Florida State University
College of Medicine
Biomedical Sciences Ph.D. Program

PH.D. PROGRAM IN BIOMEDICAL SCIENCES

STUDENT HANDBOOK

COLLEGE OF MEDICINE

FLORIDA STATE UNIVERSITY

FALL 2008

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STUDENT HANDBOOK

PH.D. PROGRAM IN BIOMEDICAL SCIENCES,
FLORIDA STATE UNIVERSITY COLLEGE OF MEDICINE

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WELCOME TO THE
PROGRAM IN BIOMEDICAL SCIENCES
COLLEGE OF MEDICINE
FLORIDA STATE UNIVERSITY

INTRODUCTION

This booklet contains information needed for successful completion of your graduate degree program. Please read this Handbook thoroughly. Familiarity with the contents will assist you to make a smooth transition into the Program and Department of Biomedical Sciences, and will help to minimize complications or delays in your training program. Advisors are available for assistance, but, you are responsible for assuring that all requirements are satisfied to meet your planned graduation schedule.

The Handbook is divided into two parts. Part I is an abbreviated, narrative description with tables and other aids to guide you quickly through the requirements for your graduate training. Part II describes in detail the policies and practices of the Program that you need to be familiar with. Part II is in alphabetical order. Links in Part I guide you to the detailed descriptions in Part II.

Materials in the Appendix include a Progress in Program checklist to assist you in keeping track of program requirements and their deadlines. Also included are University Catalog descriptions of graduate courses offered in the College of Medicine, courses offered in other departments that are suitable elective courses, and forms that should be completed and turned in to the Graduate Program Office to record satisfaction of various Program requirements.

University Requirements and the Office of Graduate Studies: As a student at Florida State University you need to meet certain requirements that apply to all graduate students. Important examples of processes governed by University standards include, but are not limited to admission and registration procedures and deadlines, the Preliminary Doctoral Examination for Admission to Candidacy for the Ph.D. Degree, the composition and qualifications of your Supervisory Committee, residency requirements, and the defense and submission of your Dissertation. In addition to this Biomedical Sciences Graduate Student Handbook you should become familiar with University requirements described in the FSU Graduate Student Bulletin published by the University Office of Graduate Studies, available at http://registrar.fsu.edu/bulletin/grad/.

The degree requirements and other expectations of a graduate student generally are specified in the Program in Biomedical Sciences Student Handbook and FSU Graduate Bulletin for the year that the student entered the Program. These documents are not contracts; however, the Program and University reserve the right to change requirements. Requirement changes and

the affected student entry dates are identified in this Handbook. Students with questions about application of requirement changes to their case should contact the Program Director for clarification.

The Director of Graduate Programs, Biomedical Sciences Student Support Coordinator and staff in the Graduate Program Office are available to provide student counseling about program requirements, registration, financial, housing and more personal matters. Please feel free to contact them as needed. We look forward to working with you and to your successful graduate training!

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PART I. GUIDE TO GRADUATE STUDIES

This document is intended to guide you through the expectations of graduate students in the Graduate Program in Biomedical Sciences. Part I is a narrative summary with tables and other aids to describe the requirements for your graduate training. Part II provides full details of the policies, procedures and practices of the Program that you need to be familiar with. Part II is in alphabetical order. Refer to Part II for more detailed descriptions of any terms that are underlined in Part I and appear blue on your screen. The Appendix includes a Progress in Program checklist to assist you in keeping track of program requirements and their deadlines. Also included are University Catalog descriptions of graduate courses offered in the College of Medicine, courses offered in other departments that are suitable elective courses, and forms that should be completed and turned in to the Graduate Program Office to record satisfaction of various Program requirements

The specific recommendations listed below assume typical backgrounds. These requirements should be followed unless amended during academic advisement. Amendments may be made if you are exceptionally well prepared, or need to remedy deficiencies indicated by your transcripts and interview.

I.1. Overview of Graduate Training for a Ph.D. in Biomedical Sciences

Your ***first year*** should be devoted to orienting yourself to the biomedical sciences, learning about independent research, choosing your Major Professor and the area of concentration of your graduate training, and satisfying initial requirements of the graduate program.
Specifically you should

- complete the required course work with a minimum grade point average (GPA) of 3.0*;
- participate actively in laboratory rotations (three required);
- attend seminars regularly offered by the College of Medicine (Grand Rounds) and the Department of Biomedical Sciences seminar series. (You may also wish to attend specialty seminar series in this or other departments.)

In addition, as you near the end of your first year you should

- select your Major Professor and Supervisory Committee;
- design your Program of Studies in consultation with your Supervisory Committee;
- begin research and explore dissertation project opportunities in the laboratory of your Major Professor.

  * IMPORTANT NOTE: the University requires that graduate students maintain a minimum GPA of 3.0. A student is placed on academic probation after the first semester with a GPA below 3.0, and will be dismissed from graduate studies after two successive semesters with a GPA below 3.0.

In the ***second year*** you should become knowledgeable in your intended field of study, particularly the subspecialty of your Major Professor, become competent in laboratory techniques common to this field, and complete the majority of your formal requirements.
Specifically you should

- complete required course work, including elective courses;
- regularly attend seminars as in Year 1;
- participate in the Summer Advanced Topics seminar course;
- make progress in independent research and defining a dissertation project;

- schedule and complete the written comprehensive portion of the Preliminary Doctoral Examination;

In the ***third year*** you should complete the last formal Program requirements other than the dissertation, including achievement of *Admission to Ph.D. Candidacy* by passing the *Preliminary Doctoral Examination*, continue to develop knowledge in Biomedical Sciences and your chosen specialty, finalize design of your dissertation project, and make good progress in achieving your project aims. Specifically

- schedule and complete the presentation of your research project proposal, a requirement of the Preliminary Doctoral Examination required for Admission to Ph.D. Candidacy;
- present your dissertation Prospectus to the Supervisory Committee;
- attend seminars as in Years 1 & 2;
- present your required research seminar;
- partly or fully complete teaching requirements;
- make progress in experiments to achieve the aims of your dissertation project.

Additional years should be used to achieve the specific aims of your dissertation research project, to achieve expert knowledge and skills in your specialty area, to achieve broad knowledge in the biomedical sciences, and to publish and publically present major findings of your dissertation research. These years are the opportunity for you to focus on developing research and communication skills expected of a Ph.D. scientist. The time required to complete this phase of your training cannot be given precisely. Important research projects in biomedical sciences require a high degree of sophistication in thought and experimental techniques. Nationally, the average time to the Ph.D. in the life sciences is 5 to 5.5 years, but somewhat shorter and longer times are not unusual. Some students have graduated in as little as four years. Students in the Biomedical Sciences Program are expected to complete their degree within six years unless there are extenuating circumstances. The major uncertainty in the time to achieve your degree is *you*. Simply put, the students that work hardest and smartest are generally the earliest to graduate.

These comments do not mean that you should hurry excessively to graduate. Do allow time to take full advantage of the educational and research opportunities available to you now. The degree of independence, support and other circumstances afforded you in the future may not be as favorable as those during your graduate training! **Do take time to publish and present your results.** Learning to interpret and communicate your research results is as important as doing the experiments—some would argue more so. Publications are the currency of productivity in science. Presentation of your work at scientific meetings establishes your presence as a professional in the field, and provides opportunities to establish relationship networks with peers at other institutions. Broad scientific knowledge and skills, combined with good abilities to adapt, communicate and lead, are highly desired in the workplace. In the long run, the amount of time you spend in graduate school is less important than your productivity, and your value to a future employer as a well-trained scientist and communicator.

I.2. Summary of Degree Requirements

Following is a list of requirements. Recommendations for a typical semester-by-semester schedule are given in a later section.

I. Required Courses in Approximate Sequence (credit hrs. per semester unless noted otherwise, r=repeatable) (semester, graduate year)

PCB 5595	Advanced Molecular Biology (3) (F; G1)
IHS 5515	Ethics and Professional Integrity in Research (1) (F; G1)
STA 5172	Statistics for Epidemiology (3) (F; G1)
IHS 5935	Health Sciences Seminar (1, r) (F, Sp; G1-5)
BMS 5185	Research Opportunities in Biomedical Sciences (3 total) (F, Sp; G1)
BMS 6936	Seminar in Biomedical Sciences (1, r) (F,Sp; G1-5)
PCB 5137	Advanced Cell Biology (3) (Sp; G1)
BMS 5525	Bioregulation (4) (Sp; G1)
BMS 5935	Advanced Topics in Biomedical Sciences (1, r) (Su; G1,2)
BMS 5186C	Research Techniques in Biomedical Sciences (4) (Su; G1)
IHS 5503	Proposal Development (1) (F; G3) (taken in connection with the Preliminary Doctoral Examination)
IHS 8960	Preliminary Doctoral Examination (0,r) (F; G3)
IHS 5933	Seminar on Medical Science Education (1) (F; G3) (taken in connection with the first Supervised Teaching experience)
IHS 5945	Supervised Teaching (1,r) (variable; G3-5)
IHS 6980	Dissertation Research (1-12,r) (must have passed Preliminary Doctoral Examination; ≥ 24 hrs required for graduation)
IHS 8970	Dissertation Defense (0,r) (variable)

II. Other Requirements

- **Elective Courses:** (9 credits required) to be selected from offerings of **GMS 6001. Special Topics in Biomedical Sciences (1-3)** or APPROPRIATE GRADUATE COURSES IN OTHER DEPARTMENTS in consultation with the Supervisory Committee). A partial list of applicable courses in other departments is provided in the Appendix. Students should check with other departments on a regular basis for special topics or other courses that may be newly listed. (Note: the Supervisory Committee may recommend additional electives to satisfy additional training requirements in certain specialties.)
- **Seminar attendance**: Regular attendance at seminars of the Department of Biomedical Sciences and the College of Medicine (Grand Rounds) is required throughout the graduate training period. Students normally should enroll in the corresponding courses: **BMS 6936. Seminar in Biomedical Sciences (1-2), and IHS 5935. Health Sciences Seminar** (1). The current University limit nine of (9) credit hours per semester for a full academic load may prevent registration for these seminar courses when a student is taking several required courses, especially in the first year. Regular seminar attendance is expected as a matter of professionalism, whether the student is registered or not for the seminar. (NOTE: The requirement for enrollment in seminar courses will be waived for a Ph.D. Candidate who intends to graduate in the current academic year and otherwise is not able to accumulate the minimum of 24 credit hours of Dissertation Research.)
- **Seminar presentations**: Students are required to register for the **BMS 5935, Advanced Topics in Biomedical Sciences** seminar course during their first two years in residence and to present at least one seminar in each of the two years that they are enrolled in this

course. In addition students are expected to present at least one seminar on a topic related to their research in the Biomedical Sciences or alternative Department seminar program during their tenure as a graduate student. This requirement may be satisfied by a presentation in the regular seminar series of another department or program (e.g. Biochemistry/Structural Biology, Biological Sciences, Neurosciences). This requirement is not satisfied by presentations in journal clubs, group meetings or other informal seminar programs; by the dissertation defense, or by presentations at scientific meetings.

- **Teaching**: Students are required to have a teaching experience for a minimum of two semesters to gain this career preparation experience. Prior to fulfilling the teaching requirements students must enroll in IHS 5933. Seminar on Medical Science Education, a series of training seminars to aid development of effective teaching skills Students typically should begin to complete this requirement in their third year in residence. Teaching assignments may be made earlier in the student's career as part of their financial support. Teaching assignments usually involve facilitation in small group components of medical courses or tutoring assistance for medical students. International students must satisfy University requirements for competency in spoken English in order to be eligible to teach and for financial support as a teaching assistant. Students may be required to pass an examination or to take a course in English speaking available on campus in order to satisfy this requirement. Please see the entry in Section II of the Handbook on 'English-speaking policy' and the FSU Graduate Bulletin for details. Additional questions should be directed to the FSU Office of Graduate Studies. (IMPORTANT NOTE FOR MAJOR PROFESSORS: Teaching by a student solely to satisfy this requirement is considered an educational experience and not a department service. For this reason students in such a situation should be continued on grant support, if available, and not transferred to COM support.)
- **Laboratory Rotations**: Students in their first year are required to begin research training through rotations in research laboratories of three faculty members and enroll in BMS 5185. Research Opportunities in Biomedical Sciences. Rotations are intended to be learning experiences as well as opportunities for students to become familiar with faculty members and their laboratories before selecting their Major Professor.
- **Preliminary Doctoral Examination**: Pass Program and University requirements for the Preliminary Doctoral Examination (see Part II for details).
- **Publications**: Students are expected to publish during their tenure in the graduate program. At least one manuscript should be submitted to a peer-reviewed journal. The manuscript should describe a significant aspect of the students dissertation research and must be accepted for publication prior to the scheduled Defense of Dissertation. (Requirement applies to students Program entry date of August, 2008 or later.)
- **Research and Dissertation:** Perform dissertation research under the direction of a supervising Major Professor. Submit, publicly present, and successfully defend a Dissertation describing an original research project in biomedical sciences. Dissertation Format and Defense of Dissertation requirements are specified by the University. Details are provided in Section II of this Handbook and in the **University Graduate Bulletin**.

I.3. Registration for Classes

The Program Director and Graduate Program Assistant assist students in registering for their first semester of classes after the advisement period.

Students are responsible for registering in subsequent semesters. Advice is available from the Program Director or Biomedical Sciences Student Support Coordinator. Registration is carried out through the FSU Online Registration and the COM Enrollment Coordinator/Registrar (Melinda McDaniel). Window dates for FSU Online Registration are published by the FSU Registrar. Prior to the Registration Window students should fill out a Graduate Course Registration Form (see Appendix), have the form signed by their academic advisor, then take the completed form to the COM Enrollment Coordinator. The COM Enrollment Coordinator will register students for requested classes that are offered in the College of Medicine. **COM classes have a BMS, GMS or IHS prefix**. Students must use the FSU Online Registration to register for all other classes; that is, classes offered by other Colleges of the University--be sure to pay attention to registration dates to avoid being charged for late fees.

IMPORTANT NOTE: Students are not allowed to carry out Online Registration or register through the COM Enrollment Coordinator if they have outstanding fees of any sort (ordinary or penalty fees such as parking or library fines, late fees, etc.). **Please be sure that you have paid all applicable fees before attempting to register by any means.**

I.4. Annual Performance Evaluations

Evaluations of each student are performed annually according to University policy. Students in the Graduate Program in Biomedical Sciences are evaluated at the end of the Spring semester of each year. Evaluations of student performance in the first year are the responsibility of the Program Director in consultation with the Graduate Program Committee and Major Professor. Subsequent annual evaluations are performed by the student's Major Professor with other members of the Supervisory Committee and reported to the Program Director by the Major Professor. See Evaluations section in Part II for further details.

I.5. Detailed Recommendations for Year One

The following recommendations are for entering students with typical backgrounds; that is, who majored in biochemistry, biology or comparable disciplines and who have not obvious academic deficiencies. Students with special needs or prior advanced training should discuss other options with their advisor.

> **Arriving in Tallahassee: You should plan to arrive in Tallahassee at least a week before the published start date of classes (August 25, 2008)** to allow yourself time to establish your household, participate in orientation events and register for classes. When you first arrive on campus you should visit the Graduate Program Office as soon as practical to pick up any last minute information and make an appointment to meet the Program Director for preliminary advising. Program staff also may be able to assist you with questions about housing, shopping or other matters.
>
> There are a series of orientation events you should plan to attend the week before the published start of classes. An orientation for international students is held on the Sunday or Monday of the week before classes start (Sunday, August 17 for 2008). The Florida State University Office of Graduate Studies provides an orientation session and useful workshops on Tuesday of

the week before classes start (August 19, 2008). Registration and more information about the orientation and workshops can be found at http://gradstudies.fsu.edu/orientation.html. Orientation to the Program and Department of Biomedical Sciences begins with a luncheon on Thursday (August 21, 2008). The luncheon is followed by presentations of important information about various aspects of the College and Department, then a combined reception, poster session and dinner. These activities prove informal opportunities for you to become acquainted with Program faculty, staff and students.

Advising: The Program Director and his assistant will advise you for course registration and other matters when you enter the Program during Orientation week. The Director will continue to serve as your advisor for the first two semesters. Normally you will choose your Major Professor after laboratory rotations, but before the end of the Spring semester. Your Major Professor will serve as your principal academic advisor during the remaining tenure in graduate school.

Living Stipend, Tuition and Fees: Your stipend and tuition are paid through the College of Medicine offices, regardless of funding source. The Graduate Program Assistant in the Office for Research and Graduate Programs (Denise Newsome) will assist you in processing forms needed to pay tuition and to receive your stipend before the first semester. Each subsequent semester you are required to sign a Graduate Waiver Receipt Form agreeing to waiver policies. These forms become part of your permanent file stating that you are liable for tuition should you withdraw from the University.

Student fees must be paid directly by you each semester. University practices do not allow direct payment of student fees by the College. For this reason your biweekly stipend is increased by an amount that, by year end, will compensate you for the cost of fees you incurred during the year. Please note that you must budget accordingly so that you can pay fees due each semester on time. The Program cannot reimburse you for any penalties incurred for late payment of normal fees or late registration. You are also responsible for costs of services such as parking and healthcare. See University sources on these matters.

Schedule of Classes: You should register for the following courses in the indicated semesters unless advised otherwise. Credit hours for each course is listed in parenthesis ( ).

Fall Semester:

PCB 5595	Advanced Molecular Biology (3)
STA 5172	Statistics for Epidemiology (3)
IHS 5515	Ethics and Professional Integrity in Research (1)
BMS 5185	Research Opportunities in Biomedical Sciences (2)

Spring Semester:

PCB 5137	Advanced Cell Biology (3)
BMS 5525	Bioregulation (3)
BMS 5185	Research Opportunities in Biomedical Sciences (1)
IHS 5935	Health Sciences Seminar (1)
BMS 6936	Seminar in Biomedical Sciences (1)

Summer Semester:

BMS 5935	Advanced Topics in Biomedical Sciences (1)
BMS 5186C	Research Techniques in Biomedical Sciences (4)
BMS 5905	Directed Independent Study in Biomedical Sciences (3)

Other Requirements (Year 1)

- Seminar Participation: Attendance at Health Science Seminar and Biomedical Science Seminar series in the Fall and Spring semester.
- Selection of Major Professor before end of Spring semester.
- Selection of Supervisory Committee before end of Summer semester.
- Submission of Program of Studies in consultation with Supervisory Committee before end of Summer semester.

I.6. Recommendations for Year Two

You, your Major Professor and the other members of your Supervisory Committee should meet prior to the Fall semester of your second year to determine the courses in your Program of Studies. Normally you should expect to accomplish the following in the second year.

- Complete nine (9) credit hours of elective courses, if possible (see below). You may chose to satisfy some of these hours with special topics courses offered in the College of Medicine under the course title **GMS 6001. Special Topics in Biomedical Sciences (1-3).** The specific content offered under this title will vary from one semester to another and will be announced well in advance of the registration window. You may also elect to take graduate courses in the Department of Biological Sciences, Department of Chemistry and Biochemistry, Department of Psychology, or other departments that are consistent with your training goals. The Supervisory Committee may recommend electives beyond the minimum nine hours to satisfy additional training requirements in your specialty area.

  (Note: You may find that is not possible to complete all of your intended Program of Studies in your second year because of schedule limitations. You may also choose to change or add courses to your Program of Studies as new offerings become available in this or other departments. Changes and extension of the time to complete your Program of Studies beyond the second year are allowed so long as you keep your Supervisory Committee informed and take the intended courses at the earliest opportunity.)
- Regularly attend seminars as in year one and enroll in **IHS 5935: Health Sciences Seminar (1)** and **BMS 6936: Seminar in Biomedical Sciences (1)** in the Fall and Spring semesters.
- Enroll in **BMS 5935: Advanced Topics in Biomedical Sciences (1)** in the Summer semester.
- Enroll in a total of nine (9) credit hours in each of the Fall, Spring and Summer semesters. Typically you should enroll in sufficient credit hours of **BMS 5905: Directed Independent Study in Biomedical Sciences (1-12**) in addition to other scheduled courses to achieve the desired total number of credit hours (currently nine (9) per semester).
- Schedule and complete the written comprehensive examination portion of your Preliminary Doctoral Examination with your Supervisory Committee during the Summer semester.

I.7. Requirements in Additional Years

- Write and present your research project proposal, normally by the end of the Fall semester of Year 3. You should enroll in **IHS 5503: Proposal Development (1)** and **IHS 8960: Preliminary Doctoral Examination (0)** in the semester in which you intend to present your research proposal. (Note: After you successfully present and defend the research project proposal you have passed the Preliminary Doctoral Examination and qualify to

be recommended for admission to Candidacy for the Ph. D. Degree by your Supervisory Committee.)

- Present the Prospectus of your dissertation to the Supervisory Committee, normally by the end of the Spring semester of your third year.
- Complete teaching requirements.
  - Enroll in **IHS 5933: Seminar on Medical Science Education (1)** in the Fall semester of the first year in which you are scheduled to teach.
  - Enroll in **IHS 5945. Supervised Teaching (3)** in each semester in which you are scheduled to teach.
- Regularly attend seminars as in prior years and enroll in **IHS 5935: Health Sciences Seminar (1)** and **BMS 6936: Seminar in Biomedical Sciences (2)** in the Fall and Spring semesters. (NOTE: The requirement for enrollment in seminar courses will be waived for a Ph.D. Candidate who intends to graduate in the current academic year and otherwise is not able to accumulate the minimum of 24 credit hours of Dissertation Research.)
- Present the required research seminar.
- Register for sufficient hours of **IHS 6980: Dissertation Research (1-12)** in addition to regular classroom and seminar courses to satisfy the enrollment requirements for the semester (currently nine (9) credit hours; subject to change). Complete a minimum of 24 hours of Dissertation Research to qualify for graduation.
- Submit and have accepted at least one publication to a peer-reviewed journal (effective for students entering August, 2008 and later).
- Complete research, then write and defend your dissertation. Enroll in **IHS 8970: Dissertation Defense (0)** in the semester in which you plan to defend your dissertation.

Summary Recommendations

Year 1			Year 2			Year 3			Year 4			Year 5		
Fall	**Spr.**	**Sum.**	**Fall**	**Spr.**	**Sum.**	**Fall**	**Spr.**	**Sum.**	**Fall**	**Spr**	**Sum.**	**Fall**	**Spr.**	**Sum.**
Adv. Mol. Biol.	Adv. Cell Biol.	Adv. Topics	Elect. Course	Elect. Course	Adv. Topics	Elect.	Supr. Teach		Supr. Teach					
Stats for Epidem	Bio-Regul-ation	Res. Techn.	Directed Individual Study (DIS)		Prelm. Exam (1)	Prelm Exam (2)	Dissertation Research		Dissertation Research			Dissertation Research		
Ethics		DIS			DIS	Prop. Devel.								
Lab. Rotations I, II	III		Lab Meeting			Lab Meeting			Lab Meeting			Lab Meeting		
Health Sciences Seminar			Health Sciences Seminar			Health Sciences Seminar			Health Sciences Seminar			Health Sciences Seminar		
Biomedical Sciences Seminar			Biomedical Sciences Seminar			Biomedical Sciences Seminar			Biomedical Sciences Seminar			Biomedical Sciences Seminar		

- Required Course, semester indicated
- Required Course, semester variable
- Required Seminar
- Non-scheduled times: DIS or Dissertation

PART II: POLICIES, PRACTICES AND REQUIREMENTS

II.1. Admission to Candidacy for the Ph.D. Degree

The Ph.D. Program in Biomedical Sciences assumes that entering students intend, on admission, to pursue studies to the Ph.D. degree. The University does not award a student official Candidacy for the Ph.D. degree, however, until he/she has met Program/Department requirements and has demonstrated basic competencies necessary for successfully completing the independent scholarly activities and dissertation for the Ph.D. degree. These competencies are assessed, in part, by the Preliminary Doctoral Examination. A student is awarded 'Admission to Candidacy for the Ph.D. Degree' after they pass the Preliminary Examination of their respective Program/Department and their Supervisory Committee certifies, by formal ballot after the Preliminary Examination, that the student has completed the required coursework and demonstrated the necessary competencies described above. Students should submit a copy of the appropriate approval form (provided in the Appendix), signed by the Supervisory Committee, to the Biomedical Sciences Student Support Coordinator (Jonquil Livingston). The Student Support Coordinator will subsequently complete the required University form for Admission to Candidacy, submit the form to the Program Director for signature, then forward the completed form to the University Registrar and Office of Graduate Studies.

Students are expected to complete the requirements for Admission to Candidacy prior to beginning the fourth year of graduate studies unless there are extenuating circumstances. Students are eligible to register for **IHS 6980. Dissertation Research (1-12)** after their Supervisory Committeee approves Admission to Candidacy. A student must complete a minimum of twenty-four (24) credit hours of IHS 6980 'Dissertation Research' in order to graduate with the Ph.D. degree. **The FSU Registrar must receive a completed 'Admission to Candidacy' form signed by the Dept. of Biomedical Sciences Chair and submitted by the Program/Department office before a student will be allowed to register for Dissertation Research.** This form is available at http://registrar.fsu.edu/services/images/admiss_to_candidacy.pdf. Additional details about the Admission to Candidacy process are described in the later section on the Preliminary Doctoral Examination.

II.2. Advisement

Year 1: Entering students are advised by the Program Director, in consultation with the Graduate Program Coordinator and Graduate Program Committee, for enrollment options in the first two semesters or until they select a Major Professor. The Program Director also will explain procedures and provide advice for selecting laboratory rotations and a Major Professor.

The Major Professor is the principal advisor and mentor of a graduate student after the first year. Academic and other advice and counseling are available to the student and Major Professor from the Graduate Program Director, the Biomedical Sciences Student Support Coordinator, the Graduate Program Assistant, and the Associate Dean for Research and Graduate Studies. Students are particularly encouraged to become acquainted with the Biomedical Sciences Student Support Coordinator, who provides valuable assistance to students on a variety of matters.

The following individuals are available to provide student counseling. Generally speaking the Graduate Program Director (Randolph Rill) most commonly addresses questions about Program requirements and academic status/evaluations; the Biomedical Sciences Student Support Coordinator (Jonquil Livingston) addresses a variety of issues of continuing students including registration, immigration status, program requirements, housing and more personal matters; the Graduate Program Assistant (Denise Newsome) processes applications for admission and addresses enrollment and other issues of newly entering students; and the Enrollment Coordinator (also referred to as the COM Registrar) enrolls students in COM courses and provides advice on registration procedures.

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Melinda McDaniel, Enrollment Coordinator (COM Registrar)
Office of Student Affairs, RM 1110-E
Phone: (850) 644-5323, E-mail: Melinda.McDaniel@med.fsu.edu

II.3. Assistantships and Fellowships (Financial Support)

Program-Based Assistance: It is the intent of the Program to assure that all students receive financial support during their graduate training. Graduate students are supported on an assistantship from Graduate Program funds during the first year of training. The Major Professor is normally expected to support a student on a Research Assistantship (RA) from external grant funds in the first year after the student is accepted for mentorship; and to support the student on an RA in successive years if grant funds are available. Students are also strongly encouraged to apply for external and University fellowships that they may qualify for (see also below). If insufficient funds are available from grant sources or fellowships, the Program provides support as a Teaching Assistantship (TA), contingent on satisfactory student progress in his/her degree program and availability of funds. Questions concerning tax status of a TA or RA should be directed to the Personnel Relations Office.

External and University Fellowships: Fellowships supporting graduate education are available on a competitive basis from a number of government sources and private foundations. In addition, Florida State University annually makes available on a competitive basis several fellowships to graduate students of all disciplines. Students are encouraged to apply for all sources of graduate fellowships as they may reasonably qualify for, both before and after they enroll in the Program. Receipt of an external competitive fellowship is a significant honor. The College of Medicine Office of Research and Graduate Programs and the University Office of Research can be consulted for details on fellowship programs. *Students submitting a fellowship application that involves*

completion of a substantial research proposal (e.g. NIH, NSF) will be allowed to use this research proposal as part of their Preliminary Doctoral Examination requirement.

Receipt of a FSU fellowship of any type also is a worthy honor and assists the Program. Entering students may qualify for a College Teaching Fellowship or a McKnight Black Doctoral Fellowship. University Dissertation Fellowships are available for students entering their final year of graduate studies. University Fellowships are available to all graduate students. (Note: according to University sources, applicants with less than either a combined aptitude score of 1200 on the Graduate Record Examination or an undergraduate grade point average of 3.5 on a 4.0 scale stand little chance of receiving a University Fellowship unless one or the other is superlatively high, or letters of recommendation are exceptionally laudatory.) Information and applications are available from the University website http://www.fsu.edu/~dof/Faculty-Handbook/Ch8/Ch8.26.html. Applications should be submitted through the office of the Ph.D. Program in Biomedical Sciences.

II.4. Course and Credit Requirements

Transfer of Course Credits from Other Institutions: Courses taken at another institution cannot substitute for Program core courses and normally do not confer official credit towards the Ph.D. Courses from other institutions may contribute otherwise to the overall training program of a student and be listed on the official Program of Study form, however, whether they are transferred with credit or not. *One graduate-level course from another institution may satisfy one Program elective requirement of a student, at the discretion of his/her Supervisory Committee.* See the current Florida State University Graduate Bulletin for regulations on official transfer of course credit from another recognized graduate school to be listed on a student's Florida State University permanent record. Grades earned at another institution cannot be used to improve a grade point average at the Florida State University.

Approval of Credits from Florida State University Courses taken prior to admission: Graduate courses completed at FSU with a B grade or better normally will be approved for credit towards course requirements in the Ph.D. Program in Biomedical Sciences. Students should formally petition the Program in writing to receive approval of credit for courses taken prior to admission.

II.5. Dissertation Preparation and Defense

Dissertation research is expected to be original and to make a significant contribution to the scientific discipline as judged by scientific peers. Students are strongly urged to submit much or all of their dissertation research for publication in peer-reviewed journals prior to writing the dissertation insofar as possible. The dissertation becomes a published document and serves as a compendium of the background, aims, experimental strategies and results, and significance of the dissertation research. Students are advised to examine library copies of published dissertations in their field as examples of the scope and style. Standards for the detailed format of the dissertation are specified by the University. See the Office of Graduate Studies website for details on dissertation preparation and review, and other requirements for graduation: http://www.fsu.edu/gradstudies/thesis.shtml. Students should enroll in **IHS 8970: Dissertation Defense (0)** in the semester in which they intend to defend the dissertation.

IMPORTANT NOTE: Students are advised to plan well in advance for completing graduation requirements. The dissertation must be approved at least four (4) weeks prior to the end of the semester in which a student intends to graduate. Additional time must be allowed for the defense of

dissertation, satisfaction of any criticisms of the Supervisory Committee, and review of the dissertation for conformity to format requirements by the Office of Graduate Studies.

II.6. Elective Courses

The Program requires that a minimum of three elective courses (9 credit hours) be included in the Program of Studies. Students are encouraged to complete these courses during the second year in residence if the schedule of course offerings allows. The minimum number of elective course hours should be satisfied before Admission to Candidacy. Elective courses can be selected from offerings in the College of Medicine (typically special topics courses) or by graduate or selected senior undergraduate (4000) level courses in FSU departments in the life or physical sciences. A list of approved courses offered by other departments is included in the Appendix II. Special topics and other suitable courses may be offered that are not well advertised in advance. Students are encouraged to check with other departments prior to registering to determine if there are new offerings. See related information in the section on Program of Studies.

II.7. Employment Outside the Program

Expeditious completion of degree requirements is beneficial to the degree candidate and other parties. Graduate studies should be engaged as a full-time endeavor except under extraordinary circumstances. Students who are supported on a full value fellowship or assistantship are considered to be fully engaged and are not permitted to hold employment outside the Program. Small, non-recurrent tasks for which compensation is received, such as occasional tutoring, are permitted. Sanctioned opportunities for tutoring of medical students may be available in cooperation with the Office of Medical Student Affairs. Students who are interested in such tutoring experiences should see the Program Director for details.

II.8. English-Speaking Policy

The ability to communicate in spoken English is a necessary component of training in this graduate Program in Biomedical Sciences. Entering international students who do not appear to be sufficiently fluent in English to be effective learners will be required to take remedial actions. A student who does not become competent in spoken English is unlikely to perform well in classes and will not be able to successfully complete Program requirements such as seminar presentations, teaching and the Preliminary Doctoral Examination. The University requires that students who are teaching assistants meet established standards for English speaking and comprehension consistent with the teaching assignment. Failure to meet these requirements will disqualify a student from receiving a teaching assistantship from the College of Medicine.

II.9. Enrollment Requirements

Supported student: The Program and University considers all graduate students to be full-time students and requires each student to register for a minimum number of credit hours as determined by prevailing University policy (currently 9 hours in Fall, Spring and Summer semesters). University regulations and liability clauses require such enrollment practices. Exceptions are made only for students who are not financially supported by Program or University funds and are in their final term prior to graduation (see below).

Unsupported student in final term: An unsupported student in his/her last term, whose only task is the writing of his/her dissertation or thesis, may petition the Graduate Program Committee to register for a reduced load. This action should be taken before the semester begins. A minimum 6-hour load generally applies to students who are still on campus and are utilizing Departmental facilities. In no case should a student registered for fewer than 6 hours continue to perform research. Only one term of a reduced load is permitted, hence students who have not completed the defense of their dissertation or thesis during the term in which they are registered for a reduced load must adhere to the 9 hour per semester minimum in all subsequent terms.

An unsupported student is exempt from registration if he or she has satisfactorily completed all University and Program requirements except for the defense of Thesis/Dissertation, and is not utilizing any University or Department/Program facilities.

II.10. Evaluations—Annual Performance

An annual review of the performance of each student is required by the University. Performance review of students after their first year is the responsibility of the Graduate Program Committee in consultation with the designated Major Professor. Evaluation after the end of the first year is based primarily on performance in courses and rotations, but recommendations of the Major Professor are included in the evaluation process.

Reviews after the second and successive years are performed by the Major Professor and other members of the Supervisory Committee. An annual performance evaluation should be conducted ***before the end of each Spring semester***. Prior to the annual evaluation, the student in his or her second or successive years should provide the Supervisory Committee with a written summary of activities using the Annual Progress Report form provided in the Appendix. This written report serves as a basis for discussions between the student and Committee, and a final Committee evaluation. **The student summary of activities and a written evaluation prepared by the Committee should be signed by the student and Supervisory Committee members and submitted to the Program Director on or before the end of each Spring semester**. (NOTE: A Prospectus of Dissertation is included as part of the annual review after year three (see section II.16 below).

Unsatisfactory Progress: Continued financial support of a graduate student is predicated on satisfactory progress towards the degree. Under extraordinary circumstances a Major Professor can withhold available financial support from a student with 'due cause'. **'Due cause' must be based on a record of unsatisfactory progress documented in the annual and any interim evaluation(s) of the student, including failure to complete clearly defined and achievable performance objectives.** The Major Professor and Supervisory Committee participate in setting objectives, annual evaluations and final decision processes; and are expected to assure that acceptable standards of due process and fairness are met. If the Supervisory Committee concludes from the annual evaluation that a student is making unsatisfactory progress, then performance objectives for the next semester or year, as judged appropriate, should be established by the Supervisory Committee and communicated to the student and Graduate Program office in writing. The Program Director may participate in these proceedings as an *ex officio* member of the Supervisory Committee. Subsequent 'Unsatisfactory' evaluations may serve as a basis for withdrawal of student financial support and assignment to a different Major Professor, withdrawal of Doctoral Candidacy status with an option for an M.S. degree (see sections below) or dismissal from the Program.

II.11. Fees on Registration

Your stipend and tuition are paid through College of Medicine offices, regardless of funding source. Student fees, however, must be paid directly by you each semester. University practices do not allow direct payment of student fees by the College. For this reason your biweekly stipend is increased by an amount that, by year end, will compensate you for the cost of fees you incurred during the year. You must budget accordingly so that you can pay fees due each semester on time. The Program cannot reimburse you for any penalties incurred for late payment of normal fees or late registration. You are also responsible for costs of services such as parking and healthcare. See University sources on these matters.

Please note that all pending penalty or other fees must be paid before you can register for the upcoming semester. Be sure that you have paid these and any other fees due prior to attempting to register with the College of Medicine or University Registrar.

II.12. Florida Residency Status

Out-of-state tuition is charged to the Program for all first year students who are not Florida residents. Students with US citizenship who are not Florida residents are expected to apply for Florida residency as soon as they are eligible for in-state tuition. International students are not eligible for Florida residency or in-state tuition by current Florida law. All students who are eligible for Florida residency ***MUST*** meet with the Graduate Program Assistant upon arrival to begin filing the appropriate paperwork. Failure to apply for in-state residency will require the student to be held responsible for future out-of-state tuition costs.

II.13. Foreign Languages

There is no Program requirement for a foreign language. Under rare circumstances a student's Supervisory Committee may require that a foreign language be included as part of the student's Program of Studies to assist training in a specialty area.

II.14. Healthcare

Care for common maladies is available at the Thagard Health Center on the FSU main campus. The University requires that students provide proof of health insurance. Students who do already have health insurance may purchase coverage with University assistance and are eligible for limited financial aid. Please see the FSU Graduate Handbook or contact the Office of Graduate Studies for details.

II.15. Laboratory Rotations

Laboratory rotations are an essential part of student training *and are required of all students in their first year.* Rotations serve both to provide training in several areas of biomedical science, and to familiarize students with research opportunities in the College. Faculty members who have agreed to supervise students for rotations provide the Program Director with short descriptions of one or more anticipated rotation projects prior to the beginning of the Fall semester for distribution to incoming students. Students should use these descriptions as a guide and schedule interviews with

prospective faculty supervisors to discuss options for their rotations. Three rotations of approximately seven weeks each are scheduled in the first year, two during the Fall semester and one during the first seven weeks of the Spring semester. After considering their options the student should inform the Graduate Program Director of their preferred rotation supervisors and schedule not later than the Friday of the first week of classes in the Fall term. The Program Director will notify students and faculty supervisors of the final assigned rotation schedule by the following Tuesday. Final assignments are designed to match students with their preferred supervisors following a schedule that places one student per rotation period with a given supervisor whenever possible.

Students are expected to submit a brief (one page) description of the goals and results of each rotation period to the Biomedical Sciences Student Support Coordinator in the Graduate Program Office within a week after completing a rotation. Faculty supervisors provide a brief evaluation of each student's performance during the rotation period. Supervisor evaluations are components of the annual review of first year students.

Important note: The rotation experiences are intended to be educational experiences and are not solely a means for students to explore options for a Major Professor. For that reason some faculty members who elect to supervise students in laboratory rotations may not be available as Major Professor. The availability of a faculty member to serve as a Major Professor changes with time and is determined by external grant funding, current research group size, progress towards tenure, personal circumstances and other factors subject to change. Students are encouraged to investigate the availability of a faculty member as a Major Professor when designing their rotation schedule. A fourth rotation can be scheduled by a student or may be recommended by the Program Director if difficulties are encountered in choice of a Major Professor. Student's wishing to perform a fourth rotation should consult with the Program Director.

II.16. Major Professor

Major Professor Role and Selection: The Major Professor is the principal advisor and mentor of a graduate student after the first year. A student's choice of Major Professor has a substantial influence on his or her graduate training, field of expertise, satisfaction with the training experience, and ultimate employment.

The Program encourages students to approach their choice of Major Professor thoughtfully and deliberately, as this decision is one of the most important they will make in graduate school. The laboratory rotation and department seminar programs provide valuable means for students to become familiar with the many aspects of biomedical sciences and the research interests of Program faculty. Students are encouraged to make appointments with faculty members who are possible candidates for their Major Professor to discuss opportunities in their laboratories. These faculty members may or may not have served as supervisors during laboratory rotations or other laboratory experiences.

Deadline for Selection of the Major Professor: A Major Professor should be chosen as early as practical after the student has completed laboratory rotations and discussed research options with faculty members. Selection should be made not later than the end of the second semester in residence, normally the Spring semester. A formal notification form available from the Graduate Program Office and signed by the student and Major Professor should be used to report the choice of Major Professor to the Director and Graduate Program Office. Students with extenuating

circumstances can request to delay choice of a permanent Major Professor to not later than the end of the third semester, normally the end of the Summer semester. Such requests should be submitted in writing to the Program Director. A provisional research faculty supervisor will be appointed in such cases until a final choice of Major Professor is made.

Change of Major Professor: Students have the right to change Major Professor in the event they believe there is irreconcilable disagreement or incompatibility. Students are advised that the earlier such a decision is made, the better for all parties, and that such a change may delay completion of the Ph.D. degree requirements.

II.17. Minimum Grade Point Average

The University requires that graduate students maintain a minimum grade point average (GPA) of 3.0 in order to remain in good academic standing. A student whose aggregate GPA falls below 3.0 in a given semester will be placed on academic probation for the following semester. Failure to improve the GPA to 3.0 or better in the subsequent semester is cause for automatic dismissal from the Graduate School and Program unless there are extenuating circumstances. **Students who anticipate that their GPA may fall below a 3.0 should consult with the Program Director and Major Professor (if selected) prior to registering for the subsequent semester to determine the best course of studies to remedy the GPA deficiency.**

II.18. Preliminary Doctoral Examination and Admission to Candidacy for the Ph.D. Degree

The University requires that all students seeking the Ph.D. degree must pass a Preliminary Doctoral Examination administered by the respective Program before they can receive Admission to Candidacy for the Ph.D. degree. The Ph.D. Program in Biomedical Sciences administers this examination in two parts: a written comprehensive examination composed by the Supervisory Committee, and an original research project proposal written by the student and presented orally to the Supervisory Committee. The Program Director may participate in these proceedings as an *ex officio*, non-voting member of the Supervisory Committee. The written comprehensive examination is conducted within the sixth semester in residence, normally the Summer semester of the second year. The research project proposal should be submitted in writing and presented orally by the end of the seventh semester in residence, normally the Fall semester of the third year. This schedule for completing the Preliminary Doctoral Examination may be extended by the Supervisory Committee due to extenuating circumstances, but all students are expected to attempt both parts of the Preliminary Doctoral Examination within the third year of residence. A student who has not completed the Preliminary Doctoral Examination by the end of the Fall semester of the fourth year in residence may be dismissed from the Ph.D. Program for failure to make adequate progress towards the degree, subject to review by the Program Director and Graduate Program Committee in consultation with the Supervisory Committee. Students should register for **IHS 5503. Proposal Development (1)** and **IHS 8960. Preliminary Doctoral Examination (0)** in the semester in which they plan to complete the Preliminary Doctoral Examination by presenting the research project proposal.

Students attempting either part of the Preliminary Doctoral Examination may receive a Pass, Partial Pass, or Fail as described below. A student who has received a 'Pass' on both parts of the Preliminary Doctoral Examination is eligible to be considered for Candidacy for the Ph.D. Degree at Florida State University. The Supervisory Committee must conduct a vote to approve the student

for Candidacy and submit the results of this vote to the Graduate Program Director. Results of a positive vote will be forwarded to the Biomedical Sciences Student Support Coordinator (Jonquil Livingston) who will complete the University Admission to Candidacy form for Program Director's signature. The completed form will be forwarded to the University Registrar and Office of Graduate Studies. Students who are admitted to Ph.D. Candidacy are eligible to register for **IHS 6980. 'Dissertation Research'** in subsequent semesters. A negative vote must be accompanied by a written explanation and recommendations for the continuation or dismissal of the student from the Ph.D. Program.

The written comprehensive examination part of the Preliminary Doctoral Examination is designed to assess the student's ability to comprehend and integrate knowledge obtained in formal course work, knowledge relevant to his or her field of specialization gained through experience or assigned readings, and knowledge of major advances as presented in special topic courses and required seminars. The student's Supervisory Committee composes and administers the written portion of the Preliminary Doctoral Examination. The exact format of the examination is determined by the Supervisory Committee and may consist entirely of closed book questions or a mixture of closed book and open book questions. Examination questions are intended to broadly relate to student training in his or her intended area of specialization. The Supervisory Committee as a whole determines the general content and format of the examination questions and provides the student with guidance on preparation for the examination questions. The Supervisory Committee will meet as a group to assess the student's performance on the examination according to the following possible outcomes and make recommendations in the event of a Partial Pass.

Possible outcomes of the written comprehensive examination

Pass: The student is considered prepared to continue work towards completion of the Preliminary Doctoral Examination and should schedule a date for presenting the research project proposal before the end of the following semester, normally before the end of the Fall semester of the third year. The student should register for **IHS 5503. Proposal Development. (1).** (S/U grade only.) and **IHS 8960. Preliminary Doctoral Examination (0).** (S/U grade only.) in the semester intended for presentation of the proposal.

Partial Pass: If deficiencies were noted in a minority of responses, then the Supervisory Committee will make recommendations to the Graduate Program Committee for remedy of these deficiencies. Remedies depend on the degree of deficiency and may consist of assignments such as retake of examination question(s), writing a paper, presentation of a seminar, or completing a course with a grade of B or better. The Graduate Program Committee will review the student's performance on the examination and prior performance in the Program and may accept, modify or reject the recommendation of the Supervisory Committee. The Graduate Program Committee will meet with the Supervisory Committee and reach a consensus on subsequent action if the initial recommendation is not accepted. Remedies must be completed within the allotted time or the student will not be permitted to continue towards the Ph.D. degree. After the remedy is completed successfully the student should schedule a date for presenting the research project proposal before the end of the following semester and register for **IHS 5503. Proposal Development. (1).** (S/U grade only.) and **IHS 8960. Preliminary Doctoral Examination (0).** (S/U grade only.) during that semester.

Fail: The Supervisory Committee will review the full record of a student failing a majority of the examination and make a recommendation for dismissal or for retention as a candidate for a Master's in Science (M.S.) to the Graduate Program Committee. The Program Committee will review the student's full record in the Program and may accept, modify or reject the recommendation of the Supervisory Committee. The Program Committee will meet with the Supervisory Committee and reach a consensus on subsequent action if the initial recommendation is not accepted. Possible final actions are

(a) approval to continue in the Graduate Program towards completion of a thesis M.S. degree* (may require laboratory work to complete thesis research),
(b) approval to continue in the Graduate Program towards completion of a course-work M.S. degree* (may require additional course work or other assignment), or
(c) dismissal from the Graduate Program.

Students should consult other sections of this Handbook for details of requirements for the thesis and course work M.S. degrees.* A student who completes a thesis M.S. degree and who has a supporting recommendation from his/her Supervisory Committee can petition the Graduate Program Committee for permission to continue towards completing requirements for the Ph.D. degree. The Program Committee will meet with the Supervisory Committee to consider and act on such a petition.

* **IMPORTANT NOTE**: The College of Medicine does not presently offer a M.S. degree, but has applied to the University for approval of these M.S. degree programs.

The Research Project Proposal component of the Preliminary Doctoral Examination consists of the composition, presentation and defense of an original research proposal. The subject of this proposal is the option of the student and can be related to the research area of the anticipated dissertation research project. In the latter case good judgment should be exercised so that the proposal reflects predominantly the input of the student, not the Major Professor. This proposal is not considered to be a substitute for a Prospectus of research intended for the candidate's dissertation (see separate section on Prospectus below).

The student should register for **IHS 5503. Proposal Development. (1).** (S/U grade only.) and **IHS 8960. Preliminary Doctoral Examination (0).** (S/U grade only.) in the semester that the proposal will be prepared and defended, normally the Fall semester of the third year.

The requirement for writing and presentation of an original research project proposal is designed to assess the student's preparedness for and abilities to perform valid and meaningful scientific research. These abilities include, but are not limited to, the following:

- integration of concepts and knowledge in conceiving a scientifically viable and significant research proposition,
- selection and critical evaluation of the literature,
- application of knowledge of techniques appropriate to the proposed research and their limitations,
- demonstration of communication skills, including basic writing skills and the practice of sound scientific style in written and oral communications.

Writing and presentation of a research project proposal also serves as an instructional instrument (a) introducing the student to the grant preparation process and peer review systems, and (b) providing an opportunity for the student to develop expertise in the written and verbal communication of scientific ideas.

It is intended that the student take this opportunity to seek the advice of his or her Major Professor and other Supervisory Committee members on appropriate styles and strategies for preparing research proposals. Faculty members, particularly the Major Professor, should not contribute to the conceptual/creative content proposal, but it is appropriate for mentors to critique the proposal draft and provide advice on matters such as logical consistency, accuracy, style, originality, completeness, organization and clarity.

Possible results of assessment of the research proposal presentation are (i) Pass, (ii) Re-Examine, or (iii) Fail. The Supervisory Committee is responsible for setting re-examination conditions. The student may make two attempts to pass, but the Supervisory Committee is responsible for deciding between a Fail and a Partial Pass, which can be made up to a full Pass in a specified manner. The Supervisory Committee will review the full record of a student failing the examination and make a recommendation for action to the Graduate Program Committee. Recommendations may be for

(a) approval to continue in the Graduate Program towards completion of a thesis M.S. degree* (may require laboratory work to complete thesis research),
(b) approval to continue in the Graduate Program towards completion of a course-work M.S. degree* (may require additional course work or other assignment), or
(c) dismissal from the Graduate Program.

* **IMPORTANT NOTE**: The College of Medicine does not presently offer a M.S. degree, but has applied to the University for approval of these M.S. degree programs.

Format of the Written Research Project Proposal

The student is responsible for scheduling the presentation date. A two hour period should be scheduled for the presentation and assessment. The examination period consists of two parts, a 30-40 minute oral PowerPoint presentation of the proposal by the student, followed by a questioning period. The Supervisory Committee primarily will ask questions pertaining to the proposition, but also may ask questions pertaining to the candidate's laboratory research. One week prior to the examination date the student should submit to each member of the Supervisory Committee a copy of the written proposal. The written research project proposal should follow the format described below, which closely parallels that of major granting agencies.

Students will be informed of their status with respect to the examination immediately after deliberations of the Supervisory Committee. The Major Professor should report the result of the Preliminary Doctoral Examination and the vote for Admission to Candidacy to the Graduate Program Office on the form provided (see Appendix). The Graduate Program Office will notify the University Registrar and Office of Graduate Studies as required when a student is approved for Admission to Candidacy.

The written proposal should contain the following elements. Each element should not exceed the length limitation indicated in parentheses ( ). Print text (excepting References) in at least 12 point text in Times Roman or other easily readable font. Supporting figures can be included and will not be counted towards the length limitations, but should be kept to an essential minimum.

- **Summary** (250 words). Summarize the overall project goals, specific aims, and general experimental approach.

- **Background--Work by Others** (3 pages). Concisely review the literature so that the reader has a clear perception of both the general significance of the project and the observations most pertinent to the specific aims described below.
- **Background--Work by the Student** (1 page). Briefly summarize any preliminary work that relates directly to the choice of aims below.
- **Statement of Specific Aims** (1 page). Using the background to provide an appropriate rationale, outline the specific questions that will be addressed or information that will be sought.
- **Experimental Approaches and Procedures** (10 pages). Describe the overall experimental approaches to the above aims and give the rationale for these approaches. Do *not* describe experiments as you would in a *Methods* section of a paper.
- **References Cited** (80 citation limit. Give full citations, including titles. Print in 10 point, Times Roman.) Students are strongly encouraged to use the NIH Medline databank for literature searches and a database like Endnote or competitors. Medline can be accessed via computer on the Web through the COM Library website.

II.19. Program of Studies

The Supervisory Committee, in consultation with the Major Professor and student, determines the Program of Studies the student shall complete prior to Admission to Ph.D Candidacy. The Program of Studies consists of the required and elective courses that constitute effective graduate training in the student's chosen specialty as mutually agreed upon by the student and Supervisory Committee. The Program of Studies commonly includes graduate courses from other departments in the University, and in some cases may include courses beyond the minimum nine credit hours of electives to satisfy training needs of the student's research specialty. The Program of Studies should be composed as soon as practical after the Supervisory Committee is formed and reported to the Graduate Program Office on the form provided for this purpose (see Appendix). The student should strive to complete the courses specified in the Program of Studies by the end of the second year in residence, but may be required extend the time to completion into the third year because of limited course availability.

II.20. Prospectus of Dissertation Research

Each student should present a Prospectus of the intended dissertation research during the annual evaluation following successful completion of the Preliminary Doctoral Examination and Admission to Ph.D. Candidacy, typically at the end of the Spring semester of the third year. The Prospectus is more detailed than the annual report, but need not be developed like a formal proposal. The Prospectus should consist of a clear statement of the specific aims of the dissertation project and expected completion date, followed by summaries of the experimental approaches towards achieving the aims and progress already made.

A completed 'Prospectus Approval Form' must be submitted to the Biomedical Sciences Graduate Program Office, which will forward a copy to The Florida State University Office of Graduate Studies. A copy of this form can be found at http://www/fsu.edu/gradstudies/forms/.

II.21. Publication of Dissertation Research

Students are strongly encouraged to publish research findings throughout their graduate training. Students entering in August 2008 or later are required to publish at least one peer-reviewed manuscript describing a significant aspect of their dissertation research in order to qualify for graduation with the Ph.D. degree. Evidence of acceptance of the manuscript by the Editor shall be considered to constitute 'publication' for the purposes of this requirement.

II.22. Seminar Attendance and Presentations

Seminar attendance: Students are required throughout their graduate training to attend the following Department and College seminars and to register for the corresponding courses indicated below if sufficient credit hours are available after registering for other courses required in that semester. The requirement for enrollment in seminar courses will be waived for a Ph.D. Candidate who intends to graduate in the current academic year and otherwise is not able to accumulate the minimum of 24 credit hours of Dissertation Research.

Seminar schedules are posted on the COM website and Department bulletin board.

IHS 5935. Health Sciences Seminar (1). *(S/U grade only.)* This College-wide seminar series, commonly known as 'Grand Rounds' is offered in the Fall and Spring semesters during the noon lunch hour (12:00-1:00) on Thursday's. The Grand Rounds seminar series provides graduate students with exposure to contemporary research and clinical practice issues in medicine.

BMS 6936. Seminar in Biomedical Sciences (1-2). *(S/U grade only.)* The seminar program of the Department of Biomedical Sciences is normally held at noon on Wednesday during the Fall and Spring semesters. The Department hosts a variety of academic and industrial speakers covering contemporary topics in biomedical sciences. In the early portion of the Fall semester Program faculty members present seminars describing their research in order to assist students in selecting their Major Professor and Supervisory Committee members.

Specialty Seminars: Students are also encouraged to attend available seminar program in their specialty in the Department of Biomedical Sciences or other campus graduate Departments or Programs.

Seminar presentations: Each student is required to present at least two seminars during their first two years in residence in the context of the summer 'Advances in Biomedical Sciences' course. In addition students are required to present at least one seminar on their research in an established seminar program during their third or fourth year in residence. This requirement is not satisfied by presentations in journal clubs, group meetings or similar informal contexts; presentations at scientific meetings; and the presentation during the defense of dissertation. Seminar presentations for credit should be scheduled in consultation with the Supervisory Committee. The student is responsible for arranging to meet the seminar presentation requirements and properly communicating with the seminar organizer and his/her Supervisory Committee during the planning stage of the related seminar series.

II.23. Supervisory Committee

The Supervisory Committee plays important roles in the training of a graduate student as both a mentoring and evaluation body (see also sections on Program of Studies and Annual Evaluations). The Supervisory Committee is chosen by the student in consultation with the Major Professor. The University requires that the Supervisory Committee consist of the Major Professor and a minimum of two additional faculty members who have Doctoral Directive Status in the University, including a member of a department outside of the College of Medicine who serves as the representative of the University at large. Additional Committee members may be chosen by the student or Major Professor as appropriate to provide desired Committee expertise. Choice of committee members should be made as soon as practical, but not later than the end of the semester after selection of the Major Professor, normally by the end of the Summer semester of the first year in residence. A formal notification form signed by the student and Committee members should be used to report the choice of Committee membership and Program of Studies to the Director and Graduate Program Committee (see Appendix).

II.24. Teaching Requirements

Teaching experience is an integral part of graduate education, hence every student is required to participate in teaching during his or her graduate career. A student working toward the Ph.D. degree is required to teach for at least two semesters. Teaching requirements are normally fulfilled during the third year in residence, but may be satisfied in the second year if the student is supported financially on a teaching assistantship. Teaching assignments usually involve facilitation in small group components of medical courses or tutoring assistance for medical students. The College offers ***IHS 5933: 'Seminar on Medical Science Education'*** to instruct the student in carrying out teaching duties in a competent and professional manner. All students are expected to register for and fully participate in this course as part of fulfilling the teaching requirement. **IHS 5933** can be taken in the second or third years, but should precede any teaching assignments.

(IMPORTANT NOTE FOR MAJOR PROFESSORS: Teaching by a student solely to satisfy this requirement is considered an educational experience and not a department service. For this reason students in such a situation should be continued on grant support, if available, and not transferred to COM support.)

Appendix I. College of Medicine Graduate Courses

Biomedical Sciences (BMS, GMS prefix)

BMS 5935. Advanced Topics in Biomedical Sciences (1-2). (S/U grade only.) A seminar-based course in which students in the Ph.D. Program in Biomedical Sciences present seminars on current research from the literature on topics developed under the guidance of faculty members. Students will critically read, analyze, and present current research. May be repeated a total of eight (8) semester hours.

BMS 5525. Bioregulation (4). Prerequisite: PCB5595. An advanced, lecture-based course emphasizing the molecular basis of regulation in biological systems. An important component is study of the design and interpretation of experiments leading to current understanding of regulation of gene expression. The course relies on the contemporary research literature, and focuses on specific model organisms and current problems that illustrate experimental approaches used to investigate different aspects of the control of gene expression.

BMS 5905. Directed Independent Study in Biomedical Sciences (1-12). (S/U grade only.) An individualized research course intended for students in the Ph.D. Program in Biomedical Sciences prior to passing the Preliminary Doctoral Examination. May be repeated a maximum of fifty-four (54) semester hours.

BMS 5185. Research Opportunities in Biomedical Sciences (1-6). (S/U grade only.) Provides entering students in the Ph.D. Program in Biomedical Sciences opportunities to be informed of and receive training in research by rotating through laboratories of several individual faculty members in the Department of Biomedical Sciences. Students must complete three (3) laboratory rotations. Currently students should register for two (2) semester hours of credit for the Fall semester and one (1) semester hour of credit for the Spring semester. May be repeated a total of eight (8) semester hours.

BMS 5186C. Research Techniques in Biomedical Sciences (4). Prerequisites: PCB5595, PCB5137, BMS5525 (Bioregulation). An advanced laboratory course for students in the Ph.D. Program in Biomedical Science providing training in laboratory techniques and experimental approaches essential to contemporary molecular biology and biochemistry research.

BMS 6936. Seminar in Biomedical Sciences (1-2). (S/U grade only.) A seminar series in current topics in biomedical sciences. May be repeated a total of sixteen (16) semester hours for credit.

GMS 6001. Special Topics in Biomedical Sciences (1-3). (S/U grade only.) An expert, lecture-based course focusing on recent advances and outlooks in biomedical science research. Course offerings include but are not limited to such topics as aging, biotechnology, bioinformatics, developmental biology, genomics and proteomics, molecular signaling, neuroscience and physiology. The general emphasis is on the molecular, genetic and cell biology aspects of these topics. May be repeated a total of sixteen (16) semester hours.

GMS 6097C. Biomedical Sciences Research (3). Laboratory course designed to provide students with individualized instruction in specific experimental strategies and methods important in their chosen specialty area of biomedical research training. May be repeated a total of twelve(12) semester hours.

Integrated Health Sciences (IHS)

IHS 5905. Directed Individual Study in Health Sciences (1-12). (S/U grade only). A course for graduate students who wish an individualized research experience in Biomedical Sciences, Medical Humanities and Social Sciences, Public Health or other fields represented in the College of Medicine. Students receive laboratory or other training in research methods and improve their readiness for and appreciation of research in health-related science. May be repeated a maximum of thirty-six (36) semester hours.

IHS 5515. Ethics and Professional Integrity in Research (1). (S/U grade only). A required course for students in the Ph.D. Program in Biomedical Sciences. This course provides a survey of three broad areas

of research ethics: issues raised by using animals in research, using people in research, and by the scientific method itself. The course presents examples of ethical decisions faced in medical research, including (but not limited to) ascribing credit for contributions in publications, consequences of plagiarism and fraudulent data, access to genetic data, confidentiality, institutional reiew boards and considerations in research involving animal or human subjects

IHS 5935. Health Sciences Seminar (1). (S/U grade only) Seminar program for graduate students in the Ph.D. Program in Biomedical Sciences and other health-related programs. Biomedical Sciences students are required to enroll each Fall and Spring semester. May be repeated a total of twelve (12) semester hours for credit.

IHS 5503. Proposal Development. (1). (S/U grade only.) Individualized instruction on development of a dissertation proposal and other proposals for research projects in biomedical sciences according to standards of external granting agencies such as NIH and NSF. Components of proposal writing addressed include strategies of successful proposals; designing hypothesis-driven research; review processes and expectations; setting reasonable goals; definitions and importance of specific research aims; necessary and sufficient background documentation; describing experiment design and methods. May be repeated a total of two (2) semester hours for credit.

IHS 5933. Seminar on Medical Science Education (1). (S/U grade only.) Prerequisite: Limited to graduate students in the College of Medicine. Preparation for supervised teaching and education outreach experiences. Topics include approaches to conduct of classes and laboratories, exam construction, ethics in teaching, legal and safety issues for instructors, and effective written and oral communication.

IHS 5945. Supervised Teaching (1-5). (S/U grade only.) Students in the Ph.D. Program in Biomedical Sciences are required to register for a minimum of two (2) semester hours before graduation. May be repeated for a total of (5) semester hours.

IHS 6980. Dissertation Research (1-12). (S/U grade only.) Ph.D. candidates in Biomedical Sciences should register for this course after passing the Preliminary Doctoral Examination. A minimum of twenty-four (24) Dissertation hours is required for graduation.

IHS 8970. Dissertation Defense (0). (S/U grade only.) Oral defense of dissertation research. One-time registration during the term in which student expects to defend their Ph.D. dissertation.

IHS 8960. Preliminary Doctoral Examination (0). (S/U grade only.) Oral examination and defense of the doctoral proposal; successful completion allows advancement of the student to Ph.D. candidacy.

Appendix II: Graduate Elective Courses Offered in Other Colleges

The following graduate courses are approved choices to satisfy the Program requirement for nine (9) credit hours of elective courses. Additional courses may be eligible for electives at the discretion of the Supervisory Committee. See the Graduate Bulletin of the Florida State University at http://registrar.fsu.edu/bulletin/grad/ for a complete listing of graduate courses. Students are advised that many departments offer special topics courses at irregular intervals. These courses may not be well advertised, but can be discovered by checking directly with the graduate offices of other departments in the life sciences.

Chemistry & Biochemistry

BCH 5505. Structure and Function of Enzymes (3). Pre- or co-requisite: BCH 4053 or equivalent. Course addresses elements of protein structure and structural motifs, structure determination methods; protein folding and stability; enzyme kinetics and mechanisms; structure-function relationships.

BCH 5745. Chemical and Physical Characterization of Biopolymers (3). Pre- or co-requisite: BCH 4053 or equivalent. Course covers biopolymer types and conformations; solution properties of biopolymers; macromolecular equilibria; hydrodynamic behavior; determination of size and shape; biopolymer separations; introduction to biological spectroscopy.

BCH 5886r-5887r. Special Topics in Biochemistry and Cell Biology (one to three [1-3] hours each). Each course may be repeated to a maximum of twelve (12) semester hours or a total of four times.

CHM 5506. Physical Chemistry of Macromolecules I (3). Prerequisite: Two semesters of physical chemistry or consent of instructor. Course covers conformational statistics of random coil polymer chains; ordered polymer structures and order-disorder transitions; thermodynamics of polymer solutions; structure-property relationships of polymers. Crosslisted under physical chemistry.

CHM 5507. Physical Chemistry of Macromolecules II (3). Prerequisite: Two semesters of physical chemistry or consent of instructor. Course addresses principles and applications of spectroscopic methods to polymers and biological macromolecules including electronic, vibrational electron spin and nuclear magnetic resonance spectroscopy; and spectroscopic studies of dynamic systems. Crosslisted under physical chemistry.

Biological Science

BSC 5409. Biophysical Principles of Biological Techniques (3). This course analyzes physical principles behind modern laboratory methods used in biological research.

MCB 5505. Virology (3). Structure and replication of the bacteriophage, plant and animal viruses, with an emphasis on comparative molecular biology and infectious disease.

MCB 5936r. Selected Topics in Microbiology (1-4). May be repeated to a maximum of sixteen (16) semester hours.

PCB 5137. Advanced Cell Biology (3). Principles of cell organization; membrane structure and transport; cyto skeleton; signaling; organelle structure and function; energy metabolism; cellular aspects of cancer and immunity.

PCB 5595. Advanced Molecular Biology (3). Prerequisites: PCB 4024 or PCB 5525 (molecular biology) or instructor permission. Gene regulation and its relationship to differentiation and development.

PCB 5746. Mammalian Physiology I (4). Prerequisites: BCH 4053, 4054 or equivalents; CHM 3210, 3211 or equivalents; PHY 3053C; or permission of instructor. This course facilitates an understanding of

neurophysiological and neuroendocrinological mechanisms in mammals. It covers the principles of operation of neurons, neural circuits, neurohormones, and the nervous system as a whole.

PCB 5747. Mammalian Physiology II (4). Prerequisite: PCB 5746. Cardiovascular, respiratory, renal, and gastrointestinal physiology; endocrine physiology; metabolism.

PCB 5785. Biology of Muscle (3). Prerequisites: BCH 4053; PCB 3743. Muscle biophysics, biochemistry, and physiology; an emphasis on contractile function, experimental methods, and specialization of muscular systems in vertebrates and invertebrates.

PCB 5795. Sensory Physiology (3). Prerequisite: Mammalian physiology I or general physiology/cell biology background. Mechanisms of sensory transduction; higher level processing of sensory information; comparative aspects of sensory physiology.

PCB 5835. Neurophysiology (3). Prerequisite: Mammalian physiology I or general physiology/cell biology background. Membrane biophysics; molecular aspects of cell excitability; advanced cellular neurophysiology.

PCB 5846. Neurocytology and Neurochemistry (4). Morphological, molecular, developmental, and phylogenetic relations to nerve tissues.

PCB 5936r. Selected Topics in Genetics and Cell Biology (1-4). May be repeated to a maximum of sixteen (16) semester hours.

PCB 5937r. Selected Topics in Physiology (1-4). May be repeated to a maximum of sixteen (16) semester hours.

PCB 6155C. Microscopy and Electron Microscopy for the Biologist (3). Permission of instructor required prior to registration.

Neuroscience

PSB 5057. Neuroscience Methods: Molecules to Behavior (2). (S/U grade only.) This course exposes graduate students to a broad array of current techniques and methodologies in the neurosciences from a molecular to behavioral level of analysis.

PSB 5341. Systems and Behavioral Neuroscience (4). This course covers integrated neural systems that ultimately lead to the behavior of organisms. Topics include fluid and energy balance, reproduction, sleep, emotions, cognition and neurological disorders.

PSB 6070r. Current Problems in Neuroscience (2). (S/U grade only.) Detailed examination of a current area of neuroscience research. May be repeated to a maximum of eight (8) semester hours.

Appendix III: FORMS

LIST OF FORMS:

VIII. Program of Studies and Supervisory Committee Membership

IX. Graduate Course Registration Request Form

X. Annual Student Review

a. Student Activities Summary (to be completed by student)

b. Faculty Evaluation (to be completed by Supervisory Committee)

XI. Supervisory Committee Certification of 'Pass' of Preliminary Doctoral Examination and Admission to Ph.D. Candidacy

XII. Prospectus Approval Form

XIII. Progress in Program Summary (guide for students, official version kept in Graduate Program Office).

XIV. Program in Biomedical Sciences Graduation Checklist

Graduate Program in Biomedical Sciences
Program of Studies and Supervisory Committee (rev. 10/12/2005)

PLEASE RETURN THE COMPLETED FORM TO THE GRADUATE PROGRAM OFFICE

Graduate Students: Use this form to report the composition of your Supervisory Committee and their approval of your Program of Studies.
Faculty Members: Your signature on this form indicates your willingness to serve on the Supervisory Committee of this student and your approval of his/her Program of Studies.

The Program of Studies is intended to indicate the formal coursework that the student and Supervisory Committee agree are necessary for achieving a level of expertise in the Biomedical Sciences and the chosen subject area of the dissertation research expected of a Ph.D. graduate. Changes in the Program of Studies are permitted with approval of the Supervisory Committee. Report changes of the Supervisory Committee or the Program of Studies on a new form marked "REVISED".

Program of Studies

(Do not list rotation, DIS, dissertation, seminar or similar courses)

Course No.	Course Title	Semester Taken or Intended	Grade
PCB 5595	Advanced Molecular Biology		
STA 5172	Statistics for Epidemiology		
IHS 5515	Ethics and Professional Integrity in Research		
PCB 5137	Advanced Cell Biology		
BMS 5525	Bioregulation		
BMS 5186C	Research Techniques in Biomedical Sciences		

Supervisory Committee:

	Printed Name	Signature
Major Professor	_____	_____
Univ. Representative	_____	_____
Others (at least two)	_____	_____
	_____	_____
	_____	_____
	_____	_____

FSU College of Medicine
Graduate Course Registration Form (rev. 10/23/2007)

*Instructions: This form should be completed for registration **each semester** by all students in the Ph.D. Program in Biomedical Sciences. Students in other Colleges who wish to register for graduate courses in the College of Medicine should also complete this form.*

First year graduate students should register for required courses listed in the Student Handbook unless they have petitioned the Program Director for an exception. The form must be signed by the Director of the Graduate Program if it deviates from the requirements in the Student Handbook.

Second and successive year students should follow the Program of Studies recommended by their Supervisory Committee and otherwise follow the recommendations in the Student Handbook. The form must be signed by your Major Professor.

Completed and signed forms should be submitted to the Enrollment Coordinator/Registrar of the College of Medicine (Melinda McDaniel) during the normal registration window as listed on the web site of the University Registrar (http://registrar.fsu.edu/). The COM Registrar will register you for courses offered within the College of Medicine. Normally these will have BMS, GMS, or IHS prefixes.
IMPORTANT NOTE: If you wish to take a course offered in a different college from the COM, then you must register for this course through the University Registrar.

Student Name: _____

Term of registration (circle): *Fall Spring Summer* **Year:** _____

FSU Student Number (FSUSN): _____

Courses for which you want to be registered: (include course number and name)	Credit Hour	Instructor**
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

** If you are registering for a DIS course, please list the supervising faculty member.**

_____ _____
Program/Departmental Authorization Date

Biomedical Sciences Ph.D. Program Student Annual Review

(Rev. 12/19/2007)

ANNUAL ACTIVITIES INFORMATION SHEET

Dear Students:

Program and University policy requires annual evaluation of graduate student progress. To assist in this evaluation by your Supervisory Committee and the College of Medicine Graduate Program Committee you will need to fill out this form. Please fill in the requested information about your activities in the past academic year. This form should be completed and returned by e-mail to Denise Newsome in the Office of Research and Graduate Studies. Also a copy should be provided to your Major Professor. The form should be returned by the last scheduled day of classes for the Spring Semester (typically the third week in April.)

Student Name**:**_____

1. Major Professor: _____

2. Year of Entry into Program: _____

3. Committee members in addition to Major Professor (circle any changes from previous report):

   a._____

   b._____

   c._____

4. Do you expect to be supported on a grant during the next academic year?

   Please Select: Yes No

5. Anticipated degree completion date:_____

6. Completion date or Anticipated completion date for Comprehensive Examination:_____

7. Please list any of the following activities during the prior academic year:

    a. Courses taken and grade (do not list seminars):
        1._____ _____
        2._____ _____
        3._____ _____
        4._____ _____
        5._____ _____
        6._____ _____

    b. Teaching responsibilities:

    c. Proposals for Funding Submitted (list title, agency & nature of grant):

    d. Manuscripts accepted or submitted for publication (list title, authors, journal and submission or acceptance date):

    e. Presentations at meetings (list presentation title, meeting title and date):

8. Planned Research and Training Activities. Please list any of the following activities planned during the next academic year:
    a. Courses to be taken:

        1._____
        2._____
        3._____
        4._____
        5._____
        6._____

b. Teaching responsibilities:

c. Proposals for Funding (list title, agency & nature of grant):

d. Manuscripts to be submitted for publication (list title, authors, journal and submission or acceptance date):

e. Presentations at meetings (list presentation title, meeting title and date):

9. Do you have suggestions for how the Program can make your training situation better?

10. Provide a one page description of your research goals and progress during the previous year. Please complete attach the one page description.

Biomedical Sciences Ph.D. Program Student Annual Review

FACULTY EVALUATION FORM (Rev. 7/22/08)

Dear Faculty Members:

Program and University policy requires annual evaluation of graduate student progress by their Supervisory Committee. Each student is advised to present Committee members with an Annual Activity Information sheet, then schedule a meeting with the Committee in which the student's progress is reviewed. After meeting with the student the Supervisory Committee should discuss the student's progress and arrive at a consensus evaluation and recommendations. The Major Professor should complete this evaluation form, discuss the evaluation with the student, then submit this signed form to Denise Newsome in the Office of Research and Graduate Studies. Annual evaluations should be completed by May 15. Attach additional sheets as needed.

Student Name**:**_____

Major Professor: _____

Summary Evaluation and Recommendations

Committee member signatures

_____ Major Professor

_____ University Representative

_____

_____

SUPERVISORY COMMITTEE CERTIFICATION OF 'PASS' OF PRELIMINARY DOCTORAL EXAMINATION AND ADMISSION TO PH.D. CANDIDACY

DATE:_____

EACH STUDENT SHOULD PROVIDE A COPY OF THIS FORM TO THE SUPERVISORY COMMITTEE AFTER THEY PRESENT AND SUCCESSFULLY DEFEND THEIR RESEARCH PROPOSAL.
EACH COMMITTEE MEMBER SHOULD SIGN THIS FORM TO INDICATE THEIR APPROVAL OF A 'PASS' PERFORMANCE FOR THE PRELIMINARY DOCTORAL EXAMINATION ***AND*** APPROVAL OF 'ADMISSION TO PH.D. CANDIDACY'. THE STUDENT SHOULD SUBMIT THIS SIGNED FORM ALONG WITH A COPY OF THE RESEARCH PROPOSAL TO THE BIOMEDICAL SCIENCES STUDENT SUPPORT COORDINATOR (JONQUIL LIVINGSTON) IN ROOM 3350 M. IF YOU HAVE ANY QUESTION ABOUT THIS FORM FEEL FREE TO CONTACT JONQUIL AT 5-8379.

STUDENT NAME:_____

We, the Supervisory Committee, certify that the student named above has passed the Preliminary Doctoral Examination and met all additional requirements for Admission to Candidacy for the Ph.D. degree in Biomedical Sciences.

MAJOR PROFESSOR:_____

COMMITTEE MEMBER _____

COMMITTEE MEMBER_____

COMMITTEE MEMBER_____

COMMITTEE MEMBER_____

COMMITTEE MEMBER_____

SUPERVISORY COMMITTEE CERTIFICATION OF ACCEPTANCE OF THE PH.D. PROSPECTUS

DATE:_____

EACH STUDENT SHOULD PROVIDE A COPY OF THIS FORM TO THE SUPERVISORY COMMITTEE AFTER THEY PRESENT THEIR PROSPECTUS OF THE PH.D. DISSERTATION TO THE COMMITTEE. EACH COMMITTEE MEMBER SHOULD SIGN THIS FORM TO INDICATE THEIR APPROVAL OF THE PROSPECTUS. THE STUDENT SHOULD SUBMIT THIS SIGNED FORM ALONG WITH A COPY OF THE PROSPECTUS TO THE BIOMEDICAL SCIENCES STUDENT SUPPORT COORDINATOR (JONQUIL LIVINGSTON) IN ROOM 3350 M. THE PROGRAM OFFICE WILL PROVIDE THE OFFICE OF GRADUATE STUDIES WITH A COPY OF THE PROSPECTUS AND INDICATE ACCEPTANCE. IF YOU HAVE ANY QUESTION ABOUT THIS FORM FEEL FREE TO CONTACT JONQUIL AT 5-8379.

STUDENT NAME:_____

We, the Supervisory Committee, certify that the student named above has prepared and presented a satisfactory prospectus for the Ph.D. dissertation.

MAJOR PROFESSOR:_____

COMMITTEE MEMBER _____

COMMITTEE MEMBER_____

COMMITTEE MEMBER_____

COMMITTEE MEMBER_____

COMMITTEE MEMBER_____

Progress Summary for the Ph.D. in Biomedical Sciences

Annual Update Target Date May 15

(Rev. 6/23/08 rlr)

Student Name: _____

Entry Year: 20_____ Semester: Fall/Spring (circle)

Year 1: Rotations, Courses & Milestones Completed

____**Completion of First Year Lab Rotations (BMS 5185)**

____Rotation One, Faculty Sponsor: _____

____Student Summary

____Faculty Evaluation

____Rotation Two, Faculty Sponsor: _____

____Student Summary

____Faculty Evaluation

____Rotation Three, Faculty Sponsor: _____

____Student Summary

____Faculty Evaluation

____**Successful completion of all First Year Courses with overall GPA ≥ 3.0**

Fall Semester:

___PCB 5595	Advanced Molecular Biology (3)	Grade: ____
___STA 5172	Statistics for Epidemiology (3)	Grade: ____
___IHS 5515	Ethics and Professional Integrity in Research (1)	Grade: ____
___BMS 5185	Research Opportunities in Biomedical Sciences (2)	

Spring Semester:

___PCB 5137	Advanced Cell Biology (3)	Grade: ____
___BMS 5525	Bioregulation (3)	Grade: ____
___BMS 5185	Research Opportunities in Biomedical Sciences (1)	

Summer Semester:

___BMS 5935	Advanced Topics in Biomedical Sciences (1)	Grade: ____
___BMS 5186C	Research Techniques in Biomedical Sciences (4)	Grade: ____

Additional Year One Milestones:

____Selection of Major Professor_____ .

____Selection of Supervisory Committee—this committee will include the Major Professor and at least three additional faculty members with Doctoral Directive Status; at least one of these members should be from outside the College of Medicine. The committee members in addition to the Major Professor are:

1. _____ (DDS)
2. _____ (DDS)
3. _____ (University Rep., with DDS)
4. _____ (Other)
5. _____ (Other)

____Submission of Program of Studies with approved by the Supervisory Committee

____ Department & College of Medicine Seminar Program Attendance

____Annual Performance Evaluation (Recommendations if Cause for Concern _____)

Year 2: Courses & Milestones Completed

____ Successful completion of all Second Year Courses with overall GPA ≥ 3.0

Fall Semester:

___Elective Course Number & Title: _____
Grade: _____
___Elective Course Number & Title: _____
Grade: _____

Spring Semester:

___Elective Course Number & Title: _____
Grade: _____
___Elective Course Number & Title: _____
Grade: _____

Summer Semester:

___BMS 5935 Advanced Topics in Biomedical Sciences (1) Grade: _____

Additional Year Two Milestones:

____ Schedule the Written Comprehensive Examination of the Preliminary Doctoral Examination
Date completed: _____ (Recommended deadline September 1)
Outcome: Pass: _____
Partial Pass: _____
Fail: ____
Recommendation if Partial Pass or Fail: _____
_____

____ Department & College of Medicine Seminar Program Attendance
____Annual Performance Evaluation (Recommendations if Cause for Concern
_____)

Year 3: Courses & Milestones Completed

____ Successful completion of all Third Year Courses with overall GPA ≥ 3.0

Fall Semester:

___Elective Course Number & Title: _____
Grade: _____
___Elective Course Number & Title: _____
Grade: _____

Spring Semester:

___Elective Course Number & Title: _____
Grade: _____
___Elective Course Number & Title: _____
Grade: _____

Additional Year Three Milestones:

____ Defense of the Research Project Proposal component of the Preliminary Doctoral Examination and approval for Candidacy for the Ph.D. degree
Date completed: _____ (Recommended deadline December 15)
____ Copy of research proposal and approval of Candidacy provided to Program Office
____Teaching for one or more semesters:
Semester(s) & course(s) taught: _____
____ Completion of requirement for three Elective Courses (recommended, not required)
____ Approval of Ph.D. Research Prospectus by Supervisory Committee
____ Copy of Prospectus and approval provided to Program Office
____ Department & College of Medicine Seminar Program Attendance

____ Required Department research seminar
____ Publication accepted in peer-reviewed journal
(one required for students entering 8/08 and later)
Authors, title and journal: _____
_____
____Annual Performance Evaluation (Recommendations if Cause for Concern
_____)
____ Anticipated Graduation Date: _____

Year 4: Milestones Completed

____ Fourth Year Courses taken (if any)
___Elective Course Number & Title: _____
Grade: _____
___Elective Course Number & Title: _____
Grade: _____
____ Required Department research seminar (if not completed previously)
____ Successful completion & defense of Preliminary Doctoral Examination Research Proposal (if approved deferral or re-examination)
____ Copy of research proposal and Committee approval provided to Program Office
____ Completion of requirement for three Elective Courses (if approved deferral)
____ Approval of Ph.D. Prospectus by Supervisory Committee (if approved deferral)
____ Copy of Prospectus and approval provided to Program Office
____ Completion of teaching requirement (minimum of two semesters)
Semester(s) & course(s) taught: _____
____ Department & College of Medicine Seminar Program Attendance
____ Publication accepted in peer-reviewed journal
(one required for students entering 8/08 and later)
Authors, title and journal: _____
_____
____ Successful Defense of Dissertation (if scheduled) & Date: _____
____Annual Performance Evaluation (Recommendations if Cause for Concern
_____)
____ Anticipated Graduation Date: _____

Year 5: Milestones Completed

____ Department & College of Medicine Seminar Program Attendance
____ Publication accepted in peer-reviewed journal
(one required for students entering 8/08 and later)
Authors, title and journal: _____
_____
____ Successful Defense of Dissertation (if scheduled) & Date: _____
____Annual Performance Evaluation (Recommendations if Cause for Concern
_____)
____ Anticipated Graduation Date: _____

Program Graduation Checklist
Ph.D. in Biomedical Sciences

(Rev. 6/25/08 rlr)

Student Name: _____ Admission Date: _____

Major Professor_____ .

Supervisory Committee--members in addition to the Major Professor:

1. _____ (DDS)
2. _____ (DDS)
3. _____ (University Rep., with DDS)
4. _____ (Other)
5. _____ (Other)

The following must be completed and indicated documentation received for Department certification of satisfaction of requirements for the Ph.D. in Biomedical Sciences.

Year 1

____ Completion of required coursework with overall GPA ≥ 3.0
____ Annual Evaluation by Graduate Program Committee
____ Program of Studies, approved by the Supervisory Committee & submitted to Program Office
____ List of Supervisory Committee members reported to Dean of Graduate Studies

Year 2

____ Overall GPA ≥ 3.0
____ Annual Evaluation completed by Supervisory Committee
____ Written component of Preliminary Doctoral Examination, Date passed _____

Year 3

____ Core & Elective Courses completed with overall GPA ≥ 3.0
____ Research proposal component of Preliminary Doctoral Examination
____ Candidacy for Ph.D. approved by Supervisory Committee, Date approved _____
____ Results of Preliminary Doctoral Examination reported to the University Registrar.
____ Admission to Candidacy form filed in the Office of the University Registrar
____ Ph.D. Prospectus approved by Supervisory Committee, Date approved _____
____ Ph. D. Prospectus Approval Form submitted to the Dean of Graduate Studies
____ Annual Evaluation completed by Supervisory Committee

Year 4

____ Annual Evaluation completed by Supervisory Committee

Additional requirements

____ Research Seminar, Date presented _____
____ Teaching requirement (2 semesters), Semester completed _____
____ Peer-reviewed manuscript published or accepted, Date: _____ (Effective 8/08)
____ Registration for minimum 24 credit hr of dissertation research, Date satisfied _____
____ Department notification of successful Dissertation defense, Date notified _____