

**DEPARTMENT OF BIOLOGICAL SCIENCES
GRADUATE STUDENT LEARNING OUTCOMES**

M/s/p by Assessment Committee: May 15, 2008.

At the completion of the Masters of Science degree in Biology a graduate student will have acquired:

- The analytical, communication, problem solving, interpersonal, and technical skills that will provide a strong foundation for scientific productivity and progressive career development.
- An in-depth understanding of biological concepts that apply to the student's area of concentration.
- Experience with the peer scientific review process.

The following are specific objectives in the areas of attitudes, skills, and knowledge.

1. The student will acquire the following attitudes:
 - 1.1. Scientific research plays a crucial role in the development of policy and decision-making for the benefit of society.
 - 1.2. Scientific progress should be based on the unbiased collection, analysis, and interpretation of evidence.
 - 1.3. The biological sciences, by their nature, are interdisciplinary.
 - 1.4. Understanding science is a life-long learning process.
 - 1.5. Scientific ethical conduct and ethical implications of scientific issues in society are important.
2. Upon completion of the Master of Science degree, the student will be able to demonstrate that he/she is skilled at:
 - 2.1. Developing a coherent research prospectus.
 - 2.2. Carrying out a research project which includes mastery of appropriate techniques and the collection, organization and analysis of data.
 - 2.3. Synthesizing the results of their work in a master's thesis.
 - 2.4. Understanding and critically evaluating the scientific work of others and discussing new results in the context of what is already known and what should still be done.
 - 2.5. Communicating his/her work, as well as that of others, in a seminar and thesis defense.
 - 2.6. Developing teaching skills.
3. Upon completion of the Master of Science degree, the student will be able to demonstrate knowledge in:
 - 3.1. Scientific concepts, recent developments, and areas for future research efforts in his or her chosen field.

- 3.2. Traditional, modern, and emerging techniques and approaches used to conduct research in his or her chosen field of research.
- 3.3. Practical applications of his or her research field and potential career opportunities.