



Student Learning Outcomes

College: Liberal Arts & Sciences

Department: Biology

Degree Program: Master of Science in Biology

- 1) Develop skills to conduct independent research capable of generating at least one peer reviewed publication, demonstrated through (holistic assessment will include assessment of):
 - a. Ability to survey scientific literature appropriate for the MS thesis research topic
 - b. Ability to generate hypotheses and propose appropriate experimental design
 - c. Ability to formulate expected results and conclusion
 - d. Ability to propose appropriate statistical analyses
 - e. Ability to propose future research questions
- 2) Demonstrate depth of knowledge about the specific sub-discipline related to the MS thesis research topic.
- 3) Demonstrate breadth knowledge about general biological principles related to:
 - a. Cellular biology and genetics
 - b. Physiology
 - c. Ecology and Environmental Biology
 - d. Evolution
- 4) Develop presentation and communication skills, as demonstrated by the ability to present a PowerPoint Presentation of the MS Thesis Research Topic that (holistic assessment will include assessment of):
 - a. Provides sufficient background information to justify the proposed project.
 - b. Clearly presents testable hypotheses
 - c. Clearly present the proposed experimental design and statistical analyses
 - d. Clearly outlines the expected results and possible pitfalls to the proposed research
 - e. Provides an overall clearly conceived and designed MS thesis research project.