BIOLOGY M.A.

Graduate Arts and Sciences
Dr. Edwin Li, Director

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 tuition scholarships and teaching assistantships may be available to M.S. students. Students apply to either the M.S. or the M.A. program depending on their interests. Due to the independent, research-intensive 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 available funds, 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. An interview, phone or on-site, with the applicant may be requested.

The biology graduate program accepts applications all year; however students are advised to begin their studies in the fall semester because the required Research Techniques (BIO 550) course is offered only in fall. Applicants wishing to be considered for teaching or research assistantships and tuition scholarships for the fall semester are advised to apply by March 1st.

Learning Goals and Objectives

Goal 1: Students will develop their identity as scientists by acquiring more knowledge and a deeper understanding of one or more of the subfields of biology, and through interactions with faculty mentors, with their colleagues, and with other science and non-science professionals.

Objective 1.1: Students will be 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 1.2: 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 develop skills in experimental design and the presentation of scientific information.

Objective 2.1: Students will be able to design an experiment, operate basic laboratory equipment, reduce and present data that includes the interpretation of statistical tests.

Objective 2.2: Students will be able to develop cogent written and oral presentations of scientific content.

Objective 2.3: Students will be able to locate, read, interpret, evaluate, and discuss primary literature in biology.

Course Requirements

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. The candidate for the M.A. Degree in Biology is required to graduate with a grade point average of at least 3.0.
2. Successful completion of all requirements must be accomplished within a maximum of 5 years from the time of acceptance to the program.
3. 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.