Department of Biological Sciences Graduate-level (M.A., M.S.)
Student Learning Outcomes

Graduate program in Biological Sciences emphasizes advanced training and research in Biology and prepares students for careers in which an advanced research experience is required. The M.S. degree combines advanced coursework (30 units) in biology with a written thesis, which is based on original research and makes a new contribution to the field of biology. The program offers concentrations in Ecology, Evolution and Conservation as well as Molecular and Cellular Biology. Students may also pursue general training in biology by electing a "No Concentration" option. The M.A. degree program emphasizes advanced training in biology and the ability to apply the scientific process to biological problems. This non-thesis degree program combines advanced coursework (30 units) in Biology with a written project based on a current research problem in biology. The MA degree has two tracks: a Grant Proposal Track and an Applied Stem Cell Internship Track.

Graduate Student Learning Outcomes:

1. Students will demonstrate critical thinking through their ability to effectively search the scientific literature; read, understand and critically evaluate that literature; and draw appropriate conclusions from that literature.

2. Students will demonstrate acquisition of discipline-specific knowledge

3. Students will be able to design original experiments, or conduct observations, with appropriate controls that test alternative hypotheses.

4. Students will be able to collect experimental data using appropriate theoretical, laboratory or field techniques and/or instrumentation.

5. Students will be able to analyze and evaluate scientific data using appropriate statistical and other analytical tools (e.g., phylogenetic, bioinformatic, and/or mathematical software)

6. Students will be able to communicate science and particularly their own scientific discoveries through a variety of media, including oral communication (e.g., presentations, seminars), visual communication (e.g., graphs, figures, posters) and written communication (e.g., research papers, final thesis, grant proposal or project, as appropriate for their concentration).