

**Department of Microbiology & Immunology
Timeline of Key Steps in Typical Progression to Ph.D. Degree**

Before Joining Department (in either BBSP or M.D./Ph.D. program)

Professional development activities in BBSP First Year Groups
Classroom courses (typically two per semester)
Three lab rotations
Choose research advisor and join department

First Year in Department (2nd year Ph.D. students, 1st year M.D./Ph.D.)

Begin thesis research
Finish classroom course requirements (six total, including two seminar/tutorial)
Act as TA for one semester
Fall - Begin attending at least 2/3 of department and student seminars each semester. Take Mcro795 proposal writing & logic class (required)
Spring - Think about prelim topics, submit draft Specific Aims page by April 1, and complete written preliminary exam describing original research proposal by June 1. Revise if needed.

Second Year in Department (3rd year Ph.D. students, 2nd year M.D./Ph.D.)

Continue thesis research and required seminar attendance
Begin annual presentations in student seminar series
Act as TA for one semester to complete teaching requirement
Choose thesis committee & chair by first day of Fall semester classes
Fall - Inform the Student Services Specialist and the Director of Graduate Studies of your exam date and Oral Exam Committee members by October 1st. Finish oral preliminary exam and project approval by December 31. At least one week prior to meeting, provide thesis committee with a written document of two pages or less describing hypotheses, Specific Aims, and a brief overview of research design, including which parts of research design have been completed.

≥ Third Year in Department (≥ 4th year Ph.D. students, ≥ 3rd year M.D./Ph.D.)

Continue thesis research and required seminar attendance. Meet at least annually with thesis committee. Provide committee with a progress report at least one week prior to each meeting. The report consists of a Specific Aims page followed by a description of progress to date organized by Aim. The progress report should include any changes in Aims, a summary of key results, and plans for future experiments. The report should also communicate the student's vision for how results could be organized into publications, and the current status of progress toward publications. In fifth year, take refresher training in the Responsible Conduct of Research.

Degree Completion - typically Fourth or Fifth Year in Department (5th or 6th year Ph.D. students, 4th or 5th year M.D./Ph.D. students)

Our *expectation* is that all Ph.D. students will conduct sufficient research to result in at least two first-author publications describing original results in high quality, peer-reviewed journals. As a minimum, we *require* that (i) a student must make meaningful contributions to and be an author on at least two manuscripts intended for publication in respected, high-quality professional journals or books, (ii) at least one of the two manuscripts must be accepted for publication, and (iii) prior to the private Ph.D. defense, a student must have peer reviews returned for at least one first (or co-first) author primary research manuscript. When ready to graduate, submit thesis to committee at least two weeks prior to defense. Defend thesis in private meeting with committee. Give public seminar of thesis research at least two weeks after private defense. Students typically complete their Ph.D. in year five or six.