

## **GUIDELINES FOR GRADUATE STUDENTS IN THE GENETICS AND DEVELOPMENTAL BIOLOGY PROGRAM**

### **Admission requirements**

The student must possess a baccalaureate degree from an accredited college or university, must have a grade point average of at least 2.75 (on a 4.0 scale), and meet all criteria established by the program. A student may be admitted as provisional if there are any deficiencies. Basic courses, if not taken as an undergraduate, will have to be taken, which include Calculus (MATH 155, 156), Physics (PHYS 101, 102), General Chemistry (CHEM 115, 116), Organic Chemistry (CHEM 233, 234, 235, 236), General Biology (BIOL 101, 102, 103, 104), Cell Biology (BIOL 219) and Genetics (GEN 371).

### **Faculty advisor, graduate advisory committee, and plan of study**

By mutual consent of the student and faculty member concerned, a member of the faculty of Genetics and Developmental Biology Program will serve as the student's major advisor. The faculty advisor in consultation with the graduate student will propose an advisory committee of at least three faculty members for masters and five for Ph.D. track. Committee members should represent diverse backgrounds, and a majority of the graduate advisory committee must be from the faculty of Genetics and Developmental Biology. A conference shall be arranged between the advisory committee and the student within the first year of graduate study. This session shall explore the student's competence and interests and plan future courses and direction of study. For M.S. or Ph.D. track, a plan of study (blue or green papers, respectively) should be completed by the student and agreed upon by the advisory committee. The plan of study will list the advisor, advisory committee, completed and proposed course work, and research area, and must be submitted to the Director of the Division of Plant & Soil Sciences for approval.

### **Courses**

For a Masters degree, at least 32 credit hours are required. These include a minimum of 26 credit hours in classes (including seminar), distributed as outlined below; the remainder may be research credits. At the Ph.D. level, a minimum of 34 credit hours of classes (including seminar) are required.

#### Required graduate courses

Statistics (STAT 511, 512) (total 6 credit hours)

General Biochemistry (AGBI 610, 612) (total 8 credit hours)

Basic Concepts of Modern Genetics (GEN 521) (3 credit hours)

Seminar (GEN 796) is required each semester except the student's final semester (provides minimum 3 x 1 credit hour for M.S. students, or 5 x 1 credit hour for Ph.D. students)

(Seminar in another discipline may occasionally be substituted if approved by Chair of Program.)

*Course requirements continued on next page*

## **Courses (continued)**

Students must also successfully complete at least two of the following courses

Human Genetics (GEN 525) (3 credit hours)

Population Genetics (GEN 535) (3 credit hours)

Cytogenetics (GEN 724) (4 credit hours)

Advanced Biochemical Genetics (GEN 726) (3 credit hours)

Genetic Mechanisms of Evolution (GEN 727) (3 credit hours)

Animal Biotechnology (AGBI 514) (4 credit hours)

Ph.D. students are required to take two additional courses (minimum of 6 credit hours). These additional courses will be determined by consultation among the student, advisor, and advisory committee.

## **Modification of program requirements**

Students who already have completed a course (or courses) comparable to one (or more) on the required graduate courses list may, with the consent of their advisor, petition the Executive Committee of the Genetics & Developmental Biology Program to substitute the previous course for the required course.

## **Additional program requirements**

### For Masters of Science

The semester that the student plans on graduating, an Application for Graduation and Diploma Form (obtained from the Associate Dean's Office) needs to be filled out and submitted to the Associate Dean's Office at the time of registration or within two weeks thereafter. The required graduation fee must be paid at the Bursar's office. After research work is completed, the student should provide a typewritten copy of his/her thesis to committee members one month before the final oral examination. The final exam should be scheduled no later than three weeks prior to the end of the semester. A Shuttle Sheet Request must be filed at the office of the Director of Plant & Soil Sciences at least two weeks before the exam. The major advisor should receive a Report of Results form prior to the defense date. After the thesis defense, the Report of Results form should be signed and submitted to the Associate Dean's Office. After thesis defense, the thesis is filed electronically and a signed Approval of Thesis/Dissertation form must be turned in to the library's electronic thesis and dissertation office. More details are available on the blue forms for Check List for Master's Candidates. Instructions to Graduate Advisors and Department Chairs for completion of degree are available in the Graduate Student Records office (1004 Ag Science).

### For Ph.D.

The *preliminary or comprehensive examination* is given usually after the second year of study when the student has essentially completed formal course requirements, and in most circumstances no later than the third year. The purpose of the exam is for the advisory committee to assess the competence of the student. It will consist of a written and an oral exam administered within a month of each other, with the oral exam occurring after evaluation of the written exam.

The semester that the student plans on graduating, an Application for Graduation and Diploma Form (obtained from the Associate Dean's Office) needs to be filled out and submitted

*Additional program requirements continued, next page*

### **Additional program requirements, Ph.D. (continued)**

to the Associate Dean's Office at the time of registration or within two weeks thereafter. The required graduation fee must be paid at the Bursar's office. Upon completion of research work, the student should provide a typewritten copy of his/her dissertation to committee members one month before the final defense. The dissertation defense should be scheduled no later than three weeks prior to the end of the semester. A yellow Shuttle Sheet Request form must be filed at the office of the Director of Plant & Soil Sciences at least three weeks before the exam. The major advisor should receive a Report of Results form prior to the defense date. After the final defense, that form should be signed and submitted to the Associate Dean's Office. The dissertation must be filed electronically, and a signed Approval of Thesis/Dissertation form must be turned in to the library's electronic thesis and dissertation office. More details are available on the green forms for Check List for Ph.D. Candidates. Instructions to Graduate Advisors and Department Chairs on pink paper are available in the Graduate Student Records Office (1004 Ag Science).

### **Checklist for graduate students in the Program**

Masters level, minimum 26 credit hours classes, minimum total of 32 credit hours

- Courses
- Thesis committee
- Plan of study - develop and submit during first year
- Final defense

Doctoral level, minimum 34 credit hours of classes

- Courses
- Advisory/dissertation committee
- Develop a program of study and submit during first year
- Preliminary written and oral exams after formal courses, usually after second year
- Final defense

*Revisions approved by the faculty of Genetics & Developmental Biology, 5/5/05*