples of these assessments are taken periodically for formative feedback and summative reporting. These samples include administration of an entrance exam in an introductory course and an exit exam in a senior capstone course. Student progress in developing technical laboratory skills is assessed in the final introductory course. Ongoing assessment for the following are performed in core lab courses: technical skills, data presentation and interpretation skills, quantitative skills, and study design skills. A final assessment of both written and oral communication skills is provided by faculty evaluation of student final papers and oral presentations in the capstone course.