

Graduate Student Guidelines

Approved by Graduate Studies Committee
Department of Biological Sciences
20 September 2004

1. INTRODUCTION

The objective of the graduate handbook is to present the policies related to earning a Master of Science (M.S.) degree in Biology from the Department of Biological Sciences at Fort Hays State University. Reading, understanding, and knowing the policies of this handbook is the responsibility of all graduate students. Graduate students should also read the section on the Graduate School in the University Catalog and in the Class Schedule printed each semester.

Meeting deadlines for completion of the graduate degree program is the responsibility of the student. Carefully note sections of this handbook that include deadlines, checklists, and required forms. Students should visit the Graduate School to obtain deadlines and to verify progress in their program.

As a graduate student, you are held to higher standards than those applied to undergraduate students. In essence, graduate study is a transition from being a student to becoming a professional biologist, and, as such, you will be held to professional standards in your conduct and your work.

- A. These policies are to serve as a reference for graduate students and faculty members.
- B. Major advisors may have other requirements of which students need to be aware.
- C. Graduate committees are given broad latitude in adding requirements to those listed in these guidelines.
- D. It is the student's responsibility to be aware of and to follow the requirements and procedures of the Graduate School.

2. ADMISSION

Application for admission to the Graduate School and application for assistantships and fellowships must be made with the Graduate School, Fort Hays State University, 600 Park Street, Hays, Kansas 67601. After the applicant submits all necessary materials to the Graduate School, the materials are forwarded to the Department of Biological Sciences. Here they are reviewed, and admission recommendations are made to the Dean of the Graduate School.

- A. Required Application Materials
 1. A completed Graduate School application and payment of associated fees.
 2. A typed description of the student's research interests or reasons for pursuing a graduate education.
 3. A listing of four evaluators at least one of whom could potentially serve as advisor.
 4. Transcripts for all undergraduate and graduate courses.
 - Transcripts from foreign schools must be evaluated by an impartial agency to allow for comparison by domestic standards.
 5. Two letters of recommendation. At least one of the letters must be from an instructor at their undergraduate institution.
- B. Orientation
 1. All graduate students are required to be on campus 3-5 weekdays prior to the beginning of classes.
 2. All graduate students are required to attend an orientation meeting every semester.
 3. All graduate students are required to attend a workshop on sexual harassment each year.
 4. GTAs may be required to assist with the preparations for upcoming classes.

3. PROGRAM OPTIONS

The Department of Biological Science offers two options for the completion of the Master of Science (Biology): Thesis and Non-thesis. In deciding between the options, students should keep in mind their educational and career goals and consult with their major advisor.

A. Thesis Option

1. Requires a minimum of 30 graduate credit hours.
 - a. At least 24 credit hours of formal courses.
 - i. Formal courses include courses with fixed titles in the university catalog as well as Topics courses
 - ii. Formal courses do not include Readings, Problems, or Research hours
 - b. At least 2 credit hours of Thesis and at least 2 credit hours of Research.
2. The student must prepare a thesis acceptable to the student's graduate committee.
3. The student must pass an oral comprehensive examination (See 8. EXAMINATIONS).
4. The student must orally present the results of their research to the public.
5. The student must pass an oral examination (thesis defense) relative to the topic of the thesis (See 8. EXAMINATIONS).

B. Non-thesis Option

1. Requires a minimum of 34 graduate credit hours.
 - a. At least 32 credit hours of formal courses.
 - b. 2 credit hours of Research (Research Report).
2. The student must prepare a research report acceptable to the student's graduate committee.
3. The student must pass a written comprehensive examination (See 8. EXAMINATIONS).
4. The student must pass an oral comprehensive examination (See 8. EXAMINATIONS).

Students may switch from one program option to the other. Students doing so will be held to the requirements of their new option. The student will need to write a letter to the department chair indicating the student's change of option. The student and the student's major advisor are required to both sign the letter. A meeting of the student's graduate committee will be required so that the student's program of study can be reviewed and possibly revised.

4. STUDENT'S GRADUATE COMMITTEE

The graduate committee assists in the development of the program of study, approves the program of study, approves the thesis proposal, supervises the thesis or report research, and approves the thesis or research report.

A. Major Advisor (Major Professor)

1. The major advisor works closely with the student to help develop a program of study, registers the student in classes, assists the student in the development of the thesis or research report proposal, advises the student on the conduct of research, aides in the preparation of the thesis or research report, and approves the thesis for review by the student's graduate committee.
2. The major advisor must be a member of the graduate faculty.
3. Upon admission to the graduate program, the student should ask a member of the biology faculty to serve as his/her major advisor.
 - If a student has not obtained a major advisor by the end of the student's first semester of graduate study, then the student is subject to dismissal.
4. A student's major advisor can be changed at any time during the student's program.
 - a. The change can be initiated by either the student or the major advisor.

- b. A letter informing of the change in major advisor should be sent to the department chair, former major advisor or graduate student, new major advisor, the student's graduate committee, and the Graduate School.
- B. Committee
- 1. Composition
 - a. A graduate committee will consist of a minimum of 4 committee members.
 - b. The major advisor will chair the committee.
 - c. A minimum of two other members of the FHSU biology graduate faculty.
 - d. An outside committee member, an individual from a different FHSU department, or an adjunct of the Department of Biological Sciences.
 - i. If the major advisor feels that the student's research project requires more outside expertise, then one other outside member can be included on the graduate committee.
 - ii. Outside members must have an earned M.S. or earned PhD in Biology or other appropriate discipline..
 - iii. Other outside readers may be asked to read the thesis or research report and offer their opinion as to its merit. These other outside readers are non-voting.
 - 2. The student selects the graduate committee after consultation with his/her major advisor.
 - 3. The student invites the potential committee members to serve on his/her graduate committee.
- C. The graduate committee should be established and have its first meeting in the first semester of the student's graduate studies.
- D. If after two semesters of graduate study the student has not had a meeting of their graduate committee or the graduate committee has not approved a program of study (See 5. PROGRAM OF STUDY) and a research proposal (See 7. RESEARCH), then the student will be ineligible for a graduate assistantship and subject to dismissal.

5. PROGRAM OF STUDY

During the first semester of the student's graduate studies, the student and advisor should outline a program of coursework.

- A. Content
- 1. All students are required to enroll in BIOL 825 Biological Scientific Writing during their first fall semester.
 - 2. All students pursuing a Thesis Option must take or have taken Biometry or equivalent.
 - 3. No more than 6 credit hours of upper division undergraduate courses (300-400 level courses) can apply toward the student's graduate program.
 - 4. Deficiencies in undergraduate biology or cognates will not be included in the graduate program against the minimum required hours.
 - 5. The program of study should consist of at least the minimum credits hours required for the program option that the student is pursuing.
 - 6. All thesis-option students are required to take 2 credit hours of seminar.
 - a. One credit hour will be a formal seminar (spring semesters).
 - b. One credit hour will be a discussion seminar (fall semesters).
- B. All courses of the program of study listed on the Graduate School's form entitled "Program for Master's Degree" are required for the completion of a M.S.
- C. All courses of the program of study listed on the Graduate School's form entitled "Program for Master's Degree" must be taken for a letter grade.
- D. Students may take courses beyond those required by the committee.
- E. The student's graduate committee may require the student to complete more courses than the minimum specified by the student's selected option.

- F. Only 10 hours of graduate credit transferred from another university can be applied to the program of study.
- G. After the major advisor has approved the program of study, it is submitted to the committee for approval.
- H. A copy of the program of study with signatures of all committee members must be forwarded to the committee members and the Department Chair within one week of the committee meeting that sets the program.
- I. A minimum of one meeting of the graduate committee is required each year the student is in the program.
- J. Changes in the Program of Study
 - 1. If changes are necessary, the student and major advisor should prepare a new program of study. The student also should prepare a brief statement explaining the reasons for the changes and summarize the student's progress to date.
 - 2. A program of study can only be amended with consent of their graduate committee.
 - 3. A majority vote of the graduate committee is required to amend the program of study.
 - 4. Copies of the amended program of study with signatures of the committee members must be forwarded to all committee members within 1 week of any meeting in which the program of study is changed.
- K. Enrollment
 - 1. Students should enroll in at least 9 credit hours during each fall and each spring semester.
 - 2. At least six of the credit hours during the fall and spring semesters should be from courses listed on the student's program of study.
 - 3. If a student has a GTA or a GRA for the summer semester, he/she is required to enroll in 3 credit hours during the summer.
- L. Time Limit
 - 1. Courses completed within the preceding 6 years may be applied toward the Master's degree.
 - 2. If a student wants to include a course in their program that was completed prior to the 6 year limit, then the student can petition for the course to be recertified.
 - 3. A student must retake any course older than 8 years.
 - 4. Students not completing all of the requirements for the M.S. within the 6 years may be required to pass another oral or written comprehensive exam.
- M. Completion of Degree *in Absentia*
 - 1. Students should complete all degree requirements before leaving campus.
 - 2. A student may petition their graduate committee in writing for permission to complete graduate requirements in absentia.
 - 3. If the graduate committee decides to allow the student to complete their degree in absentia, then the graduate committee is to set a deadline for completion of the degree.
 - 4. Students in absentia are required to enroll in at least 1 credit hour per semester until all degree requirements are completed.
- N. All students are required to obtain teaching experience (e.g., GTA, lab assistant) prior to graduation. The graduate committee will determine if this requirement has been successfully achieved.

6. SCHOLASTIC STANDARDS

Graduate students are held to a higher academic standard than undergraduates. Students are expected to demonstrate exceptional performance in all of their courses.

- A. A graduate student automatically is placed on probation and is subject to termination of graduate status or their assistantship for the following reasons:

1. A GPA less than 3.00 in any semester.
 2. A grade of "C" in more than 6 credit hours or 2 courses.
 3. A grade lower than "C" in a course listed on their program of study.
- B. Students must maintain a 3.00 GPA in courses listed on their program of study to be eligible for graduation.
- C. A student may not withdraw from any course listed on the graduate program without written permission from their committee.

7. RESEARCH

A. **Research Proposal.** Research requires thought and planning. Students are required to briefly describe their proposed research for their graduate committee in a research proposal. The student's major advisor will help with the preparation of the research proposal and approve the proposal prior to its dissemination to the student's graduate committee. The research proposal should be presented to the student's graduate committee at least two weeks prior to its first meeting. At the first meeting of a graduate committee, the research proposal should be discussed and possibly revised. A majority vote of the graduate committee is required to approve the research proposal.

As the research progresses, it is expected that changes will need to be made to the research proposal. Changes to the research proposal must be approved by a majority of the graduate committee. Students are strongly encouraged to hold a meeting of their graduate committee to discuss the proposed changes to their research and obtain the approval of their committee. It is the student's responsibility to keep all members of the graduate committee informed of progress in their research.

Research Proposal Format

The following topics should be addressed in the thesis proposal:

- Origin of the research question
- General aspects of the research question
- Hypotheses
- Approach, methods, and materials needed for research
- Anticipated significance
- References

The requirement of the research proposal is independent of the requirements of any course in which a student may enroll. If the student's graduate committee has not approved a research proposal by the end of the 2nd semester of graduate work, then the student will not be eligible for an assistantship and is subject to dismissal from the graduate school.

B. **Thesis or Report.** Preparation of the thesis or the research report is an indicator of the student's ability to analyze, summarize, and present research findings. The quality and accuracy of this document is of paramount importance. The completion of the thesis or research report shall not be tied to the grade of a course other than hours in thesis or research.

The student should consult the Graduate School guidelines for the requirements for formatting and presentation of the document. The thesis or research report may be written in such a way as to be acceptable for publication. However, if a thesis or research report is written for publication, it is required to have a separate and expanded introduction and discussion to properly establish the context of the research. All theses or research reports must be accompanied by a signature sheet that is modeled on those attached to these guidelines. The advisor should review the thesis or report and determine when it is suitable for review by the student's graduate committee. An approved research report then can be circulated to the student's graduate committee for

their approval. The graduate committee can request changes to the research report. When a majority of the graduate committee has approved the research report the graduate student can circulate the signature sheet. The approval of the thesis is discussed in thesis defense. (See 8. EXAMINATIONS)

- C. **Misconduct in Research.** The conduct of graduate student research will comply with university policy. Allegations of misconduct are subject to due process. A finding of misconduct is followed by notification and disciplinary action as outlined in university policies.

Research misconduct includes four categories of unacceptable actions:

- Acts of deception, falsification, plagiarism, or misappropriation.
- Failure to comply with sponsoring agency guidelines.
- Retaliation against any person reporting misconduct in research.
- Failure to comply with legal requirements governing research.

- D. **Use of University Property.** Use of university equipment (copiers, computers, microscopes, greenhouse, animal house, etc.) or supplies (paper, pens, etc.) must be approved by the major advisor and the faculty or staff member responsible for such items. Graduate students must assume responsibility for the proper use of university equipment and property, and for the care and return of borrowed materials.

The Department will furnish expendable supplies only for teaching and research obligations. Graduate students must purchase their own supplies for classes in which they are enrolled. The same principle applies to use of the departmental copy machine. Departmental telephone and FAX can only be used when approved by the department chairman.

Equipment and rooms for student research are not to be shared with anyone not specifically authorized to use them. Only students receiving formal financial assistance from the university are allowed to drive university vehicles. All students must complete driver certification training by FHSU security. Permission to use university vehicles must be obtained from the student's advisor and budgetary authority, and the appropriate request forms must be completed and approved.

- E. **Publications and Presentations.** Students are strongly encouraged to communicate the results of their research to the broader scientific community. Graduate students and their major advisors are encouraged to prepare the student's research for publication in a journal or for presentation at a scientific meeting. Students who are presenting their research at a meeting may apply for an honorarium from the Department of Biological Sciences to help defray some of the costs of travel.

Students and faculty should consider professional ethics when reaching a decision about recognition for publication. It is prudent for the student and their advisor to establish in advance what the proposed publication arrangements will be. Results of sponsored research should be published jointly with the person or persons who received the grant or contract.

- F. **Ownership of Data.** Students performing research sponsored by grants, assistantships, or departmental monies should understand that the data they collect are the property of the Department of Biological Sciences and the sponsoring agency. Students, major advisors, and sponsoring agencies should establish an understanding of how data will be handled if the student does not complete their degree or if the student decides not to publish the research.

8. EXAMINATIONS

- A. **English Proficiency.** International students for whom English is not their first language must score at least 550 on the TOEFL before they will be admitted to Graduate School. Additional proficiency will be required of international students serving as graduate assistants.
- B. **Diagnostic Examination.** The advisor or graduate committee may require the student to take a diagnostic examination to assist in the preparation of the program of study.
- C. **Written Comprehensive Examination.** Students in the non-thesis option are required to pass a written comprehensive examination.
- D. **Oral Comprehensive Examination.** All M.S. degree candidates must pass an oral comprehensive examination (oral exam). Graduate students are not allowed to take the oral exam prior to completing 18 graduate hours on their program of study. Students must file the appropriate form with the graduate school prior to taking the exam.
 1. Scheduling
 - a. During fall and spring semesters, the exam can only be scheduled to take place between the 4th and 12th weeks of the semester.
 - b. During the summer term, the exam can only be scheduled to occur between the end of the first quarter of the semester and the end of the third quarter of the semester.
 - i. Only non-thesis option students should plan on taking their orals during the summer term.
 - c. The exam should be taken in the second year of study and cannot be taken in the later half of the semester in which the student intends to graduate.
 - d. Exceptions to the scheduling policy can be made by the department chair. A request for an exception to the scheduling policy must be made in writing with a compelling rationale for the exception.
 - e. The tentative date for the exam is set by the student with the consent of the major advisor and the department chair.
 - f. An examination committee approved by the department chair must approve the date.
 2. Content
 - a. The graduate student and major advisor select five topic areas from the list below.
 - b. The questions for the student's exam will be limited to the student's thesis topic and five chosen topic areas.
 - c. Topic areas:
 - i. Cellular and Molecular Biology
 - ii. Organismic Diversity
 - iii. Ecology
 - iv. Management and Conservation
 - v. Evolution and Systematics
 - vi. Physiology
 - vii. Anatomy
 - viii. Scientific Method and Statistics
 - ix. Genetics
 3. Examination Committee
 - a. The examination committee will consist of a minimum of five graduate faculty members of the Department of Biological Sciences. The oral exam committee members need not be members of the student's graduate committee. This number includes the major advisor and the department chair.
 - b. The student polls all of the graduate members of the biology faculty to see who would be willing to serve on the student's examination committee.

- c. The student then submits the list of graduate faculty willing to serve on the examination committee and the topic areas on which the student is to be tested.
- d. The department chair then decides on the composition of the examination committee from the willing graduate faculty relative to the areas to be tested. Other graduate faculty members in the Department of Biological Sciences are invited to attend but may not ask questions or vote.
- e. Members of the examination committee are expected to be at the examination for the entire time period. No late arrivals or early departures of committee members are allowed.
- f. Deans of the College of Health and Life Sciences and the Graduate School should always be invited. However, their participation is not required. They will serve as non-voting members.

4. Examination Structure

- a. The major advisor will serve as the chair of the examination committee.
- b. The major advisor will determine the order that committee members will question the graduate student. This order should be announced prior to the beginning of the examination.
- c. All members of the examination committee are to ask questions and should be allowed an approximately equal amount of time for questions.
- d. All oral examinations will last 2 hours \pm 20 minutes.
- e. At the end of the questions the major advisor will excuse the student.
- f. Once the student has left the room, the graduate committee will, following discussion, vote on the performance of the student.
 - i. Balloting will be secret and written. Each member of the examination committee will cast one vote.
 - ii. The only possible votes are Pass and Fail.
 - iii. A majority of Pass votes is required for the student to pass the examination.
- g. Once the votes are counted the student is brought back into the room and informed only of whether they passed or failed the examination (not the vote count).
- h. A student who fails the oral examination can retake the examination one additional time at a time to be approved by the examination committee. The subject areas must remain the same as the first examination.
- i. It is the responsibility of the major advisor to take the Report of the Comprehensive Examination form to the examination and to return it, completed and signed, to the Graduate School within 2 working days after the day of the examination.

E. **Oral Examination of Research (Thesis Defense)**, Students in the thesis option are required to pass an oral examination of their research (thesis defense). The thesis defense consists of two parts: the public oral presentation and the formal examination.

1. Scheduling

- a. The thesis defense cannot be scheduled in the first two weeks or in the last 4 weeks of a semester.
- b. The student and major advisor select a tentative date for the thesis defense.
- c. The thesis, approved by the major advisor, should be submitted to the student's graduate committee at least three weeks prior to the tentative date for the thesis defense.
 - i. Two weeks after receiving the thesis from the student, the members of the graduate committee should provide written comments for the student on needed revisions.

- ii. When the committee member passes the comments to the student, the committee member should indicate whether they feel that the student should schedule a defense.
 - iii. If a majority of the graduate committee feels that the thesis is ready for a defense, the student and major advisor can schedule a defense date.
 - d. The major advisor, Department Chair, and all of the members of the graduate committee must approve the defense date.
 - e. When the date has been approved the student needs to reserve a location for the public presentation and the defense with the department secretary.
- 5. Public Presentation
 - a. Announcement
 - i. The graduate student is responsible for the development and dissemination of an announcement (or flyer) that publicizes the public presentation of their research.
 - ii. The announcement should be posted at least one week in advance of the defense.
 - iii. The announcement should prominently contain the statement “Public Invited.”
 - iv. Copies of the announcement should be:
 - posted throughout Albertson Hall and the campus.
 - sent to the student newspaper.
 - sent to the Dean of the College of Health and Life Sciences.
 - sent to the Dean of the Graduate School.
 - Interested parties (e.g., KSU agricultural experiment station, Kansas Department of Wildlife and Parks, Hays Medical Center)
 - b. Presentation
 - i. The student is responsible for reserving the location for the presentation.
 - ii. The major advisor will chair the presentation.
 - Introduce the student
 - Select questions from the audience for the student
 - iii. The presentation should last 20-40 minutes with another 10 minutes for questions.
 - iv. The student is expected to answer questions posed by the audience.
- 6. Formal Examination
 - a. The student’s graduate committee and department chair will administer the examination.
 - b. The major advisor will serve as the chair of the examination committee.
 - c. The major advisor will determine the order that committee members will question the graduate student. This order should be announced prior to the beginning of the examination.
 - d. All members of the examination committee are to ask questions and should be allowed an approximately equal amount of time for questions.
 - e. The formal portion of the thesis defense will last 2 hours \pm 20 minutes.
 - f. At the end of the questions the major advisor will excuse the student.
 - g. Once the student has left the room, the graduate committee will, following discussion, vote on the performance of the student.
 - Balloting will be secret and written. Each member of the examination committee will cast one vote.
 - The only possible votes are Pass and Fail.
 - A majority of Pass votes is required for the student to pass the examination.

- h. Once the votes are counted the student is brought back into the room and informed only of whether they passed or failed the examination (not the vote count).
- i. A student who fails the oral examination can retake the examination one additional time at a time to be approved by the examination committee.
- j. It is the responsibility of the major advisor to take the Report of the Examination form to the examination and to return it, completed and signed, to the Graduate School within 2 working days after the day of the examination.

9. GRADUATE ASSISTANTSHIPS

A graduate assistant (GA) is hired as a temporary member of the university's instructional (GTA) or research staff (GRA). *These are not scholarships.* A graduate assistant failing to adequately perform their assigned duties will forfeit the appointment and its benefits.

A. Application and Selection

- 1. Application Deadlines
 - a. Applications for assistantships beginning in the fall semesters are due the preceding 1 March.
 - b. Applications for assistantships beginning in the spring semesters are due the preceding 1 December.
 - c. Applications for assistantships beginning in the summer semesters are due the preceding 1 March.
- 2. A selection committee comprised of faculty members in the department reviews the applications and forwards its recommendations to the Graduate School, which awards all assistantships.

B. Outside Work

- 1. Outside work for GRAs and GTAs is strongly discouraged.
- 2. However, open communication with the student's major advisor and department chair is encouraged when outside work is necessary.

C. GTA

- 1. Students awarded GTAs are assigned primarily to teach or assist in laboratory courses.
- 2. Eligibility
 - a. Students are eligible for support for four semesters (fall and spring) and three summer sessions.
 - b. Students are not guaranteed an assistantship.
 - c. Assistantships may be withdrawn at any time for lack of funds, student's failure to perform assigned tasks, or student's failure at other responsibilities.
- 3. The laboratory coordinator makes assignments, with approval of the department chair.
- 4. Assignments are distributed as evenly as possible and are based on a standard of 20 hours of work per week.
- 5. Specific duties given to each GTA are made by the supervising faculty and may include but are not limited to the following:
 - a. scheduled hours teaching or assisting in lab or classroom;
 - b. mandatory GTA meetings with faculty supervisor;
 - c. preparing for lab (e.g., reading background information, writing lecture notes and quizzes);
 - d. setting up lab materials and putting lab materials away;
 - e. grading lab assignments outside of class;
 - f. assisting faculty with preparation of lecture materials or grading exams;
 - g. other duties assigned by faculty supervisor or department chair.
- 6. A normal teaching load for a GRA is three lab sections with two lab preparations.

7. Office hours
 - a. GTAs will be assigned office space by the laboratory coordinator.
 - b. GTAs will schedule a minimum of four office-hours per week between 0800 and 1800 hrs Monday through Friday.
 - c. These office hours will be announced in the classes you teach, printed in your syllabi, posted on your office door, and provided to the department's secretary and supervising instructors, within one week of the start of each semester.
 - d. During scheduled office hours, GTAs must be available in their office or teaching lab to meet with students or faculty.

D. GRA

1. Each GRA is required to have a written contract that details his/her responsibilities and remuneration.
2. Contracts must be signed and dated by both the principle investigator and the student.
3. The signed contract must be submitted to the Biology Department office within three weeks.
4. The original contract can be amended. The amended contract must be signed by both parties and submitted to the Biology Department office.

10. AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY

Fort Hays State University does not discriminate on the basis of race, color, religion, national origin, sex, or handicap. The university complies with the Civil Rights Act of 1964, related Executive Orders 11246 and 11375, and all civil rights laws of the State of Kansas. Accordingly, equal opportunity for employment and admission shall be extended to all persons, and the university shall promote equal opportunity and treatment through a positive and continuing affirmative action program.