Master of Science in Biology: Concentration in Microbiology

A student interested in pursuing an advanced degree in any of these programs must meet the general requirements as outlined as well as any additional requirements specified by the major field of study.

For current advising information, including research and funding opportunities, consult the SF State Biology Department website at biology.sfsu.edu.

General Admission Requirements

An applicant must have a baccalaureate degree from an accredited institution and the equivalent major coursework for the program area to which application is made. To evaluate an applicant, the biology department requires the following:

1. transcripts of all undergraduate work;
2. Graduate Record Examination scores for the general test;
3. a statement of purpose;
4. two or more letters of recommendation, preferably from science faculty.

When the department receives this information, the completed file is forwarded to the faculty coordinator of the program area chosen by the applicant. The faculty in the program area evaluate the applicant’s file and recommend admission or denial based on the following criteria:

- Grade point average in the undergraduate major—minimum required GPA in science courses is 3.0
- Statement of purpose
- GRE scores
- Letters of recommendation

Denial of admission may be based on inadequacy in any of the above criteria, if an applicant’s interests are not represented by current faculty, or if faculty in the applicant’s area of interest are unable to support additional students.

Written English Proficiency Requirement

The University has a requirement for written English proficiency that is to be assessed at two levels.

Level One

The student must pass a proctored essay test administered by the department at the beginning of the first semester.

Level Two

Prior to filing the Advancement to Candidacy (ATC), the student must prepare a thesis prospectus for approval by the student’s thesis committee.

Admission to Program

Applicants must possess a baccalaureate degree in biological or physical sciences, with at least two laboratory courses in microbiology, one year of general physics, one year of general chemistry, and one year of organic chemistry. Acceptance to fully classified status will be determined by departmental evaluation.

The specific course requirements shall be determined by the student’s committee and are based on consideration such as goals, interests, and undergraduate preparation. For additional details, contact the Graduate Program Coordinator.

Course Requirements

The general requirements of all students are as follows:

- All courses listed on the Advancement to Candidacy (ATC) (or to satisfy conditional requirements) must be completed with a letter grade. The culminating experience courses, BIOL 895 and BIOL 898 are the exception and will be graded on a CR/NC basis.
- A minimum of 30 units of upper division and/or graduate credit (may include up to six units of experimental courses in biology).
- A minimum of 21 units of which six units may be from a graduate level paired course.
- A minimum of two department seminars requiring student presentations.
- After initiating a research program, a graduate student must enroll each semester in BIOL 897 - until the research is completed.
- Four units of BIOL 898 or three units of BIOL 895.
- An oral defense of the thesis or research project.

On-line course descriptions are available. Most upper division courses in biology are acceptable for the master’s in biology upon approval of the graduate advisor. Students are reminded to check the individual concentrations for additional requirements.

Concentration in Microbiology

The study of microbes and viruses is central to the fields of microbiology, pathogenesis, immunity, and biomedicine. Microbiology is also important in the study of the biochemical and genetic properties of cells and organisms. The M.S. in Microbiology is flexible. With a program advisor, students may plan a program of courses that will meet their individual goals and academic or professional interests, such as preparation for professional or doctoral programs or employment. Prior undergraduate preparation will also be considered.