

Frequently Asked Questions about the Comprehensive Exam for Students Pursuing a Master's degree in Microbiology and Immunology

The Microbiology and Immunology Department offers a Master's degree program for two groups of students:

- 1) The Special Master's Program is for research technicians in the department who pursue a M.S. degree as a part-time student while continuing to work as a full-time employee.
- 2) Students who originally entered the Ph.D. program and who have decided that they do not wish to complete the requirements for a Ph.D. may choose to enter the Master's track and complete the requirements for a M.S. degree.

Departmental Master's Degree requirements are the same for the two groups of students. One of the requirements is that students must take and pass a comprehensive examination that focuses primarily on the student's specialized area of interest.

For former Ph.D. students (group 2 above), Passing either the written or oral Ph.D. preliminary examination can be substituted for the M.S. preliminary examination described in this document. However, one preliminary examination cannot be counted toward two degrees. Therefore, a student who switches degree intent from Ph.D. to M.S. should take the M.S. specific preliminary examination if he or she wishes to preserve the option to return to the Ph.D. track.

When should students take this exam?

Students usually take the exam after completing all or almost all of their coursework. In most cases, students take the exam after about two years in the program. The student may choose the specific dates when he or she wants to take the exam, in consultation with the advisor.

What is the scope of the exam?

The exam questions are drawn from areas covered by the course work the student has taken and from his or her area of research. Students may choose whether they prefer to take an open book exam or a closed book exam; no student has ever chosen a closed book exam.

Who writes the questions? What type of questions and how many?

The members of the student's committee write the questions for the exam. The student's research advisor is responsible for soliciting questions from the members of the thesis committee and for assembling the exam. Questions should be designed to take two to three hours to answer; the entire exam period is usually **48 hours**.

The exam questions should probe the student's understanding of experimental design, the interpretation of the literature and of important concepts in his or her field of research, and should not just involve recall of facts. If a question involves analysis of one or more research papers, then the student should be given copies of the papers to read in advance, either as hard copies or computer files.

Generally, each committee member writes at least two questions, at least one of which the student must answer. In assembling the exam, the advisor has considerable flexibility. For example, the number of questions the student must answer may vary, depending on the advisor's assessment of the level of difficulty of the questions. If four committee members each submit two "big" questions with multiple parts that will each probably take several hours to answer, then it would be reasonable to require that the student answer just four questions, one from each committee member. If some or all of the questions are smaller in scope, then the student might be instructed to answer five of the eight questions, including at least one from each committee member.

By giving students 48 hours for an exam consisting of four or five questions, the goal is to provide sufficient time to comfortably complete the exam. If the advisor thinks that 48 hours is not enough time for the student to complete the particular exam that has been assembled for him or her, the advisor may extend the time limit. For example, a student might typically start the exam at 9 a.m. on day one, and turn it in by 9 a.m. on day three. However, if the questions are exceptionally long or complex, the advisor might extend to deadline until 5 p.m. on day three.

Who actually administers the exam?

The advisor gives the student the exam questions at the agreed-upon time and collects the completed exam. The student can go wherever he or she wants to work on the exam. If for some reason the advisor cannot administer the exam (unexpected out-of-town trip, etc.), he or she can arrange for the Student Services Specialist or another faculty member to do it.

What is the format for the answers?

If at all possible, the answers should not be hand-written. Ideally, the student will turn in the answers electronically, with a separate computer file (with an easily interpretable filename) for each question; this will facilitate distribution of the answers to committee members for grading.

Who grades the exam?

Each committee member should grade the answer(s) to his or her question(s), using a scale of H, P+, P, P-, L, or F. If everyone is satisfied with the answers to their questions, then there is no need for the committee to meet to discuss the exam. If there is any concern about one or more answers, then everyone on the committee should look at the entire exam and subsequently meet to determine the outcome.

In the past, there have been a few times when a student generally did well on the exam, but did a poor job with one or two questions. In those cases, the committee has decided to have the student re-do the deficient answers until the committee was

satisfied, and only then report that the student has passed the exam. However, depending on the quality of the student's answers and the number of questions that were not answered satisfactorily, the committee may decide upon a grade of Fail.

A student who fails the exam can make a second attempt to pass it, after waiting at least three months (Graduate School rules). If the first exam revealed a particular area of weakness, the student might be advised to take a course or do directed reading on the topic before taking the exam a second time. In such a case, when the student wants to try a second time, the advisor will assemble a new exam, soliciting questions from the committee members as before.

How is the outcome reported?

The student's advisor is responsible for telling the student of the committee's decision and should also tell the Student Services Specialist whether or not the student has passed the exam. The Student Services Specialist will prepare the appropriate form for reporting the outcome to the Graduate School.

If anyone (student, advisor, committee member) has questions about any part of the preliminary examination process for M.S. students, they should contact Bob Bourret, Director of Graduate Studies (6108 Marsico Hall; 919-9666-2679; bourret@med.unc.edu) or Miriam Braunstein, Special M.S. Student Advisor (6211 Marsico Hall; 919-966-5051; braunste@med.unc.edu).