

GUIDE FOR GRADUATE STUDIES
IN THE
DEPARTMENT OF BIOLOGICAL SCIENCES
COLLEGE OF SCIENCE
UNIVERSITY OF NOTRE DAME

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This guide is circulated by the Graduate Studies and Admissions Committee of the department. Please address suggested changes, in writing, to the Director of Graduate Studies.

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Preface

This document, hereafter referred to as the “Graduate Guide”, is essentially a statement of departmental policy with regard to a number of facets of graduate study. It was organized by and is subject to continual scrutiny by the faculty and students. It is designed to assist you in your orientation to the Department and to graduate work at Notre Dame. Hence, each student should peruse the contents carefully, noting, in particular, the suggested normal progress of a graduate student toward completion of his or her degree.

In all matters of general academic policy, and in deadlines on the academic calendar particularly, the students and faculty are subject to the official bulletins of the University and the Graduate School. In particular, The Graduate School Bulletin of Information takes precedence in all matters of graduate policy in the event of discrepancies with the Graduate Guide. It is your responsibility to become familiar with the contents of the Graduate Bulletin. Students and faculty must realize that each person has a responsibility for maintaining high standards in the University, College, and Department. This can be done without automatic action often found in large institutions. The faculty wants to treat you as a mature individual and a colleague in a community of scholars working toward common goals of excellence in research and teaching. Flexibility is and will be a strong point in the administration of the policies outlined herein.

SECTION I: GENERAL CONSIDERATIONS

A) Departmental Administration

The Department of Biological Sciences currently is administered formally by a Chairperson who is responsible to the Dean of the College of Science. If you have a suggestion, problem, or other topic that you would like to discuss with the Chairperson, do not hesitate to see him/her. However, the Director of Graduate Studies (DGS) normally will deal with most questions and problems of graduate students on subjects ranging from academic matters to office space allocation. Heavy reliance is made on the various standing committees for the development of new Departmental policies and for the implementation of existing policies. For graduate matters, these committees consist of (1) Graduate Studies and Admissions Committee (chaired by DGS), (2) Graduate Recruitment Committee, and (3) Graduate Student Relations Committee. The latter two committees contain graduate student members. The graduate students also participate in the Biology Graduate Student Organization (BGSO), which is student-run and organized, and in the University-wide Graduate Student Union (GSU). As a graduate student, your formal or informal input to any committee is always welcome.

B) Standing Committees

Several faculty committees focus on various aspects of graduate education in this department. The DGS oversees the activities of the first three committees listed below.

Graduate Studies and Admissions Committee: The primary objectives of this committee are to evaluate applicants for admission and financial support and to initiate and enforce policies

concerning graduate students. Besides the review of applications for admission, its responsibilities include:

1. Helping the DGS in assigning an interim advisor for new graduate students and addressing any questions raised by the student.
2. Reviewing students' academic performance and progress. This includes performance in coursework and research. If disciplinary action, withdrawal of support, or other serious action is considered, the committee will consult with the student's advisor or advisory committee before a decision is reached. Such decisions will be communicated to the student as early as possible to allow maximum time to change career plans.
3. Serving as a liaison group between faculty and students.
4. Updating and distributing the Graduate Guide.
5. Meeting collectively with graduate students as requested.
6. Answering questions and receiving suggestions from anyone for the improvement of the Department's Graduate Program.

Graduate Recruitment Committee: The primary goal of the committee is to actively recruit applicants to the Department's graduate program. The Committee also organizes an annual 'recruitment weekend' in the spring.

Graduate Student Relations Committee: The primary objective of this committee is to discuss issues relevant to graduate education in the Department and to present proposals to the DGS and Department Chairperson to improve graduate student life in the Department.

Curriculum Committee: The primary objectives of this committee are the review of, and appropriate action on all courses and requirements involving graduate and undergraduate education.

Grievance Committee: The primary responsibility of this committee is to arbitrate cases involving grievances in all aspects of student life in the department. The Graduate Studies and Admissions Committee (GSAC) activates this committee when needed and receives the report of their decision. The GSAC will consider the report and take appropriate action to address the grievance.

C) Graduate Student Administration

All graduate student administrative positions described below are filled by elections held each year during the spring semester. The exact date of the elections is determined by the Graduate Student Representative to the Faculty.

Graduate Student Union Representatives: The Graduate Student Union (GSU) is a University-wide organization for graduate students. The GSU organizes social events for graduate students, conducts workshops on various academic issues, provides grants to support graduate student participation at scholarly meetings and generally represents the concerns of Notre Dame graduate students to the administration. There are two graduate student representatives to the GSU from each academic department. GSU representatives are voting members of the Union. They must attend monthly meetings of the GSU and must be willing to

serve on an additional GSU committee which also meets monthly. The GSU representatives are responsible for keeping the faculty and graduate students current on pertinent issues.

Graduate Student Faculty Representative: The Graduate Student Faculty Representative acts as an intermediary between the graduate students and the faculty in biology. This representative attends all biology faculty meetings and reports to the graduate students on pertinent issues. The representative meets minimally twice a year with the biology graduate students to discuss problems, complaints, or suggestions that the graduate students may have. The representative then discusses these issues with the DGS or Department Chairperson.

Biology Graduate Student Organization: The BGSU is a student-run organization that receives support from The Graduate School and Department. The BGSU serves as a forum for graduate students to enhance scholarly and social activities within the Department, across the University, and with other institutions.

D) Admissions

The normal requirements for admission to graduate study in the Department of Biological Sciences are a cumulative B average in undergraduate courses, 4 semesters of chemistry (including organic chemistry), 2 semesters of physics, 2 semesters of mathematics (including calculus), and appropriate training in basic biology. The Graduate Record Examination scores (General Test) and 3 letters of recommendation must be filed at the time of application for admission. The GRE Subject Test in an appropriate field (generally Biology) is also strongly recommended for admission. The Test of English as a Foreign Language (TOEFL) is required for all foreign applicants.

At the discretion of the GSAC, students not meeting all requirements may be admitted with the provision that deficiencies be made up without graduate credit at the earliest possible date. At the time of admission, the GSAC will notify the student of his/her status and file a list of deficiencies in the student's Departmental file. It shall be the responsibility of the advisor(s) and the student to arrange to remove the deficiencies by coursework or individual study within the first year or as soon thereafter as possible. The GSAC should be notified in writing by the advisor immediately after removal of the deficiency. A student admitted on provisional status is not eligible for an advanced degree until all deficiencies have been formally removed.

E) Interim Advisor

Just prior to the beginning of each academic year, a short orientation program is held for new/incoming graduate students. At this orientation, each incoming graduate student will be assigned an interim advisor by the DGS. These assignments will be made with consideration of the specific academic interests of the student. It will be the responsibility of the interim advisor to guide the student's program until a research advisor is selected. The advisor will notify the student of any deficiencies and help in planning the student's course of study. He/she will inform the student of the policies of the University and the Department by offering guidance and a pathway of communication. **The student is in no way obligated to the interim advisor in a research capacity.**

F) Research Area and Advisor

By the end of the first semester of the second year of residence a Ph.D. student must have chosen a faculty member as a permanent advisor and have begun a research program. The Master's student should choose an advisor by the end of the first year of residence. After securing the consent of a faculty member to be his or her permanent advisor, the advisor must immediately inform the Chairperson of the Department of this fact in writing. Such written notice of mutual agreement is also required if a student should change permanent advisors later. After that, it is the responsibility of the research advisor to guide the student's program in formal courses and research and to provide counsel when necessary. The duties of the interim advisor are taken over entirely by the research advisor at this point. A student may, for whatever reason, change research advisors at any time. In that case, a letter must be sent by the new advisor to the DGS, indicating that this change has occurred.

G) Advisory Committee

The student, in consultation with his/her advisor, selects an Advisory Committee. This should be done early enough so that the Committee can have a useful role in their advisory capacity. After selecting a committee and obtaining the approval of all the members to serve on the committee, the student must have the departmental graduate secretary file the appropriate form (see Appendix 1, Form 1) for final approval of the committee. The advisory committee for a Ph.D. shall consist of at least three faculty members plus the research advisor who shall be the chairperson. In a 4-membered Ph.D. Advisory Committee, all members are official readers of the thesis. If a 5-membered committee is needed (see below), one of the members is officially a non-reader. If the student opts to have official co-advisors (i.e., 2 Biology faculty members), then the Advisory Committee must consist of 5 members (2 advisors plus 3 readers). The M.S. Advisory Committee consists of the research advisor and 2 other faculty members. All members of the M.S. Advisory Committee are official readers of the thesis. The members of the committee should be selected in order to best be able to contribute guidance and stimulation to the student in his/her graduate program and career interests. One or more of the committee members may be from other departments in the University as dictated by the student's interests. In some cases (e.g., interdisciplinary programs), the committee must have a member from a department outside of Biological Sciences. A committee may also have a member from a different institution. **Any committee member from outside the Department must be specifically approved by the Graduate School before he/she can serve on the Advisory Committee.** In this case, approval is requested in writing by the research advisor to the DGS. If requesting a non-Notre Dame member this request should be accompanied by appropriate documentation (e.g., curriculum vitae) of the outside member's professional qualifications. If approved at the department level, the DGS will petition the Graduate School for final approval. Although Advisory Committees can have members from outside of the Department of Biological Sciences and/or Notre Dame, a majority of the committee members must be from the regular teaching and research faculty of the Department of Biological Sciences. Therefore, if a Ph.D. student wishes to have two outside members, then the Advisory Committee must contain 5 individuals so that a majority of members would come from the Department. It is the responsibility of the student and advisor to support the expenses of outside committee members to travel to Notre Dame for Advisory Committee meetings.

The Advisory Committee is to be available for consultation, to help determine the program of coursework, and to safeguard the interests of the student, the Department, and the University. Its members shall also serve as members of the examining committee for the candidacy examinations, participate in the annual progress meetings required of all Ph.D. candidates, contribute readers for the dissertation, and serve as members of the committee hearing the oral defense of the dissertation or thesis.

Students must keep in mind that except in the most extreme circumstances, no formal functions of their Advisory Committee should be scheduled for the summer or Christmas break. This includes either part of the Candidacy Examination, the oral Defense of Thesis, or the official reading of a thesis. This applies equally to Master's and Doctoral Candidates. The only exception is when the student's full, previously designated and approved committee is on campus at that time, and all agree to participate during that period. No committee substitution will be made during the summer or Christmas break on the grounds of "convenience".

H) Coursework

Every graduate student, regardless of the source of their financial support, is required to enroll and register for a minimum of 9 credits each semester until all course work is completed and they have been admitted to degree candidacy. During the academic year, a graduate student with a teaching or research assistantship may not register for more than 9 credit hours. A graduate student with a fellowship may register for a total of 12 credit hours. An additional 3 credit hours of 400-level courses may be taken if authorized by the DGS and approved by the Graduate School. In the Summer Session, a graduate student may not register for more than 10 credit hours.

For Master's students the degree requirement calls for a minimum of 15 formal course credits and 9 credits of thesis research (BIOS 599). Once 24 credits have been earned, a Master's student will then need only 1 credit per semester (either BIOS 599 or BIOS 580) to remain a full time student. For Ph.D. students a minimum of 24 formal course credits and 30 credits of dissertation research (BIOS 699) are required. Once 54 credits have been earned, a doctoral student will need only 1 credit of BIOS 699 or BIOS 580 per semester to remain a full-time student. Students need not enroll/register during the summer session unless 1) they intend to graduate during that summer session or 2) academic loans that they might have require them to be continuously enrolled/registered throughout the year. In addition to the 9 credits per semester, each student is eligible for one "free" audit course (maximum of 3 credits). A second audit may be permitted with the permission of the DGS, and assuming that all required course work has already been completed.

After a student has been in the graduate program for one full academic year, he/she can petition to have post baccalaureate credits for formal course work (e.g., M.S. courses) relevant to Biological Sciences transferred to their Notre Dame record. Those credits must be approved by the DGS and will be included in the required course credit total (24 or 54). A maximum of 24 formal course credits can be transferred from a prior Master's, Ph.D., or non-degree program. Only 6 course credits can be transferred from an uncompleted (M.S. or Ph.D.) program. Only graduate-level courses with grades of B or higher will be considered for transfer. In all cases, transfer of post baccalaureate credits will be reviewed on a course-by-course basis by the DGS, in consultation with the major advisor and student. Final action to transfer will be approved by the GSAC. Students who would like to transfer post baccalaureate credits should consult with their major advisor and then complete a credit transfer form (available in Biology office) and

submit this to the DGS. On the form the student must indicate: 1) the course titles and credit equivalents (of courses to be transferred); 2) the degree program and location (in which the credits were obtained) and 3) any explanations necessary to interpret the courses or course credits. It should be noted that, before the Graduate School will consider course transfers, an official transcript must be on file in the Graduate School indicating the course titles, credits and grades for all courses being considered.

I) Changes in Class Schedules

A graduate student may add courses only during the first seven class days of the semester. Students may add courses after this time only on recommendation of the department and with approval of the Graduate School. A student may drop courses during the first seven class days of the semester. To drop a course after this period and up to the mid-semester point (see the Graduate School Calendar for the exact date), a student must have the approval of the chair of the department offering the course, the student's adviser and the Graduate School. A course may be dropped after the mid-semester point only in cases of serious physical or mental illness. Courses dropped after this date will be posted on the student's permanent record with the grade of "W."

A course taken for credit can be changed to an audit course after the mid-semester point only in cases of serious physical or mental illness.

J) Graduate Grades

Listed below are graduate grades and the corresponding number of quality points per credit hour.

A	4	
A-	3.667	
B+	3.333	
B	3	
B-	2.667	
C+	2.333	
C	2	
F	0	
I	0	(Until Incomplete is removed)
NR	None	No grade reported
S	None	Satisfactory
U	None	Unsatisfactory
V	None	Auditor (graduate students only)
W	None	Withdrew

Quality point values are used to compute the student's grade point average (GPA). The GPA is the ratio of accumulated earned quality points to the accumulated earned semester credit hours. GPA computation takes into account only those grades earned in Notre Dame graduate courses by students with graduate status at Notre Dame. For courses taken in a department or college in the University but outside the Graduate School, or taken outside the University, the grade will not be included in the GPA computation. The grades of C- and D are not awarded by the Graduate School.

A student receives the temporary grade of "I" when, for acceptable reasons, he or she has not completed the requirements for a 500 or higher level graduate course within the semester or summer session. No grade of "I" can be given for courses below the 500 level or to graduating students in the final semester or final summer session of a terminal degree program.

The student then must complete the coursework for a grade prior to the beginning of the final examination period of the next semester in which the student is enrolled. If a student receives an "I" for a summer session course, he or she must complete the coursework for a grade before the final examination period begins for the next semester or summer session (whichever comes first) in which the student is enrolled. The University temporarily computes this grade as the equivalent of an "F" in calculating the GPA. When the student fulfills the above requirements, the "I" is replaced by the new grade. Should the student not complete the course work as required, the "I" remains on the academic record and is computed in the GPA as equivalent to an "F".

The department and the Graduate School will review a student who receives more than one "I" in a semester or an "I" in two or more consecutive semesters, to determine his or her eligibility for continued support and enrollment.

The grade of "P" or pass is awarded only on foreign language reading examinations, comprehensive examinations, candidacy examinations and dissertation defense examinations.

The grades of "S" and "U" are used in courses without semester credit hours, as well as in research courses, departmental seminars, colloquia, workshops, directed studies, field education and skill courses. These courses, if given the grade of "S," do figure in a student's earned semester credit-hour total but do not figure in the computation of the GPA. A grade of "U" will not count toward the student's earned semester credit-hour total, nor will it figure in the computation of the GPA.

The grade of "V" has neither quality-point nor credit-hour values. It is the only grade available to the registered auditor who requests at the beginning of the semester that it be made part of his or her permanent record and who attends the course throughout the entire semester. The grade of "V" cannot be changed to a credit-earning grade.

The grade of "W" is given for a course that a student is allowed to drop after the mid-semester point.

Unexcused absence from a scheduled final examination results in an "F." An absence excused in advance results in an "I" (incomplete).

K) Standards of Performance in Course Work and Research

The status of any graduate student who receives a grade below B (including U grades) will be reviewed immediately by the DGS. The student will receive a warning letter from the DGS indicating that this grade is unacceptable and that obtaining similar grades in the future may result in expulsion from the graduate program. In the letter the DGS will also indicate if the student's overall GPA is in violation of Graduate School requirements (see next paragraph). If a student receives two grades below B (not necessarily within the same semester) the GSAC, after consulting with the student's advisory committee and/or interim advisor, may recommend dismissal to the Chairperson of the Department. For this ruling, grades of "B-" are considered to be a grade of "B". In general, an attempt is always made to ascertain whether or not a unacceptable grade is in an area of major importance for the student in his/her academic goals. If a course is ruled to be outside the student's major area, the unacceptable grade might not count

against him/her. These guidelines for unacceptable academic performance hold for students seeking the Master's degree as well as for those going for the Ph.D.

It should be emphasized that the Graduate School requires that: a) Continuance in the graduate degree program, admission to degree candidacy and graduation, require maintenance of at least a 3.0 (B) cumulative GPA and b) A student may be dismissed from the department or program if the GPA in any one semester is below 2.5 or if the GPA is below 3.0 for two consecutive semesters.

In addition to performance in class work, at the completion of each Spring Semester the GSAC will review the overall progress of each graduate student. Specifically, the Committee will examine 1) grades; 2) progress in scheduling and completing oral and written comprehensive examinations according to published guidelines (for specific degree requirements see Section II: Degree Programs, page 13 (M.S.) and page 17 (Ph.D.); 3) results of oral and written comprehensive examinations; 4) performance as a teaching assistant (if applicable: See Section III; Part A; page 24) and 5) progress in thesis research. Depending on the outcome of the review, different actions will be taken. For most students no action will be necessary. However, the GSAC will notify in writing students and their major advisors if a deficiency is observed in one of the areas listed above. The student must correct the deficiency according to the appropriate guidelines given in the Graduate Guide. If the deficiency is not corrected then the student may be asked to leave the graduate program. During the reviews, grades and GPAs will be monitored using University transcripts that are updated each semester. Comprehensive examinations will be monitored using the forms in the Graduate Guide that are submitted when a graduate student schedules and completes a written or oral examination. Performance as a teaching assistant (TA) will not be considered in evaluating overall academic performance but will be monitored to determine if a student's teaching assistantship will be renewed (see Section III, A. Graduate (Teaching) Assistantships). Progress in thesis research will be monitored through the summaries of annual advisory committee meetings required of every Ph.D. student (see Section II; Part B; page 17).

L) Enrollment

Once admitted, all degree and non-degree graduate students must enroll before each semester at the times and locations announced by the University Registrar. Enrollment dates are published in the Graduate School Calendar.

Any admitted student who fails to enroll for one semester or more must apply for readmission upon return. (See "Continuous Enrollment," below.)

A late charge of \$25 will be assessed to any student enrolling after the date set forth on the Graduate School Calendar.

All degree-seeking students are expected to maintain full-time status and to devote their full time to graduate study. **No degree student may hold a job, on or off campus, without the expressed permission of the DGS, Department, and the Graduate School.**

1. Full-time/Part-time Student Status

A full-time student is one who (1) registers for 9 or more credit hours of required course work per semester in the academic year or 6 or more credit hours in the Summer Session or (2) has completed the credit hour requirements for a degree and is registered for a minimum of one credit hour. This second category includes both resident and nonresident students (see "Continuous Enrollment.")

A part-time student is any enrolled graduate student who does not fall within either of the preceding categories. For loan purposes, a half-time student is a part-time student who registers for at least six credit hours per semester in the academic year or three credit hours in the Summer Session.

2. Continuous Enrollment

All students must enroll each semester in the academic year to maintain student status. Continuous enrollment is met normally by enrollment in the University and registration in a graduate-level course relevant to the student's program. A student who is concurrently pursuing degrees in the Graduate School and in another school in the University meets the continuous enrollment requirement by registering for a course in either program. Any exception to this rule, including a leave of absence, must be approved by the Graduate School. (See "Leave of Absence," below.)

Degree students who have completed the credit hour requirement for their degree must register for at least one credit hour per semester, including the final semester or Summer Session in which they receive their degree. These students may be considered full-time students whether or not they are in residence. Students not in residence and taking one credit hour pursuant to continuous enrollment requirements are charged a special registration fee.

A student who fails to enroll for one semester or more must apply for readmission upon return.

Continuing degree-seeking students (i.e., degree students who are eligible to continue their studies in the fall semester) may have access to University facilities and services from May through August without registering and enrolling for academic credit in the Summer Session.

3. Leave of Absence

For exceptional reasons and on the recommendation of the department, a student in good academic standing may request a leave of absence for a maximum of two consecutive semesters. A request for a leave of absence must be made before the semester in which the leave is taken and all leaves of absence must be approved by the Graduate School. If, for some urgent reason, a student is allowed to leave the University after the beginning of the semester, the withdrawal procedure below must be followed. If at the end of the leave of absence period the student does not return, the student is considered terminated. Application for readmission is required if the student wishes to return.

In the case of a medical leave of absence, clearance from the University Health Center is required prior to readmission.

4. Withdrawal from the Program

To withdraw from the University before the end of the semester, a student must inform the DGS, Department, and the Graduate School as well as complete the notice of withdrawal in the Registrar's Office (105 Main Building). For information on refunds, refer to "Tuition and Expenses" of the Graduate School Bulletin.

Upon approval of the withdrawal, the University enters a grade of "W" for each course in which the student was registered. If a student drops out of the University without following the procedure described above, a grade of "F" is recorded for each course. The credit for any course or examination will be forfeited if the student interrupts his or her program of study for five years or more.

The University reserves the right to require the withdrawal of any student when academic performance, health status or general conduct may be judged clearly detrimental to the best interests of either the student or the University community.

M) Academic Integrity

The official Graduate School policy on academic integrity is shown in Appendix 4.

N) Policies on Harassment and Other Aspects of Student Life

The official Graduate School and du Lac policy on Harassment and other aspects of student life is shown in Appendix 5.

SECTION II: DEGREE PROGRAMS

The Department of Biological Sciences offers two advanced degrees: the Masters of Science (MS) degree and Doctor of Philosophy (Ph.D.) degree.

A) MASTER'S PROGRAM

The Biological Sciences Department offers a Master of Science degree which, in partial fulfillment for that degree, requires the successful completion of a research thesis. A non-thesis Master's degree can be obtained, but only under exceptional circumstances and only after certain special criteria (to be discussed subsequently) are met.

a. The research Master of Science requirements are that the student must:

1. Register *minimally* in full-time status for one semester during the academic year
2. Successfully complete a minimum of 24 credit hours of courses and thesis research while maintaining a grade point average of at least 3.0.
3. Fulfill deficiencies, and/or additional requirements set by the student's Advisor and/or the Advisory Committee.
4. Pass an oral preliminary examination that concentrates on a thesis research proposal.
5. Write a thesis on research conducted under the direction of an advisor and committee.
6. Pass a defense of the thesis.

b. Procedure for Implementation of Requirements.

1. Courses

Normally, courses are selected from the 500 or 600 level. However a maximum of 6 credits of courses at the 400 level is allowed. No graduate credit will be given for courses under the 400 level. A maximum of 9 credits is allowed for thesis research. Thus, a minimum of 15 hours of formal course work is necessary. In addition, one credit hour of graduate seminar per year is required

for all graduate students in Biological Sciences. Eligible seminars for this requirement are offered under the BIOS 580 seminar series. Graduate seminar courses will count towards the 15 hours of formal course work. Formal coursework may also be selected from a limited number of South Bend Center for Medical Education (SBCME) courses subject to space availability and approval of its Director. To enroll, the student should first consult with the SBCME professor in charge of the course and then the student's advisor submits a request to the Director of the SBCME Director. The number of credits involved must be negotiated before enrollment.

2. The Oral Preliminary Examination

This examination which emphasizes the student's thesis research, will be administered by the student's Advisory Committee, generally not later than mid-semester of the student's third semester in residence. Permission to extend this deadline must be requested in writing by the students' advisor to the GSAC, giving cause for the requested delay. The appropriate form to schedule the exam (see Appendix 1, form 8) must be filed in the Departmental office at least one week in advance of the arranged examination time. The oral examination will not be open to the public.

For the examination the entire thesis committee will meet simultaneously with the student. Normally, such examinations can be expected to take approximately two hours, but no time limit is implied herein. The oral examination should start with a 30-50 minute presentation of the student's research proposal, including a clear description and justification of the research topic, investigations already completed and the proposed experiments designed to address the completion of his/her research project. Following this presentation, the committee will then question the student on the proposed dissertation research. Although the emphasis of questioning should be on the dissertation research, questions on any area of biology may be asked.

The decision to PASS a student on the oral preliminary examination requires a vote of 2 out of 3 of the committee members and should be completed immediately following the examination. The student will be immediately notified of the outcome of the exam. For a student to be admitted to candidacy (see below), he or she must "give sufficient evidence of his or her research capability". With this in mind, it is assumed that a PASS decision by the thesis committee is a reflection of that expectation.

After successful completion of steps 1 and 2 of this section, the student must file the appropriate forms (see Appendix 1, forms 2 and 9) with the departmental graduate secretary, confirming the completion of the preliminary oral examination. At the same time the student should, using the appropriate form (Appendix 1, form 5), request approval from the DGS or Department Chairperson for his/her thesis title. Approval of the title signifies Departmental approval of the thesis project. Following thesis title approval, the student may then be recommended by the Department Chairperson for admission to degree candidacy by the Graduate Council (see below).

3. Admission to Candidacy:

To qualify for admission to candidacy, a student must be in a Master's degree program. He or she must have been enrolled in the program without interruption, maintained a minimum cumulative GPA of 3.0 in approved course work, have successfully completed the preliminary oral examination, and have received departmental approval of his or her thesis proposal (see above, #2). Admission to candidacy is a prerequisite to receiving any graduate degree. It is the student's responsibility to apply for admission by requesting the appropriate form (see Appendix 1, form 10) from the departmental graduate secretary.

4. The Research Thesis

The thesis submitted must be a research thesis. A thesis based solely on library inquiry is unacceptable.

5. The Thesis Defense

The defense of the thesis occurs in two steps. The first is an *Approval of the Written Thesis by the Readers* and the second is an *Oral Defense of the Thesis*.

i. Approval of Readers

The approval of the written thesis will consist of a thorough reading of the thesis by the two members of the student's thesis committee other than the student's major advisor. These individuals now designated as "readers" can either approve or disapprove the thesis as presented. Prior to circulating the thesis to the readers of the committee, the major advisor must sign the title page. This signifies the approval of the advisor and indicates that the thesis is in a form that he/she feels is capable of being circulated. If the thesis is not signed by the advisor then the committee members can refuse to read it.

In the event that the thesis is disapproved by one or more of the readers, the appropriate changes must be made after consultation with the student and/or his advisor and/or other committee members. Both readers must approve the thesis before an oral defense is arranged. Approval by a reader implies that the thesis is essentially in final form as far as that reader is concerned. Approval of the thesis by a committee member is indicated by the reader signing the appropriate form (see Appendix 1, form 11) and submitting it to the departmental graduate secretary. These forms will be prepared by the secretary. The student should give them to the readers when the thesis is circulated.

ii. Thesis Defense

After approval from the readers is obtained the student's major advisor will arrange for an oral defense of the thesis to be administered by the entire thesis committee. This is done by submitting the appropriate form (see Appendix 1, form 8) to the departmental graduate secretary. The defense of the thesis should start with a 40-50 minute presentation of the thesis research, followed by an oral examination by the committee members. The presentation of the research is open to the public, however, the oral examination following the presentation is not. Formal public notice (outside of the committee members) of the thesis

defense is not required for the M.S. degree. A decision to PASS this examination will be based on a simple majority (2 of 3).

It should be noted that an "approved" thesis does not imply that changes cannot be made in the written thesis. The oral defense may bring to light considerations not apparent in the written manuscript which, in a committee person's opinion, necessitates change. In that event, a final decision may be (but not necessarily) withheld until such changes are implemented, after appropriate consultation between the parties concerned.

Before transfer to the Graduate School, a completed approved thesis must be accompanied by a transmittal form (see Appendix 1, form 12) signed by the research advisor and DGS or Department Chairperson. The signed transmittal form verifies to the Graduate School that all requirements for the Master's degree have been completed. The Graduate School will not accept a Master's thesis without this form.

iii. Submitting the Thesis to the Graduate School

After the readers approve the thesis, the candidate should deliver two clean copies signed by the thesis director to the Graduate School office on or before the date specified in the Graduate School Calendar. There it will be verified for compliance with the style manual. The candidate then should deliver the verified copies and the Graduate School approval form to the Hesburgh Library, where he or she pays the binding costs.

Should a student and adviser decide to microfilm a thesis, information concerning the University Microfilms International Master's Publishing Program may be obtained from the Graduate School office.

c. Complications with Regard to the Research Master's Program

1. The Preliminary Oral Examination

If the student fails his/her first oral examination the committee can recommend to the Department Chairperson that the student be dismissed, or be allowed to retake the examination. If recommended, a retake of the examination must be done within 6 months of the original examination. A second failure automatically results in dismissal. A student dismissed under either of the above circumstances cannot obtain a non-research master's degree.

2. The Thesis Defense

a. In the event a student cannot obtain approval from one or both of the readers, the student may petition the Department Chairperson, his/her major advisor and the GSAC for a non-thesis Master's. All of the above (i.e. including a majority of the GSAC) must agree before a non-thesis Master's is granted. Non-approval by any of the three results in dismissal without a Master's degree.

b. A student failing his or her thesis defense will be allowed to retake it. In the event of a second failure the student can request a non-thesis Master's Degree. In order for this request to be granted, approval must be given by the Department Chairperson, the student's major advisor, and a majority of the GSAC.

3. Graduate Work Beyond the Master's Degree

A student originally admitted into the thesis Master's program may desire either to enter the Ph.D. program directly or continue toward a Ph.D. after receiving the thesis Master's degree. To implement this change the student, with the support and approval of his thesis advisor and committee, should reapply for the Ph.D. program through the GSAC.

d. Degree Eligibility

Failure to complete all requirements for the Master's degree within 5 years results in forfeiture of degree eligibility.

B) DOCTORAL (Ph.D.) PROGRAM

a. The Ph.D. degree requirements are that the student must:

1. Register *minimally* as full-time status for four consecutive semesters.
2. Successfully complete a minimum of 54 credit hours of courses and dissertation research while maintaining a grade point average of at least 3.0.
3. Fulfill deficiencies, and/or additional requirements set by the student's Advisor and/or the Advisory Committee.
4. Pass comprehensive examinations consisting of both an oral and a written examination.
5. Complete a one-year, 2-semester teaching requirement as a teaching assistant.
6. Meet with the Advisory Committee on an annual basis following the oral examination.
7. Write and officially have approved a dissertation on research conducted under the direction of an advisor and committee.
8. Pass a defense of the dissertation.

b. Procedure for Implementation of Requirements.

1. Courses

The Department of Biological Sciences requires that doctoral students accumulate 54 credit hours of combined coursework and research credits. Of the 54 credit hours, no more than 8 credits may be in courses numbered 400. No graduate credit will be given for courses under the 400 level. The remainder must be in 500-600 level courses. The total 54 credit hour doctoral requirement may consist of any combination of formal classes, seminars, directed studies and research but must include minimum of 24 hours of formal courses.

In addition, one credit hour of graduate seminar per year is required for all graduate students in Biological Sciences. Graduate seminar courses will count towards the 24 hours of formal course work. Eligible seminars for this requirement include the 580 seminar series. Formal course work may be selected from a limited number of South Bend Center for Medical Education courses subject to space availability and approval of its Director. To enroll, the student should first consult with the SBCME professor in charge of the course and then

the student's advisor submits a request to the Director of the SBCME Director. The number of credits involved must be negotiated before enrollment.

Students transferring with a completed Master's degree or Ph.D. degree, may, on approval by the DGS or Department Chairperson, transfer up to 24 credits of graduate coursework toward this requirement (see "General Considerations; Course Work"). Students with an incomplete M.S. or Ph.D. may transfer up to 6 credits of graduate coursework.

2. Comprehensive Examinations

The Candidacy Examination will consist of a written examination followed by an oral examination. The oral examination cannot be taken until the student clears any deficiencies or additional requirements of the Advisory Committee and successfully completes the written comprehensive examination. Both written and oral examinations can cover the entire area of biology but normally emphasize areas relevant to the student's research interest. The oral examination generally deals more directly with the dissertation research. The written examination should be taken by the end of the second year of study and the oral examination within 6 months of passing the written. Permission to delay the oral examination beyond the first semester of the third year must be granted in advance and in writing by the DGS. The Graduate School requires that students pass the oral candidacy examination by the end of the 8th semester (i.e., fourth year). Failure to do so will result in termination of any funding from the Graduate School.

Both examinations will be administered by a committee approved by the Dean of the Graduate School, at the request of the Department Chairperson (see Section F "Advisory Committee"). The committee will consist of four or five voting members, three or four faculty members of the student's Advisory Committee plus the research advisor. For the oral portion of the comprehensive examination it will also include an outside Chairperson appointed according to the rules of the Graduate School.

Steps to be followed in planning the Candidacy Examination:

- i. When the advisor decides that the student is ready for the Candidacy Examination, the advisor solicits questions from members of the student's advisory committee. Each member (including the advisor) prepares a set of questions taking 2 to 3 hours to answer, and the examination is reviewed by each member.
- ii. The advisor administers the examination. The entire examination should be completed in three consecutive days. The examination should be taken in one of the Department's seminar rooms and advanced scheduling of the room is the responsibility of the research advisor.
- iii. Students can use computers to complete their written exams, however, the advisor must supply the computer and blank discs on which to record the answers. The student cannot bring any computer discs or CDs into the examination room other than those provided by the advisor.

- iv. The examinations are returned to the examiners and should be graded within two days. Grades must be PASS or FAIL.
- v. To pass the entire written Candidacy Examination, the candidate must receive a grade of PASS on three of four papers (4-member committee) or three of five papers (5-member committee). The Department Chairperson should be informed in writing of the outcome by submitting the appropriate form (see Appendix 1, Form 2).
- vi. If the candidate passes the written exam, the advisor arranges an agreeable time with the examining committee and requests that the departmental graduate secretary (see Appendix 1, Form 3) complete the appropriate form to schedule the oral Candidacy Examination with the Graduate School. This should be done at least 10 working days in advance of the exam date in order to allow the Graduate School sufficient time to locate an outside chairperson. The student or advisor may, however, secure their own outside chairperson for the oral examination. If this is done it should be indicated on form 3 when it is submitted.

The oral examination should start with a 40-50 minute presentation of the student's research proposal, including a clear description and justification of the research topic, investigations already completed and the proposed experiments designed to address his/her research project. Following this presentation, the committee will then question the student on the proposed dissertation research. Although the emphasis of questioning will be on the dissertation research, questions on any area of biology may be asked.

Voting on the Oral Candidacy Examination should be by secret ballot with a simple majority (3 out of 4 or 5) required for a PASS. If the candidate fails either the written or the oral examination, he/she may be given a second opportunity to be examined if the Advisory Committee recommends it with the approval of the DGS. If the candidate fails some parts of the written and passes others, he/she may be required to repeat only those parts failed. This should be done within six months. Upon recommendation of the examining committee, the student may be required to take formal course work in a particular area. If a second failure on either part of the examination occurs, the candidate will be dismissed from the graduate program.

A Master's degree may be awarded to students who fail to pass the written or oral Ph.D. candidacy examination, or other departmental requirements but have demonstrated satisfactory performance in other areas. This is a terminal degree from this department and is intended to protect the student from investing excessive time in advanced training in an environment which seems not to pertain to his/her best talents.

The student's advisor must report the results of written and oral examinations in writing to the Department Chairperson by filing the appropriate form (see Appendix 1, Form 2) after each examination.

3. Annual Meetings on Research Progress

Every Ph.D. student is required to meet annually with at least 3 of the 4/5 members of their Advisory Committee, but must include the Major Advisor. The

Oral Examination will constitute the first formal meeting for the student. The annual meetings should then be held approximately every 12 months thereafter until the Thesis Defense. The annual meeting of the thesis committee will have several functions. First, an annual meeting will keep committee members informed of research progress and changes in the thesis research. It will also give members an opportunity to provide feedback and give advice. Problems perceived at these meetings should be resolved before the defense. Second, summaries from these meetings will be used by the GSAC in their annual review to monitor student progress in thesis research (see Section I; part K; page 10).

For the annual meeting, each student must prepare a short written summary (1-2 pages) of their research, specifically emphasizing accomplishments during the past year, deviations from the prior year's goals, and new goals/objectives for the upcoming year. In addition, the summary could also discuss any differences between the student's and major advisor's expectations of the research. This summary must be submitted to committee members in advance of the meeting. In the event that a committee member is absent from the meeting, he/she must also receive the research progress summary and also must receive the signed summary of the meeting (see below).

During the 1-1.5 hour meeting, the student should briefly present the research progress summary and then the committee will discuss research progress and future goals with the student. Following the meeting, the major advisor in conjunction with the student must write a short summary of the proceedings of the meeting and circulate this to the committee for comments. After circulation, the major advisor and student will revise as needed, sign the summary to verify that it is an accurate description of the proceedings of the meeting, and submit the summary to the graduate secretary for inclusion in the student's file. Committee members can add information or provide a different impression of the meeting with an additional written summary if desired. Any additional report will also be included in the student's file.

For most students it is envisioned that the annual meetings will be primarily informative for committee members and that only minor adjustments of research goals would result. However, the assumption is that if committee members are significantly concerned about a particular aspect of the thesis research, a discussion will ensue between the student, major advisor, and committee to resolve the issue. Hopefully, this will occur at the time of the meeting and will be included in the account of the meeting. Obviously, without resolution, problems will resurface and, therefore, can be expected to be raised at the time of the defense.

Given the uncertain nature of biological experimentation, it is recognized that research goals and objectives must be somewhat flexible. For the same reason, it is also recognized that all proposed research objectives may not be accomplished. However, students that do not appear to be making satisfactory progress in their research, as determined by the major advisor and committee at the time of the annual meeting, will be asked to provide a set of specific objectives/goals that must be approved by the committee and be completed in a time period specified by the committee. In this case, it is recognized that an additional meeting (soon after the annual meeting) may be necessary for the student to properly formulate and obtain approval for these objectives. If the objectives are not completed during the

specified time, the student may be asked to leave the graduate program. In this case, a decision to terminate a graduate student would be made by the GSAC after consultation with student, major advisor, and committee.

4. Admission to Candidacy

A student may be formally admitted to candidacy only after completing the following:

- i. Satisfactory performance on the written and oral comprehensive examinations.
- ii. Approval by the Department Chairperson of the thesis title.
- iii. Completion of a minimum 24 credit hours of approved graduate study with a cumulative average of 3.0 or better.
- iv. Formal application to the Graduate School by the Department Chairperson.

Upon completing these requirements (generally following the successful completion of the oral examination), the student requests that the Department Chairperson submit the appropriate form (see Appendix 1, Form 4) to the Graduate School to be officially admitted to candidacy. Note: A student cannot graduate without having the appropriate forms for candidacy filed in the Graduate School.

5. Teaching Requirement

An essential part of the training for a doctoral degree is experience in teaching. This is fulfilled by a one-year (2 semester) teaching requirement that is automatically completed if the student holds a teaching assistantship for one or more years. If the student is supported by a research assistantship or a fellowship, then the requirement must be fulfilled either by taking a teaching assistantship for a year or by volunteering to assist in the teaching of undergraduate or graduate laboratories. University fellows are generally required to teach for 1 semester in each of the second and third years of study. This will be arranged between the student, the major advisor, and DGS.

6. Doctoral Dissertation

The student will complete a dissertation under the direction of the research advisor which will demonstrate ability to carry out independent research. The dissertation must be written in a form acceptable to the Graduate School (see Bulletin of the Graduate School and the Guide For Writing Theses and Dissertations).

7. Defense of Dissertation

The Defense of Dissertation occurs in two steps. The first is an *Approval of the Written Dissertation by Official Reviewers* and the second is an *Oral Defense of the Dissertation*. The first step must be successfully completed before the 2nd (Oral Defense) can be scheduled.

i. Approval of a Dissertation by Official Readers

A graduate student's Ph.D. advisory committee consists of 4 or 5 faculty members, i.e., his research advisor and three or four other professors requested by the advisor and approved by the Departmental Chairperson (see Section I, part F, page 7). Three of the members of this committee, but not including the major professor, are designated "official dissertation readers" and this should be indicated at the time that the advisory committee is formed and approved. Their job is to read the dissertation thoroughly and either approve or disapprove it.

When the dissertation is finished it should be circulated to the official readers by the graduate student. The title page of the circulated copies must be signed by the major advisor. This signifies to the readers that the advisor approves the dissertation and that it is ready to be circulated. Readers have the right to refuse to read a dissertation that has not been signed by the major advisor. Appropriate reader approval forms (see Appendix 1, Form 6) obtained from the departmental graduate secretary should be given to the official readers when the dissertation is circulated. It is normal procedure to allow the readers a minimum of two weeks to read the dissertation. If a reader approves the dissertation he/she signs the approval form and returns it to the departmental graduate secretary. The Graduate School requires an additional 10-day work period to schedule the oral defense of the dissertation following approval by the advisory committee.

It should be understood that a reader can approve the dissertation as presented, or disapprove it and require that changes be made before approval is granted. If changes are required, they should be discussed with the student and/or the research advisor, and/or the other members of the advisory committee. All changes should be made before approval is granted. Changes may relate to the form or content of the dissertation per se, or they may be a requirement for additional experimentation. In any event approval cannot be granted until these changes are made to the satisfaction of the reader(s) involved. Remember, approval of a dissertation by a reader implies that the dissertation with regard to content is in essentially its final form as far as he/she is concerned. After unanimous approval of the dissertation by the readers the candidate presents himself/herself for the final oral examination on his/her field of research (the "defense of dissertation").

ii. Scheduling the Oral Defense

After all of the reader approval forms have been returned, the student should contact the departmental graduate secretary to arrange scheduling the Defense with the Graduate School. The student should complete a copy of this form (see Appendix 1, Form 7) and submit it to the Chairperson so that the relevant information concerning the date and time of the defense is available. The Graduate School requires a 10-day work period to schedule the defense, which must be considered when a student is circulating the dissertation to the readers for approval. An official notification from the Graduate School will soon follow, informing everyone of the proper time of the defense.

As with the oral comprehensive examination, the defense of the dissertation is chaired by a faculty member outside of the Department of Biological Sciences, appointed by the Graduate School. If the student or advisor would like to have a particular outside Chairperson appointed for the defense and this person has agreed to act as Chairperson, they can have the department indicate this on the form sent to the Graduate School.

iii. Defense of Dissertation

The Defense of Dissertation consists of two parts. The first is a 50-minute seminar presentation of the dissertation research that is given to the student's advisory committee and the outside Chairperson, and is open to the public. The second part is a closed oral examination following the seminar that is open only to the advisory committee and the outside Chairperson. Formal public notice of the seminar must be arranged by the student or major advisor through the Department Office. It is the major advisor's responsibility to introduce the student. At the end of the seminar, any member of the audience may ask questions. Following a brief question/answer period, the advisory committee, outside Chairperson and the student will proceed to the closed session. At this time the advisory committee will question the student on the dissertation. After all questions have been asked, the committee members will vote by secret ballot to PASS or FAIL. Approval of at least three of the four or four of the five committee members constitutes successful completion of the dissertation defense.

The subject matter of this final oral examination is the student's field of research. Since the dissertation has already been approved in the context mentioned above, the student is being tested only for his or her ability to defend the dissertation in the context of their field. Thus, it is possible for a student to fail the defense even though the dissertation has been approved. In the event of failure, the committee will make its recommendations to the Chairperson of the Department. Minor changes in both the form and content of the dissertation may also be suggested to the student and his or her advisor at this time. The outside Chairperson of the examining board will inform the Graduate School of the outcome of the examination. **The student's advisor shall also inform the Chairperson of the Department of Biological Sciences of the outcome as soon as possible following the defense by submitting the appropriate form (Appendix 1, Form 2).**

iv. Submitting the Thesis to the Graduate School:

To receive the degree at the next commencement, the doctoral student who has successfully defended his or her dissertation must present two clean copies, signed by the dissertation director, to the Graduate School. The delivery deadline is published in the Graduate School Calendar. The Graduate School will verify the dissertation for compliance with the approved style manual. The candidate will then deliver the approved copies along with the Graduate School approval form to the Hesburgh Library, where he or she pays the microfilming costs. The Graduate Council requires that all doctoral dissertations be microfilmed by

University Microfilms International, Ann Arbor, Michigan. The administrative office in the Hesburgh Library handles this publication requirement.

c. Degree Eligibility:

The student must fulfill all doctoral requirements, including the dissertation and its defense, within eight (8) years from the time of matriculation. Failure to complete any of the Graduate School or departmental requirements within the prescribed period results in forfeiture of degree eligibility.

C) DEPARTMENTAL SEMINARS

Usually once a week, on Tuesday afternoon, the Department sponsors seminars for the benefit of all members of the Department. All graduate students are required to attend these seminars since they constitute a vital part of their educational experience.

Graduate students of the Department are also required to register for at least one credit hour of an appropriate graduate seminar class per year. For details see the section on course requirements for the Master's or Ph.D. degree.

SECTION III: FINANCIAL SUPPORT

Full-time, degree-seeking graduate students in good academic standing may be eligible for financial support supplied by the University in the form of Graduate (Teaching) Assistantships, Tuition Scholarships, and Graduate Fellowships. In addition, Research Assistantships may also be available through individual professors or training grant programs.

Ph.D. graduate students will receive four years of University support assuming all Departmental and University requirements are met. Ph.D. graduate students are also eligible for a fifth year of University support with the implicit approval of their major advisor and DGS. Similarly, M.S. students will receive two years of University support and are eligible for a third year of University support, again with the implicit approval of their major advisor and DGS.

Any additional University support beyond the limits described above will require formal Departmental approval. In such cases the major advisor and student must request such additional support in writing to the DGS no later than the end of January for the following Fall and no later than the end of September for the following Spring semester. The request should include 1) a clear outline of the student's entire research plan, 2) what the student has already completed towards finishing the project, 3) the specific plans (specific experiments, etc.) for the additional time requested and 4) the provisions made in the event that these experiments are not successful. The DGS will meet with the GSAC to discuss the request and render a final decision.

University support is defined as Graduate Assistantships, departmental fellowships, and special University fellowships, such as Schmitt and Luce, administered by the University. Research assistantships are *not* considered as University support. However, students that have had a combination of research and University sponsored support must still go through the procedures outlined above if they are petitioning for additional University sponsored support.

A) Graduate (Teaching) Assistant

Graduate students may be appointed to assist in the teaching laboratories of the Department of Biological Sciences by the Chairperson of the Department. Their duties will vary with the courses to which they are assigned, but will not normally exceed 17.5 hours per week on average, including contact and preparation time. This activity is looked upon as an essential part of the student's training, and every doctoral student must serve at least one year (2 semesters) as a graduate teaching assistant. This may be accomplished on a volunteer basis or through a regular appointment. A Teaching Assistant (TA) are expected to be prepared for the activities of the day and to cooperate with the faculty member in charge to insure excellent opportunities for learning by the students in the course. Performance as a TA will be monitored each semester through the completion of a TA evaluation form by the professor responsible for the course. These forms (see Appendix 1, Form 14) will be distributed to professors along with the semester grade sheets and, upon completion, will be entered into the student's file. Unsatisfactory ratings for TA performance will be evaluated in a manner similar to the evaluation of grade deficiencies. The DGS will review the completed forms each semester. If a student receives an unsatisfactory evaluation, the Director will discuss the situation directly with him/her. If the student would like to respond to the evaluation they can do so in writing and this will also be included in their file. They will subsequently receive a warning letter from the DGS indicating that if they receive a second unsatisfactory rating their situation will be brought before the GSAC. At that time, the Committee will look at the past evaluations and consult with the student, the professors issuing unsatisfactory evaluations, and the major advisor. The Committee will then decide whether the student should continue to receive TA support.

According to the regulations of the Graduate School, graduate assistants and research assistants are restricted to a maximum registration of 9 credit hours per semester and one "free" audit (maximum of 3 credits).

A graduate student accepting a graduate assistant stipend at the beginning of a semester is obligated to complete his or her duties for the whole semester. Students anticipating completing their degree and leaving the University during a semester should not seek or accept an appointment as a graduate assistant for that semester.

B) Research Assistant

A Research Assistant (RA) is a graduate student who works on thesis or other research. Support comes from government, industrial or private grant funds. Appointments are generally made on a semester-by-semester basis. An RA is appointed by the Department Chairperson at the request of the Principal Investigator for the sponsored research account (usually of the Research Advisor).

C) Research Fellow

A Research Fellow is a graduate student working on thesis research under a faculty research advisor. A Fellow normally is appointed for 12 months (academic year and summer) but maybe less (e.g., semester). He/she receives the base stipend, and tuition from a fellowship fund from within the University or external agency. According to the regulations of the Graduate School, research fellows are restricted to a maximum registration of 12 credit hours per semester and one "free" audit (maximum of 3 credits).

The Graduate School has available:

Schmitt Fellowship. Available to exceptional students, it provides tuition and a stipend for a period of four academic years (awarded only to incoming students).

Luce Fellowship. Available to exceptional female students, it provides tuition and a stipend for a period of four academic years (awarded only to incoming students).

Diversity Fellowship. Available to exceptional minority students, it provides tuition and a stipend for a period of two academic years (awarded only to incoming students).

D) Departmental Graduate Support for Research and Travel

Limited Departmental funds to help students with their thesis research may be available on a competitive basis. These funds can be used for supplies, equipment, and necessary travel to meetings, other laboratories or field sites. For information see the Department Chairperson or DGS.

E) Outside Support

Students may also apply individually for pre-doctoral fellowships, when available from government agencies, including: (1) The National Institutes of Health - Pre-doctoral Fellowships, and (2) The National Science Foundation - Graduate Research Fellowship Program. Please consult government web sites about these opportunities.

Current information on outside support also can be obtained from the Graduate School. In addition, when appropriate, proposals for support of research, supplies and travel should be made routinely by every graduate student to such organizations as NSF (Doctoral Dissertation Improvement Grants), Sigma Xi, and The Indiana Academy of Science.

SECTION IV: OTHER DEPARTMENTAL MATTERS

A) Facilities

Students may use departmental facilities such as computing facilities, greenhouses, radiation sources, printers, copy machines, etc., for legitimate reasons. However, the student is responsible for first contacting the faculty member in charge for clearance to use a particular facility. The student must also assist in maintaining security, safety, order and cleanliness in each facility. Special authorization and training must be obtained before any graduate student can use the Freimann Life Science Center (FLSC) and specifically for working with vertebrate animals. Contact the FLSC for information about vertebrate animal care and handling.

B) Keys

All keys which students are authorized to possess may be obtained from the Biological Sciences Office (Room 107) with the written request of his/her faculty advisor. A one-time deposit of \$20.00 is required from the student. Keys must be returned when they are no longer needed, at which time deposits will be refunded.

C) Stipends

Graduate and Research Assistants and Research Fellows are paid twice monthly, on the 15th and on the last day of the month. Direct deposit into a bank account of your choice is

mandatory. A deposit statement will be placed in your mailbox on payday. Students are not supported by the Department during the summer. They should consult with their research advisors to determine if summer stipend money is available through extramural grants. New graduate students that have not formally decided on a major research advisor by the first summer of their studies should contact the DGS or the Department Chairperson concerning summer stipends.

D) Travel

Any graduate student that will be traveling away from the University on University-related business (e.g., laboratory field trips, collecting trips, attending scientific meetings) must complete and submit a travel form (Appendix 1, Form 13) at least 3 days prior to the trip. This form should be submitted to the Department Administrative Assistant. If you are being reimbursed for travel expenses, you must save all receipts and submit them with a travel expense report within two weeks of your return.

E) On-campus Parking

Parking stickers for student lots are available at registration or from campus security. If there is need for temporary use of a vehicle on the campus, the Chairperson of the Department will make suitable arrangements when supplied with appropriate information by the student's advisor. Students and staff may park in the Galvin Life Science lot on weekends, holidays, and after 5 pm on weekdays.

F) Requisitions

Students are not authorized to requisition items chargeable to any University account administered by the Department, be it from University or outside research funds. All needed items must be requisitioned in writing by the appropriate faculty member. Any petty cash expenditures must be authorized beforehand by a faculty member.

G) Department Stockroom

The Department maintains a stockroom only for office and cleaning supplies. For routine laboratory supplies such as glassware, chemicals and plasticware, Biology faculty, students, and staff can purchase items from the Chemistry Stockroom housed in the Stepan Chemistry Hall. Graduate students can sign-out materials from that stockroom in two ways. If the supplies will be paid for by grant-sponsored research then the student must give the Chemistry Stockroom personnel the appropriate grant account number (issued by the major advisor) when the supplies are obtained. If the supplies are to be used for a teaching laboratory and paid for by the Department, then the student must first submit a requisition (that has been approved by the course professor) to the departmental accounting secretary. The secretary will, in turn, provide the student with a requisition that can be taken to the Chemistry Stockroom to obtain the supplies.

The Department maintains common autoclaves and dishwashing equipment that are administered through the staff of the departmental stockroom located in the basement of the Galvin Life Sciences building. See the staff of that stockroom for details on autoclave and dishwasher usage.

H) Office Supplies

Office supplies required for the course in which you function as a graduate assistant may be requisitioned only through the faculty member in charge of the course. Office supplies are not issued to students for personal use, nor is postage provided for any type of student communication.

I) Mail

All mail is distributed in the locked Graduate Student boxes adjacent to the Biological Sciences Department Office (Room 107) on the first floor. Please do not use the Biological Sciences Department for non-scientific personal mail, incoming or outgoing.

J) Telephones

Telephone service is provided on a strictly business basis. No long distance calls are allowed to be billed to the Department.

K) Addresses

It is important that the Department Office have a record of your current address and telephone number. Please insure that this information is provided to the Secretary and kept up to date.

L) Secretarial Service.

The department does not provide secretarial service to graduate students, but a Graduate Secretary is available to assist students with completing forms.

M) Escort Service for Female Students

The University Security Department supplies escorts for female students who must travel the campus at night. Call University Extension 1-5555 to arrange a time and place, and a security officer will escort you to your destination on campus. This is a free service supplied by Security. An escort service is also provided by students ("Safe Walk") and is available by dialing 4-2583.

N) Communication

The Biological Sciences faculty wishes to enhance communication with all the students. Any and all members of the faculty may be approached informally in planning and developing your career and research plans.

Routine departmental announcements will appear on the Bulletin Boards, especially those near the Department Office in student mail boxes, and via email. The Chairperson of the Department, the DGS, BGSO, and the GSAC are frequent channels for communications on department policy for graduate students.

SECTION V - APPENDICES

Graduate Guide

Appendix 1- Forms for Master's and Ph.D. examinations and Departmental and University requirements.

- 1) Form-1 Request to the Chairperson for approval of graduate committee members (covers both Master's and Ph.D.)
- 2) Form-2 Departmental verification of graduate examinations (for both Master's and Ph.D. writtens and orals)
- 3) Form-3 Request to schedule Ph.D. oral comprehensive examination (submit to DGS)
- 4) Form-4 Application for admission to doctoral candidacy (submit to DGS)
- 5) Form-5 Request for thesis title approval (submit to DGS)
- 6) Form-6 Reader's report for Ph.D. dissertation (circulate with thesis)
- 7) Form-7 Request to schedule the defense of the Ph.D. dissertation (submit to DGS)
- 8) Form-8 Request to schedule Master's comprehensive examination or thesis defense (submit to DGS)
- 9) Form-9 Report to the Graduate School on Master's comprehensive examination (submit to DGS)
- 10) Form-10 Application for admission to Master's degree candidacy (submit to DGS)
- 11) Form-11 Reader's report for Master's thesis (circulate with thesis)
- 12) Form-12 Master's thesis transmittal form (must accompany thesis to Graduate School)
- 13) Form-13 Travel information form
- 14) Form-14 Evaluation of teaching assistant performance form
- 15) Form-15 Transfer of credits form
- 16) Form-16 Research Summary Committee form
- 17) Form-17 Request for an Outside Committee Member

APPENDIX 2

**MILEPOSTS IN GRADUATE EDUCATION IN BIOLOGICAL SCIENCES:
MASTERS DEGREE**

YEAR 1

- Semester 1. Interim Advisor assigned; coursework, rotations, etc.
- Semester 2. Permanent Advisor and Advisory Committee selected (**Form 1**)¹

YEAR 2

- Semester 1. Oral Comprehensive Examination (**Forms 2, 8, 9**)
- Semester 2. Advancement to Candidacy (**Form 10**)

YEAR 3

- Semester 1. Writing
Approval of Thesis Title (**Form 5**)
- Semester 2. Reader's Approval of Written Thesis (**Form 11**)
Oral Defense of Thesis (**Form 8**) and Transmittal (**Form 12**)

¹ All **Forms** should be processed through the Biology Office (see Appendix 1 in Graduate Guide). The Office has these forms in electronic form and will assist you in filling them out.

APPENDIX 3

MILEPOSTS IN GRADUATE EDUCATION IN BIOLOGICAL SCIENCES: DOCTORAL DEGREE

YEAR 1

- Semester 1. Interim Advisor assigned; coursework, rotations, etc.
- Semester 2. Coursework, rotations, etc., continued

YEAR 2

- Semester 1. Permanent Advisor selected
Advisory Committee formed (**Form 1**¹)
- Semester 2. Written Comprehensive Examination (**Form 2**)

YEAR 3

- Semester 1. Oral Comprehensive Examination² (**Form 3**)
Advancement to Candidacy (**Form 4**)
- Semester 2. Research

YEAR 4

- Semester 1. Research
- Semester 2. Annual Meeting with Advisory Committee³ (**Report**)

YEAR 5

- Semester 1. Writing
Approval of Dissertation Title (**Form 5**)
- Semester 2. Reader's Approval of Written Dissertation (**Form 6**)
Oral Defense of Dissertation² (**Forms 2, 7**) and Submission

¹ All **Forms** should be processed through the Biology Office (see Appendix 1 in Graduate Guide). The Office has these forms in electronic form and will assist you in filling them out.

² Ten-day pre-notification of the Graduate School is required (p. 16 in Graduate Guide)

³ Annual meetings are required after oral comprehensives (p. 17 in Graduate Guide)

Appendix 4: ACADEMIC INTEGRITY

Integrity in scholarship and research is an essential characteristic of academic life and social structure in the University. Any activity that compromises the pursuit of truth and the advancement of knowledge besmirches the intellectual effort and may undermine confidence in the academic enterprise. A commitment to honesty is expected in all academic endeavors, and this should be continuously emphasized to students, research assistants, associates and colleagues by mentors and academic leaders.

The procedures for ensuring academic integrity in the Graduate School are distinct from those in the Undergraduate Honor Code.

Violations of academic integrity may occur in classroom work and related academic functions or in research/scholarship endeavors. Classroom-type misconduct includes the use of information obtained from another student's paper during an examination, plagiarism, submission of work written by someone else, falsification of data, etc. Violation of integrity in research/ scholarship is deliberate fabrication, falsification or plagiarism in proposing, performing or reporting research or other deliberate misrepresentation in proposing, conducting, reporting or reviewing research. Misconduct does not include errors of judgment, errors in recording, selection or analysis of data, differences in opinions involving interpretation, nor conduct unrelated to the research process. Misconduct includes practices that materially and adversely affect the integrity of scholarship and research.

If an individual suspects that a violation of academic integrity has occurred, he or she should discuss the matter confidentially with the department chair or appropriate director. If there appears to be a reasonable basis for further inquiry, the chair will select an impartial panel consisting of three members, one of whom may be a graduate student, to investigate the matter. The chair will inform the accused of the charges. The panel will determine initially whether to proceed directly to a hearing, to further investigate the case, or to dismiss the charges. If the panel decides to proceed directly to a hearing, the hearing will be held within 10 days of the original notification. If the panel decides that further investigation is necessary, it shall immediately notify the chair. If it decides that a hearing is not warranted, all information gathered for this investigation will be destroyed. The utmost care will be taken to minimize any negative consequence to the accused.

The accused party must be given the opportunity to respond to any and all allegations and supporting evidence at the hearing. The response will be made to the appointed panel. The panel will make a final judgment, recommend appropriate disciplinary action, and report to the chair in writing. The report will include all of the pertinent documentation and will be presented within 30 days after meeting with the accused. Copies of the report are to be made available to the accused, the chair, and the vice president. If a violation is judged to have occurred, this might be grounds for dismissal from the University; research/scholarship violations might be reported to the sponsor of the research effort (e.g., NSF, NIH, Lilly Foundation, etc.), if appropriate.

If the student chooses to appeal, he or she must address the appeal in writing to the Vice President for Graduate Studies and Research within 10 days. The student has the right to appear before the vice president or his or her delegate. The vice president may decide to appoint an ad hoc committee to handle this appeal, if deemed necessary.

Sexual and discriminatory harassment are prohibited by the University. Definitions and policies regarding sexual harassment, discriminatory harassment and other aspects of student life and behavior are described in du Lac, which is the University's description of student life policies and procedures. Students in the Graduate School must abide by those portions of du Lac which explicitly refer to graduate students or to the Graduate School. Copies of du Lac are mailed to all continuing students at the beginning of the fall semester, and may be obtained from the Office of Residence Life, 315 Main Building.

The Vice President for Graduate Studies and Research has appointed an academic counselor in the Graduate School to be available to graduate students who want to discuss confidentially problems they are having in their programs. The counselor can help a student decide how to resolve the problem. The Graduate School's academic counselor for 1997-98 is Dr. Barbara M. Turpin, Associate Dean for Graduate Studies.

Discriminatory Harassment

Approved at the April 16, 1991 meeting of the Academic Council.

I. Policy

The University of Notre Dame believes in the intrinsic value of all human beings. It is, moreover, committed to the full peaceable participation of all its members in the educational endeavor it fosters. This is the reason that the University prohibits discriminatory harassment as defined below. The University is also committed to the free expression and advocacy of ideas; it wishes to maintain the integrity of this commitment as well. For this reason, cases of verbal harassment are defined here with great caution. Harassment in general is prohibited elsewhere in the University's regulations.

II. Definition

For purposes of this policy:

A: *Harassment*

Harassment is any physical conduct intentionally inflicting injury on the person or property of another, or any intentional threat of such conduct, or any hostile intentional, and persistent badgering, addressed directly at another, or small group of others, that is intended to intimidate its victim(s) from any University activity, or any verbal attack, intended to provoke the victim to immediate physical retaliation.

B: *Discriminatory Harassment*

Conduct as described in A., above, constitutes discriminatory harassment, if, in addition, it is accompanied by intentionally demeaning expressions concerning the race, gender, religion, sexual orientation, or national origin of the victim(s).

III. Prohibition

All discriminatory harassment is prohibited.

IV. Administration of Policy

It is appropriate to report any allegation of discriminatory harassment to the authorities of the University. The ways available for doing this are as follows:

A. *Students*

An alleged incident of discriminatory harassment by a student toward another student that occurs outside a residence hall is to be reported to the Office of Residence Life and shall be handled in the same manner as other violations of University rules and regulations. (See section of du Lac entitled University Disciplinary Procedures.) Likewise, any alleged incident of discriminatory harassment by a student toward a faculty member or staff member is to be reported to the Office of Residence Life. Any alleged incident of discriminatory harassment by a student toward any other student that occurs in a residence hall is to be reported first to the Rector and in consultation with the Office of Residence Life, a determination shall be made as to whether the allegation should be handled at the hall level or whether the matter should be referred to the Office of Residence Life.

B. *Faculty*

An alleged incident of discriminatory harassment by a faculty member is to be reported to the chair of the academic department, or, in cases involving the chair, to the dean of the college. If the matter cannot be resolved at the department or college level, it is to be referred to the Provost's Office.

C. *Staff*

An alleged incident of discriminatory harassment by a staff member is to be reported to the Director of Human Resources, and shall be handled by the Office of Human Resources in the same manner as any other violation of University rules and regulations as outlined in the University Human Resource Manual.

D. *Administration*

An alleged incident of discriminatory harassment by an administrator is to be reported to the appropriate superior officer of the person involved.

E. *Ombudsperson*

Notwithstanding the above, a person alleging discriminatory harassment may choose to report the incident to the University ombudsperson. This is to be a member of the University community selected by the President, in consultation with the other officers of the University, for that task. The ombudsperson, after taking information of the incident, is to help the complainant

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handle the matter, either by informal conciliation, or by helping the complainant proceed with the reporting procedure described above.

[Note: Prof. Lloyd Ketchum is currently the University ombudsperson (ph. 1-3909)]

V. Existing University Rules and Regulations

This policy is intended to be an addition to existing University rules and regulations and does not alter or modify any existing University rule or regulation.

Sexual Harassment

I. Policy

The University of Notre Dame prohibits sexual harassment by all faculty, staff and students. Sexual harassment by any faculty, staff or student is a barrier to the educational, scholarly and research purposes of the University of Notre Dame and is a violation of law and University policy. The University of Notre Dame affirms its commitment to maintaining a learning and working environment which is fair, respectful and free from sexual harassment. To these ends, the following sexual harassment policy has been adopted.

II. Definition

The determination of what constitutes sexual harassment will vary with the particular circumstances, but may be described generally as: Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

1) submission to or rejection of such conduct is made either explicitly or implicitly a term or condition of instruction, employment, or participation in other University activity; 2) submission to or rejection of such conduct by an individual is used as a basis for evaluation in making academic or personnel decisions affecting an individual; or 3) such conduct has the purpose or effect of unreasonably interfering with an individual's performance or creating an intimidating, hostile, or offensive University environment.

III. Administration of Policy

A. *Students*

An alleged incident of sexual harassment by a student toward any other student or faculty or staff member, should be reported to the Vice President for Student Affairs and shall be handled by the Office of Residence Life in the same manner as any other violations of University rules and regulations.

B. *Faculty*

Any incident of sexual harassment by a faculty member toward any student, staff personnel or other faculty member shall be reported to the Provost's Office, and shall be handled by the Provost's Office. If a formal charge is to be filed, it shall be administered in the same manner as a charge for Serious Cause for Dismissal as outlined in the Academic Articles.

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C. *Staff*

Any incident of sexual harassment by a staff member toward a student, faculty member or other staff member, shall be reported to the Director of Human Resources, and shall be handled by the Human Resources Office in the same manner as any other violation of University rules and regulations as outlined in the University Human Resources Manual.

D. *Confidentiality*

Sexual harassment is a particularly sensitive issue which may affect any member of the University community. The right to confidentiality of all parties involved in a sexual harassment charge shall be strictly adhered to insofar as it does not interfere with the University's legal obligation to investigate allegations of sexual harassment when brought to the University's attention, and to take corrective action.

E. *Resolution*

A sexual harassment charge may result in a finding that no action is warranted, or may be handled by: 1) informal resolution, 2) reprimand, 3) disciplinary sanction, or 4) termination or expulsion.

F. *Non-Retaliation*

Any attempt by a member of the student body, staff or faculty to penalize in any way, a person bringing a sexual harassment charge, or any other form of retaliation, is prohibited and will be treated as a separate incident to be reviewed in its own right.

G. *Protection of the accused*

(a) In cases under III(B.) or III(C.) during the investigation and before formal charges, the accused will be informed of the allegations, the identity of the complainant, the facts surrounding the allegations, and given the opportunity to respond.

(b) In the event the allegations are not substantiated, all reasonable steps will be taken to restore the reputation of the accused if it was damaged by the proceeding.

(c) A complainant found to have been intentionally dishonest in making the allegations or to have made them maliciously is subject to the full range of the University's disciplinary procedures from official reprimand to dismissal.

IV. Consensual Relationships

Because of the unique relationships between student and faculty members, with the faculty member serving as educator, counselor and evaluator, and the possibility of abuse of this relationship or the appearance of abuse, the University views it as unacceptable if faculty members (including all those who teach at the University, graduate students with teaching responsibilities and other instructional personnel) engage in amorous relations with students

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enrolled in their classes or subject to their supervision, even when both parties appear to have consented to the relationship. In keeping with this philosophy of the University, if charges of sexual harassment are made, it shall not be a defense to allege that the relationship was consensual.

APPENDIX 6: DEVELOPING AND MAINTAINING A PRODUCTIVE GRADUATE STUDENT-ADVISOR RELATIONSHIP

The Biology Graduate Student Organization (BGSO) and the Graduate Student Relations Committee (GSRC) recognize that graduate students may encounter a variety of challenges during their graduate career. It is important to have an outlined protocol in place that a graduate student can follow when a problem is encountered that cannot be readily resolved. The outline below represents the steps that the BGSO and GSRC recommend a graduate student take. It is important to note that this is meant to be an informal process to improve a student's progress through the graduate program. Although this protocol is written to address problems involving a major advisor, this process could be used for any number of professional relationships in the laboratory or department. The process outlined here is not a forum to address problems that have legal ramifications. All meeting records will be kept in a confidential file in the Department Office accessible to only the Director of Graduate Studies and the Department Chairperson.

Students who encounter difficulties in their graduate career are encouraged to first request advice and aid from the peer mentoring committee (see Step 1 below). Students should contact the elected Graduate Student Faculty Representative if such difficulties arise. The representative will place the student in contact with the peer mentoring committee.

- Step 1: Peer mentoring** B A standing committee of 4-5 graduate students will act as peer mentors for the graduate students. Selection of the peer mentors will be supervised by the BGSO. There will be at least one peer mentor from each of the 3 research clusters, and all attempts will be made to have a diverse group of mentors. Graduate students can contact anyone from the list, or meet with a group of mentors, to discuss professional challenges that they may be experiencing.
- Step 2: Student-Advisor Communication** B The graduate student should make every effort to resolve the issue with their advisor before continuing to steps 3 or 4. Part of the peer mentor role will be to guide the graduate student through this process. The student should use e-mail and one-on-one meetings to accomplish this. The student is responsible for keeping track of these meetings (e.g., print out e-mails, write summary of meetings).
- Step 3: Informal GSRC Meeting** B The graduate student and peer mentor will meet with the GSRC committee to discuss the problem, possible solutions, and the reality of moving further in the resolution process. The committee is there to recommend a course of action to the student and to ensure that frivolous complaints do not go forward. If deemed necessary, the GSRC will write a brief, confidential summary of the meeting for the confidential file.
- Step 4: Meeting with the Director of Graduate Studies (DGS)** B A joint meeting will occur between the DGS, advisor, and graduate student. The DGS will attempt to facilitate a resolution of the problem. The DGS may, if deemed necessary, submit a confidential record of the meeting for the confidential file.

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Step 5: Meeting with the Department Chairperson B A joint meeting will occur between the Department head, DGS, advisor, and graduate student, in which they will try to find an acceptable solution to the problem. The Department Chairperson will submit a record of the meeting for the confidential file.