

# Doctoral Program Degree Requirements

## PhD Required Courses:

The core graduate courses required for Microbiology Graduate students are:

- MIBO8120 Foundations of Microbiology (5 credits)
- MIBO8150 Seminar in Diversity of Microbial Research (1 credit, repeated 7x)
- MIBO8170 Seminar in Prokaryotic Diversity (1 credit, repeated 7x)
- 2 - Part Module Below (each module is 1 credit and meets for 1/3 of semester)
  1. MIBO8620 is an optional segment on proposal preparation aimed at guiding students through the preparation of an NSF GRFP proposal that also can be used to satisfy the prospectus requirement of the department.
  2. MIBO8640 is a statistics/quantitative analysis module that is required but can be alternatively met by taking a suitable statistics course in another department.
- MIBO9000 Doctoral Research (variable credits)

## Other Courses:

- Other courses taken to fulfill a requirement of 20 credit hours of graduate-only course work, including GRSC8000 (Rotations, max 6 CR) and other advanced courses in genetics, biochemistry, cell biology, etc. (decided on by the student in consultation with their advisor and committee).
- Students who earn extramural fellowships may be required to take an additional course in the ethical conduct of science, such as Genetics 8650 (Responsible Science)
- As noted below, GRSC7770 is a course requirement associated with teaching, and MIBO 9300 is taken during the process of writing the thesis/dissertation in the final semester.
- For doctoral students without Master of Sciences degrees, the program of study must contain at least 5 credit hours of courses in addition to MIBO8640, and MIBO8120 whose primary purpose is to provide scientific content. Courses related to policy (for example GRSC prefixes), seminar courses (for example MIBO8160, MIBO8170), or independent research (MIBO8900 or GRSC8000) do not fulfill this requirement. Eligible courses to fulfill this requirement include but are not limited to: MIBO6030, MIBO6090, MIBO6100, MIBO6120, MIBO6220, MIBO6220S, MIBO6300, MIBO6310, MIBO6320, MIBO6450, MIBO6500, MIBO6600L, MIBO6610, MIBO6620, MIBO6650, MIBO6680, MIBO6700, MIBO6710L, MIBO8110L, MIBO8200, MIBO8260, MIBO8270L, MIBO8520, MIBO8700, MIBO8960, and MIBO8980. Other courses can be used to fulfill this requirement with the permission of the dissertation advisor, doctoral committee and graduate coordinator.

**PhD Degree Requirements continued on next page**

## Doctoral Program Degree Requirements (continued)

### Teaching requirement:

- Teaching for two semesters in introductory, advanced, or graduate-level courses is required. Most students serve as teaching assistants during their third year. One semester of teaching may be waived if the student completes an approved professional development experience (expected to be equivalent in time/effort to a semester of teaching).
- A graduate teaching and career development course, GRSC7770, is required before the first semester of teaching. In certain instances, GRSC7770 may be taken concurrently with the first semester of teaching.

### Publication Requirement:

The publication of scholarly work is the capstone of your doctoral training.

- All Microbiology PhD students are required to publish a minimum of one peer-reviewed research manuscript as first or co-first author prior to defending their thesis. Manuscripts that are accepted for publication can satisfy this requirement.
- An appeal for an exception to this requirement may be initiated by majority vote of the student's advisory committee and forwarded to the Graduate Coordinator for review.

### Defense requirement:

- The final step in graduation is passing a thesis/dissertation defense: a public seminar followed by oral exam with committee (PhD aim for Year 5).
- **In the semester of graduation**, students must be enrolled in three credit hours of MIBO9300 (writing thesis/dissertation).