

Biocore Program Goals

Biocore is an intercollege honors program. It is a challenging four-semester sequence that aims to provide a broad, in-depth, and integrated background in biology for students interested in any area of biological science. Biocore is not a major but fulfills some or all of the biology requirements for a variety of biological science majors, including many in the College of Agricultural and Life Sciences as well as those in the College of Letters and Science. The faculty and staff associated with the program care deeply about undergraduate learning and have established the following goals for our students.

As a result of participating in the Biocore program you should be able to:

1. Understand and comprehend foundation and emerging concepts in biology at the introductory to intermediate level
2. Use terminology accurately and effectively within appropriate conventions of the discipline.
3. Understand how we know what we know in biology through study of the nature of science, the primary scientific literature, and historical experiments.
4. Build a logical argument based on evidence, learn to think critically, be skeptical, look at evidence before believing, and understand that there is not always just one right answer to a question.
5. Develop novel sophisticated biological questions, formulate testable hypotheses, design and carry out experiments, make logical conclusions based on evidence.
6. Express ideas clearly and logically in oral and written form.
7. Know how to find and evaluate information.
8. Utilize quantitative approach to solve problems and make conclusions about data
9. Work as a member of a productive, collaborative research team
10. Draw on past experience, accumulated knowledge, and creativity to solve complex biological problems
11. Analyze a problem using a systems approach ("systems thinking") recognizing levels of biological organization, and emergent properties of the whole.
12. Develop interpersonal communication and leadership skills
13. Recognize and make judgments regarding ethical issues in research