

BIOLOGY

Learning Outcomes

Master of Science (M.S.)

1. **KNOW:** Demonstrate comprehensive knowledge essential for conducting research in the biological sciences. This includes at least one specific concentration area of biology, such as evolutionary biology or neuroscience, and proficiency in relevant supporting disciplines, such as statistics.
2. **APPLY/CREATE:** Apply a combination of experimental, quantitative, or computational methodologies to analyze biological data.
3. **COMMUNICATION:** Communicate research findings and their context within biological sciences literature, adhering to the professional standards for written and oral presentations.
4. **THINK:** Employ critical thinking skills to formulate hypotheses, evaluate experiments, and draw scientifically sound conclusions in addressing biological inquiries.
5. **PROFESSIONAL PRACTICE:** Uphold the highest ethical standards and best practices within the field of biology, demonstrating integrity and ethical conduct in all aspects of research, scholarship, and professional interactions.

Doctor of Philosophy (Ph.D.)

1. **KNOW:** Demonstrate comprehensive knowledge essential for conducting research in the biological sciences. This should include deep knowledge in at least one specific concentration area of biology, integrate other relevant areas of biology, and proficiency in relevant supporting disciplines, such as statistics.
2. **APPLY/CREATE:** Independently produce a novel insight or discovery by applying a combination of experimental, quantitative, or computational methodologies to generate and analyze biological data.
3. **COMMUNICATE:** Communicate research findings and their context within biological sciences literature, adhering to the professional standards for written and oral presentations.
4. **THINK:** Employ critical thinking skills to independently formulate hypotheses, design experiments, and draw scientifically sound conclusions in addressing biological inquiries.
5. **PROFESSIONAL PRACTICE:** Uphold the highest ethical standards and best practices within the field of biology, demonstrating integrity and ethical conduct in all aspects of research, scholarship, and professional interactions.