

University of Georgia Department of Microbiology

Timeline & Checklist for Ph.D.

Register for 18 total credits every Fall / Spring and 15 total credits in Summer

YEAR

FALL

SPRING

1

Integrated Life Sciences Courses:

- GRSC 8000 (6-14 cr) - PhD Lab Rotations
- GRSC 8010 (1 cr) - RRT (Rigor, Reproducibility, transparency)
- GRSC 8020 (2 cr) - Primary Literature Skills
- GRSC 8550 (1 cr) - Responsible Conduct of Research
- GRSC 7001 (1 cr) - GradFirst Seminar
- Choose a lab**- typically by the end of your first semester

- MIBO 8120 (5 cr) Foundations of Microbiology
- MIBO 8170 (1 cr) Student Seminar
- MIBO 8150 or **another journal club** (1 cr) Seminar in Diversity of Microbial Research
- (MIBO 6010 (1 cr) Critical Research in Microbiology, *Lab Meeting*)
- MIBO 9000 (variable cr) PhD Research
- GRSC 7770 (1-3 cr)* TA Policy and Pedagogy
- Create advisory committee** (by end of Summer)

2

- Fundamental Processes of Prokaryotic Biology (MIBO 8600, 2-3 cr)
- MIBO 8170 (1 cr)
- MIBO 8150 or another journal club (1 cr)
- MIBO 6010 (1 cr)
- MIBO 9000 (variable cr)
- NSF/GRFP Proposal due** ([usually mid-October](#))

- MIBO 8170 (1 cr)
- MIBO 8150 or another journal club (1 cr)
- [possible elective]
- MIBO 6010 (1 cr)
- MIBO 9000 as needed
- Comprehensive Exams/ Advancement to Candidacy:**
 - Written Exam** (due by mid-term)
 - Program of Study** (due at least 2 weeks before OralExam)
 - Oral Exam** (before end of Fall Year 3)

3+

Each Fall

- MIBO 8170 (1 cr)
- MIBO 8150 or another journal club (1 cr)
- MIBO 6010 (1 cr)
- [possible elective]
- MIBO 9000 as needed
- Oral Exam** (due before first day of finals, Fall of year 3)

Each Spring

- MIBO 8170 (1 cr)
- MIBO 8150 or another journal club (1 cr)
- MIBO 6010 (1 cr)
- [possible elective]
- MIBO 9000 as needed
- Annual committee meeting** (each year after achieving candidacy)

give two student seminars before defending (MIBO 8170)

complete 5 cr of graduate-level electives (none for grads with MS)

GRSC 7770 sem 1 sem 2

complete teaching requirement(s) (see reverse)*

publish at least one peer-reviewed research manuscript

Graduation

- Register for MIBO 9300 (Doctoral Dissertation, 3 cr) required during the semester you defend your thesis

University of Georgia Department of Microbiology

For more information check out the MIBO student handbook at mib.uga.edu/graduate-program-handbook

Required Courses

Doctoral Research (MIBO 9000, variable cr) - register for this every semester for 18 or 15 total credits in Fall/Spring or Summer, respectively.

Foundations of Microbiology (MIBO 8120, 5 cr) - molecular machines and behavior of macromolecules; physiology, metabolism, and regulation; microbial interactions and communities; emphasis on current research (2 hr 2x/week)

Fundamental Processes of Prokaryotic Cell Biology (MIBO 8600, 1-3 cr) - a 3-part modular course in key techniques:

- ▶ *Quantitative Biostatistics* - learn statistical tools appropriate for your data (Fall; 5 weeks, 3 hr/week); you may elect to take a STAT or BINF course in place of this module
- ▶ *Quantitative Protein Biochemistry and Macromolecule Analysis* - techniques for macromolecular characterization, interaction, and modeling (Fall; 5 weeks, 3 hr/week)
- ▶ *Introduction to Proposal Writing, Reviewing, and Publishing* - scientific writing practice, overview of publishing process, prepare a fellowship grant proposal (Fall; 5 weeks, 3 hr/week)

You are required to register for these courses every Fall and Spring:

Critical Research in Microbiology (MIBO 6010, 1 cr)
Lab meeting

Seminar in Prokaryotic Diversity (MIBO 8170, 1 cr)
Attend weekly and present two times; register for this at least 8x before graduation.

Seminar in Diversity of Microbial Research (1 cr, MIBO 8150 or your choice)

Choose a section of MIBO 8150 or another journal club-style option on campus. Every section discusses peer-reviewed literature of different topics. Register for this at least 8x before graduation.

Email the graduate coordinator of other departments for their journal club course code.

Professional Development

ELECTIVES

Fill knowledge gaps with 5 cr of graduate-level courses. These must be courses that are open only to graduate students and whose primary purpose is to provide *scientific content*.

Some common electives include:

- ▶ **BCMB 8114** (3 cr) biochemistry and molecular techniques
- ▶ **MIBO 8270** (3 cr) bioinformatics course on genome organization and analysis
- ▶ **MIBO 8980** (3 cr) prokaryotic genetics
- ▶ **MIBO 8960** (3 cr) genetics of fungi

See our Elective Course Reviews on the MIBO shared drive for more.

TEACHING

TA for 2 semesters **or** TA 1 semester + 1 semester of pre-approved professional development

- ▶ **GRSC 7770** (with Dr. Jennifer Walker) required concurrently or before serving as TA

Love to teach? Apply for an award or join the Future Faculty Fellows Program.

PUBLICATIONS

Establish a body of research (typically 2-3 manuscripts). A *minimum* of one peer-reviewed research manuscript must be accepted for publication before defending your thesis.

LEADERSHIP in MGSA, other organizations

The Microbiology Graduate Student Association (MGSA) advocates for and supports graduate students. Gain leadership and organizational skills as an officer of MGSA or another group on campus.

CAREER FOCUS

UGA has opportunities for many different career paths. Some resources: your advisor, committee, Experiential Professional Development (xPD).

Not sure what you want to do? Elective course **GENE 8200** guides you to research and learn from your peers about careers for PhDs in the life sciences.