MISSION STATEMENT
The Biology Department offers programs leading to the Master of Science (M.S.) and Master of Arts (M.A.) degrees in biology. These flexible programs meet the needs of students wishing to develop their skills as research scientists or prepare for admission to professional school or doctoral programs. Both programs can prepare students to enter science-related careers or help them advance in education or corporate settings.

DESCRIPTION OF PROGRAMS
The graduate programs of the Biology Department are intended for graduates who desire training in specialized fields and who are planning a career in teaching, research or professional practice in these areas.

The M.S. program requires completion of an extensive research project and a written thesis and is typically a full-time program completed within two years. The M.A. program is course-based and more easily accommodates part time as well as full-time students. Non-matriculated students may also, with permission, enroll for isolated credit. Competitive Teaching Assistantships are available for students who qualify and there may be additional opportunities for financial support. Students apply to either the M.S. or the M.A. program depending on their interests. Due to the independent nature of the M.S. program, admission is more competitive. The number of M.S. students admitted each year is also limited by the availability of faculty mentors and may change annually. The graduate admissions committee will evaluate all applicants and decide whether the applicant has sufficient credentials to be admitted to the program. A personal interview with the applicant may be requested. The biology graduate program accepts applications all year; however students are generally advised to begin their studies in the fall semester because the required Research Techniques course is offered only in fall. Applicants wishing to be considered for teaching or research assistantships for the fall semester are advised to apply by March 1 as funds are limited and funding decisions are typically made by April 1.

LEARNING GOALS AND OBJECTIVES

**Goal 1:** Students will develop their identity as scientists through interactions with faculty mentors, with their colleagues and with non-scientists. They will become informed about prospective careers for life scientists in government, industry and academia as well as learning about the professional and ethical expectations for scientists.

**Objective 1.1:** Students will be familiar with the appropriate set of research, laboratory and/or field skills used by specialists in their subfields of choice.

**Goal 2:** Students will be able to understand and critique articles from the primary literature in biology. They will improve their skills in communicating about science, particularly about biology, including data presentation, writing, and oral communication appropriately targeted to various audiences.

**Objective 2.1:** Students will be able to locate, read, interpret, evaluate and discuss primary literature in Biology.

**Objective 2.2:** Students will be able to analyze, interpret and present data of various kinds.

**Objective 2.3:** Students will design, execute and communicate results of research. (For M.A. students, this will take the form of projects completed for courses. M.S. students will complete a traditional thesis that includes a public defense and a written report.)

**Goal 3:** Students will develop skills in experimental design, data collection and analysis.

**Objective 3.1:** Students will be able to analyze, interpret and present data of various kinds.

**Objective 3.2:** Students will design, execute and communicate results of research. (For M.A. students, this will take the form of projects completed for courses. M.S. students will complete a traditional thesis that includes a public defense and a written report.)

**Goal 4:** Students will have a deeper and more sophisticated understanding of one or more of the subfields of biology, and they will develop the appropriate set of research, laboratory and/or field skills necessary for specialization in the subfields.

**Objective 4.1:** Students will increase their knowledge and understanding of one or more of the subfields of biology through assignments in courses and research experiences in courses and/or independent study.

**Objective 4.2:** Students will be familiar with the appropriate set of research, laboratory and/or field skills used by specialists in their subfields of choice.

Degree candidates for the Master of Arts Degree in Biology will be required to complete 32 credit hours of graduate study in biology. A minimum of two semesters of Graduate Seminar BIO 552 must be taken, with a maximum of 4 credit hours counting toward the degree. Students must take Research Techniques BIO 550 and at least one each from two of the three broad categories of Evolution and Diversity, Cell Structure and Function, and Systemic Organization.

**Other specific requirements**

1. Successful completion of all requirements must be accomplished within a maximum of 5 years from the time of acceptance to the program.
2. All of the requirements described in this document represent minimum requirements, and it is understood that the Graduate Committee may require additional work to make up for deficiencies in the student’s background. Any exceptions to requirements must be approved by the graduate director.