

## **GENERAL REQUIREMENTS**

### **GRADUATE DEGREE PROGRAMS IN BIOLOGICAL SCIENCES AT ISU**

This document describes the general requirements for graduate level degrees in the Department of Biological Sciences at ISU. Graduate students are expected to meet these requirements, as well as those outlined in the Graduate Catalog, as they form the basis of graduate study in the Department and at ISU. The exception is that some specialized degree programs (Master of Natural Science, Environmental Science and Management, and Clinical Lab Sciences) exempt students from some of the requirements presented in this document. The department offers M.S., M.N.S., D.A., and Ph.D. degrees. Each of these degree programs has additional requirements, which are presented in supplementary guidelines.

The student and his/her committee must petition in writing the Chair of the Graduate Programs Committee in order to deviate from any of the requirements. Students are also strongly advised to refer to the Graduate Catalog for information on admission, classification status, coursework, transfer of credit, residency, time limits, advisors and examining committees, program of study and candidacy, examinations, petitions, withdrawals, dismissals, appeals, tuition and fees, and financial support.

### **ADMISSION REQUIREMENTS**

Admission into the program requires:

1. **Acceptance by a graduate faculty member with whom the applicant has corresponded.**
2. At least a 3.0 grade point average (GPA) for the last two years of the most recent degree program.
3. Scores in the 35th percentile or higher on the verbal and quantitative sections of a Graduate Record Exam (GRE) that is no more than 5 years old.
4. For doctoral degree applicants, a score for the GRE subject area test in Biology or in Biochemistry/Cell/Molecular Biology that reflects the applicant's current knowledge. This will be used for diagnostic purposes, to determine the student's breadth and depth of knowledge of biology.
5. For applicants who hold only a Bachelor's degree in biological sciences or a closely related discipline, entrance into the Ph.D. program requires a minimum GPA of 3.0 for all undergraduate work and scores in the 50<sup>th</sup> percentile or higher on the verbal and quantitative sections of the GRE. The application must be approved by a majority vote of the Graduate Programs Committee prior to formal acceptance by the Department.
6. No student in the Department's Master's program will be permitted to advance to the PhD program without approval of the Graduate Programs Committee. Application for advancement must include (1) a letter from the student that provides a rationale for the status change and (2) a letter of support from the major professor.

Applicants who do not meet the minimum GPA and/or general GRE requirements may be admitted on Conditional status. The conditions of acceptance will be specified on the applicant's Approval for Admission to Graduate School form. After meeting those conditions, a student on Conditional status must petition the Graduate Programs Committee for transfer to Classified status. Conditional students who have not been approved for Classified status by the end of their second year will be dismissed.

## PREREQUISITES

The following courses are prerequisite for Graduate degrees in Biological Sciences at ISU. Any student who has not met these requirements through previous course work must take these courses, or complete equivalent work approved by the Graduate Programs Committee, as part of his/her graduate program. Credits earned in undergraduate courses do not count toward the graduate degree, however, they must appear on the student's Program of Study. These classes must be taken for letter grades and the grades earned must be 'C' or better. If a student wishes to make any substitutions for these courses, he/she must submit a written request and explanation to the Chair of the Graduate Programs Committee for consideration.

One semester of calculus

One year of inorganic chemistry

One semester of organic chemistry

One semester of physics

Six additional credits of coursework in mathematics, chemistry, or physics (at a level equal to or above the courses listed above)

One semester of analytical chemistry and/or quantitative analysis (for microbiology students only)

## STATISTICS REQUIREMENT

All MS, DA, and PhD students are required to demonstrate competence with statistics equivalent to that gained in a one semester inferential statistics course. This is not a prerequisite for admission to the program.

## RESIDENCY REQUIREMENT

See the General Information section at the beginning of the Graduate Catalog for information about the residency requirement for Ph.D. candidates.

## TRANSFER OF CREDIT

See the General Information section at the beginning of the Graduate Catalog for information about transferring credits into graduate programs.

## ADVISOR & ADVISORY COMMITTEE

**To be accepted into a graduate program a student must be accepted by a faculty member who has agreed to serve as the student's advisor.** To serve as the sole advisor a faculty member must be in a tenure track position and a member of the Graduate Faculty. Other faculty (e.g., Research Faculty) may serve as co-advisors. On a case-by-case basis, non-tenure track faculty may be approved by a vote of the faculty to serve as advisor for individual students; a faculty member who is not a member of the Graduate Faculty must also be approved by the Graduate School.

Graduate programs in the Department of Biological Sciences are directed by advisory committees selected by the student, in consultation with their advisor. **Each student should form and meet with their Advisory Committee no later than the first week in December if they begin in the fall semester, and no later than the first week in April if they begin in the**

**spring semester.** The committee size and composition depends on the degree, however in all cases it should have an odd number of voting members and the majority of the committee must consist of faculty in the Department of Biological Sciences. Upon submission of the Final Program of Study, or earlier upon request by the student, the Graduate School will appoint a Graduate Faculty Representative to serve on the committee.

The committee shall serve as an advisory body for the student and will (1) assess the student's academic needs and help the student establish a plan of study, (2) help the student plan his/her thesis or dissertation, and internships (as applicable), (3) evaluate the dissertation, thesis, and internships (as applicable), (4) administer the comprehensive examination and final defense (as applicable).

## PERFORMANCE REQUIREMENTS

### **Level of performance**

Graduate students are expected to apply themselves intensively to the study of materials covered by the courses in which they are enrolled, and to their thesis or dissertation research. Grades below "B-" carry no graduate credit and may not be counted toward the graduate degree. A continuing 3.0 GPA is the minimum standard expected of any student; should the GPA at any time fall below 3.0, the student will be reclassified as a conditional graduate student and will be ineligible to take comprehensive or final examinations that would be part of his/her program. Regular status may be regained only by increasing the GPA above 3.0 and requesting a change of status.

### **Advancement to candidacy**

Master's students are considered candidates for the degree upon enrollment at ISU. Doctoral students are considered candidates by the Department of Biological Sciences after the successful presentation/defense of their research proposal.

### **Thesis/dissertation**

Students must present departmental seminars of their proposed thesis or dissertation research. If a student makes a substantial change in the topic of their project it is expected they will prepare and present a new proposal. Substantive issues should be addressed in a revised research plan, which incorporates committee feedback, before proceeding. The form and style of the thesis/dissertation should comply with that prescribed by the national or international-level journal in which the student intends to publish their research. It must also meet the requirements of "Instructions for Preparing Theses, Dissertations, DA Papers, and Professional Projects" which is available from the Office of Graduate Studies. Within the framework of those constraints, however, the format of the thesis or dissertation may vary. For example, some students prepare the thesis/dissertation as one comprehensive unit, whereas others prepare a series of chapters (ready for submission for publication) with a preface that explains the overall format. The specific format and content must be approved by the student's major professor and advisory committee.

Following the final examination and approval of the thesis/dissertation, four copies of the complete thesis/dissertation (two for the library, one each for the advisor and department), together with an Abstract and a receipt from the Business Office indicating payment of all fees must be delivered to the Dean of Graduate Studies.

### **Other Expectations**

All graduate students are expected to:

- attend Departmental seminars,
- meet with their advisory committee each semester unless the committee indicates a meeting is not necessary,