

PRELIMINARY EXAMINATIONS

A written and oral Preliminary Examination, administered by the Dissertation Committee, must be completed before the beginning of the 5th semester (preferably before the end of the 4th semester). The Preliminary Examination will test your ability to assimilate knowledge and to evaluate primary literature in your area of specialization. Ordinarily, the written and oral Preliminary Examination will be completed within a period of two weeks.

WRITTEN PRELIMINARY EXAMINATION

The written portion of the Preliminary Examination will include questions from all Dissertation Committee members, with a maximum of 24 hours allotted to questions from each committee member. The style of the written examination (take-home, open book, closed book, etc.) will be determined by the Dissertation Committee. Prior to the written Preliminary Examination, the Dissertation Committee will provide you with a reading list or description of topics that will be the subject of the written Preliminary Examination. Numbers of questions, specific topics, and the kinds of questions will be decided by the Dissertation Committee. The Graduate Studies Committee will review and approve the written Preliminary Examination, determining that it meets the general standards of the School for rigor and content. In order to complete this review, the questions must be submitted to the Graduate Studies Committee at least one week before the student is scheduled to take the written Preliminary Examination.

ORAL PRELIMINARY EXAMINATION

The oral portion of the Preliminary Examination will consist of a meeting between you and your Dissertation Committee after you have completed the written Preliminary Examination. At this meeting your knowledge of the areas covered by the written Preliminary Examination will be discussed, and your ability to discuss scientific issues will be further evaluated, if necessary, by the Dissertation Committee. At the oral Preliminary Examination the Dissertation Committee will take a vote decide if you pass to fail the Preliminary Examination. Passing or failing will be for the Preliminary Examination as a whole (i.e., written and oral parts combined). The decision of the Dissertation Committee will be by majority vote. Ordinarily, upon failing the Preliminary Examination, you can retake the written and oral Preliminary Examination only once.

PROPOSAL DEFENSE

After passing the Preliminary Examination, you will submit to the Dissertation Committee a research proposal on the your dissertation topic. The Proposal Defense will evaluate your ability to propose and to defend the research project that will be the basis of your dissertation. The Proposal Defense will include placing the proposed research into the context of the literature in the field; describing hypotheses that will be tested; and describing appropriate methods, data analysis, and

MCB CORE

Advanced Cell Biology (BSC 415),
Molecular Biology of Gene (BSC 419),
and Seminar in Cellular and Molecular
Biology (BSC 420.37).

MCB ELECTIVE COURSES (MINIMUM OF THREE COURSES)

The elective courses may be selected but not limited to, the following representative specialty area courses. Student may take any courses they want and 3 courses may come from one group or from any number of groups which will be decided by the student in consultation with his/her advisor and /or student dissertation committee.

A) Microbiology and Immunology

Microbial Pathogens - BSC 361 (4 hr)
Immunology - BSC 367 (4 hr)
Virology- BSC 368 (4hr)
Parasitology -BSC 383 (4 hr)
Industrial Microbiology- BSC 389.26 (3 hr)
Microbial Physiology- BSC 466 (3 hr)
Microbial Genetics- BSC 467 (4 hr)
Advanced Immunology - BSC 450.40 (3 hr)

B) Genetics and Molecular Biology

Human Genetics - BSC 329 (3 hr)
Molecular Biology- BSC 350 (3 hr)
Biotechnology Lab I- BSC 353 (3 hr)
Biotechnology Lab II- BSC 354 (3 hr)
Genomics and Bioinformatics- BSC 355 (3 hr)

C) Cell Biology and Physiology

Introduction to Neurobiology - BSC 343 (3 hr)
Introduction to Endocrinology - BSC 345 (3 hr)
Confocal Microscopy in Biology - BSC 411 (2 hr)
Biological Microscopy- BSC 418 (4 hr)
Advanced Cell Biology II (3hr)

D) Biochemistry

General Biochemistry I- CHEM 342 (3hr)

interpretation that will test those hypotheses. The Proposal Defense will be administered by the Dissertation Committee. It can be completed only after the Preliminary Examination is passed, and must be completed before the start of the 7th semester. The precise form of the proposal will be determined by the Dissertation Committee; it should be similar in scope, content, focus, and rigor to that of a proposal for one of the major granting agencies.

DISSERTATION DEFENSE

Before you schedule your oral Dissertation Defense examination, you must have your dissertation draft authorized to be defended by (1) your Dissertation Committee and (2) the University Thesis Consultant. After the University Thesis Consultant has provided you with a copy of the Right to Defend form, prepare two copies of the final form of the thesis and deposit both copies in the Biology Office one week (seven days) prior to the date you intend to take your Oral Dissertation Defense Examination. The examination must be scheduled on or before the date that the Graduate School has specified as the date for deposit of dissertations.

Biochemistry Lab CHEM 343 (2 hr)
General Biochemistry II- CHEM 344 (3hr)
Topics in Biochemistry- CHEM 440 (1-3 hr)
Proteins- CHEM 442 (3 hr)
Lipids- CHEM 444 (3 hr)

E) Ecology

Ecological Physiology of Animal- BSC 325,
Phycology-BSC 330,
Evolution- BSC 470,
Evolutionary Population Genetics-BSC 471