

**Degree Program for the  
Doctor of Philosophy (PhD) in  
Biomedical Sciences, Concentration Physiology**

East Carolina University  
The Brody School of Medicine

Policies and Procedures  
Handbook for Students  
(*Approved: April 06, 2020*)

Assembled by the Graduate Studies Committee, Department of Physiology  
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## **POLICIES AND PROCEDURES**

For the Graduate Concentration in *Physiology*  
(*PhD in Biomedical Sciences*)

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## **I. GENERAL INFORMATION REGARDING THE GRADUATE PROGRAM IN BIOMEDICAL SCIENCES, WITH A CONCENTRATION IN PHYSIOLOGY**

### **A. Introduction**

This booklet defines the guidelines and policies governing the doctoral program in Biomedical Sciences with a concentration in Physiology, in the Department of Physiology, the Brody School of Medicine at East Carolina University and is supplemental to the current university graduate catalog. The information has been prepared for the graduate faculty, graduate students, and applicants to this graduate program. All faculty and students should be thoroughly familiar with the information provided, and should adhere to these policies and procedures in formulating the student's program of education.

### **B. Physiology Graduate Studies Committee (GSC)**

The GSC committee, formed by faculty of the graduate program in Physiology, manages the graduate program in the Department of Physiology, and is responsible for the following: formulating new or amended policies and practices to facilitate and improve the quality of graduate education; bringing policy changes before the Graduate Faculty for approval; implementing policies that are subject to approval by vote of the Graduate Faculty in the Department; interfacing with BSOM and ECU administration; ensuring compliance with existing and amended policies; and providing general support for the faculty and students in the Program. The GSC shall consist of at least two tenure track faculty or tenured members who are appointed annually by the departmental chair, and the Director for the Physiology PhD Program/Concentration (tenured faculty member), who shall act as the chair of the committee.

The GSC will report at each Department of Physiology faculty meeting. These reports will make the graduate faculty aware of the progress of all physiology graduate students; as well as serve as a platform to present, discuss and act on policy changes. New policies formulated by the GSC become binding only after they have been approved by two-thirds of the departmental graduate faculty who hold primary appointments in Physiology. All approved new policies must be added to the graduate handbook after the vote in order to become binding.

### **C. Application for Graduate Studies in Physiology**

**C.1 Regular admission:** Admission to the graduate program in the Department of Physiology requires the submission of an application and all supporting materials directly to the ECU Graduate School. Completed applications are forwarded to the Director of Graduate Studies in Physiology and the GSC. The GSC identifies qualified applicants, presents the applications at a department faculty meeting, and makes the applications available to the Physiology graduate faculty for review. The departmental faculty members provide input to the GSC, which then issues recommendations for admissions and granting

of fellowship support to the departmental chair. The Dean of the Graduate School grants final admission to the program.

Preference for admission to the program is given to applicants who exhibit the potential for academic and research success in physiology as demonstrated by their previous academic achievements, Graduate Record Examination (GRE) scores, and letters of recommendation. Programmatic considerations include availability of research mentors, facilities, and resources.

Graduate studies in Physiology require knowledge of organic chemistry, biology, physics, and mathematics. Therefore, in addition to the general admissions requirements of the Graduate School, students entering the doctoral program in Physiology should have had the following courses taken before applying:

- 1) Biology – 2 semesters with laboratory exposure
- 2) Chemistry – 4 semesters, including organic chemistry, with laboratory exposure
- 3) Mathematics through Calculus
- 4) Physics – 2 semesters with laboratory exposure

Although not required, students are also encouraged to have had an introduction to biochemistry, cell biology, molecular biology (or genetics), and statistics to provide a strong basis for the advanced graduate courses. Specific requirements for admission to the graduate program are given in the university catalog. If a transferring student is not completing a current program elsewhere, the student needs to inform the GSC prior to enrolling to the Biomedical Sciences program, concentration Physiology. Students from other departments in the Brody School of Medicine must obtain permission in writing from the GSC.

Applicants may apply for admission to begin studies in the fall semester of the academic year; however, they may be eligible to start working in the host laboratory in the second summer session before enrollment. Specific application instructions are listed on the Graduate School's website: <http://www.ecu.edu/cs-acad/gradschool/applicationinfo.cfm> (see Appendix). Applications must be supported by official transcripts from each institution attended since high school, an official copy of Graduate Record Examination (GRE) scores, at least three letters of recommendation from persons able to assess the applicant's potential as a research scientist, and an essay (1-2 pages) by the applicant describing their future career goals. Foreign applicants who do not use English as their native language must take the "Test of English as a Foreign Language (TOEFL)" examination and should achieve a score of 20 or higher on each section. Inquiries regarding admission to the graduate program in physiology should be referred to the chair of GSC.

**C.2 Admission through transfers:** Admission to the graduate program in the Department of Physiology from other programs or institutions requires the submission of an application and all supporting materials directly to the Graduate School. Completed

applications are then forwarded to the Director of Graduate Studies in Physiology and the GSC.

Completed coursework by these applicants will be assessed on a case-by-case basis against the requirements for the program in Physiology, and advisory committees or thesis committees will be established in consultation with the GSC and the Graduate Director.

**D. Vacation Policy**

There are no formal vacation days for Graduate students. The Department of Physiology allows for 20 working days of vacation, including the 12 holidays given to state employees each year. Prior to taking vacation leave, graduate students must coordinate with their dissertation advisor and their committee, to ensure that adequate progress is maintained.

## **II. INFORMATION FOR FIRST YEAR STUDENTS**

### **A. Advisors for New Students**

There are two types of committees for students before they reach candidacy:

1) The Departmental Graduate Studies Committee

The Graduate Studies Committee (**GSC**) acts as the student's initial advisory committee. The GSC will meet with the student prior to or during orientation week, to assess the student's academic background (strengths, weaknesses, and deficiencies) and to help the student develop a course of study within the framework of the curriculum for the first year that meets the academic goals of the student. In cases, in which the student has already identified a dissertation advisor to work with, the GSC may assign that faculty mentor from the Graduate Faculty as the Chair of the advisory committee, to provide guidance for the student through the first years in the program.

2) The advisory committee

The departmental GSC will provide all incoming students with an Advisory Committee (**AC**), which can be different from the Thesis committee, and which will direct the students until they pass their qualifying examination. The AC will provide integration with the department, establish communication lines between students and faculty, and identify and solve potential problems with coursework, rotations, choosing research area, and dissertation mentor. The AC membership should be diverse, consisting of 3-4 faculty members of different professorial ranks and representing the different research areas in physiology. The GSC will assist in identifying a chair and committee members for each student. If the student has already identified a mentor, that individual can serve as the Advisory Committee Chair and work with the GSC to identify the other members of the student's AC.

There will be every attempt to distribute/limit the faculty to serving on students Advisory Committees, to not over-burden any one faculty with excessive committee work. The AC should have their first meeting with a new student within the first month of the first fall semester and set a schedule for regular meetings thereafter. At the end of each semester, the student should provide informal update on the progress with coursework, rotations and seminars to the AC, which serves as the basis for the completion of the progress report form.

### **B. Research rotations in Physiology**

The GSC realizes that many (most) of the incoming students may have identified a possible dissertation advisor in their application and that they may not need a research rotation to establish a laboratory, in which to perform their PhD research project. Nevertheless, the GSC recommends, but does not require, a research rotation for first-year students even if a dissertation advisor has already been identified. Students following this rotations receive course credit for Introduction to Research PHL 7740.

The purpose of the lab rotations is to get experience in different laboratories within the Department of Physiology, to eventually identify a thesis/dissertation laboratory and advisor. Research rotations also provide the student with the opportunity to explore areas in which she/he may have interest but no prior research experience. While these rotations can span labs and techniques affiliated with the targeted main advisor, it is recommended that at least one rotation be utilized to explore a field of research and/or related methodologies that the student may not have previously considered. The recommended minimum duration / rotation is 8 weeks, and it can be scheduled to begin in the summer months prior to the first semester in the program.

Faculty is permitted considerable flexibility in assigning rotation activities and should keep in mind those students who elect to take three (instead of two) courses in the fall semester will have less time available for the rotation experience. Faculty expectations should be discussed with students during the one-on-one meetings prior to selection of rotation advisors.

### **C. Selection of a Dissertation Advisor**

The chair of the GSC and the student's AC will be responsible for advising the student in selecting a dissertation advisor appropriate to the research interests and professional goals of the student. Importantly, the selection must also be consistent with the resources of the proposed dissertation advisor and the department. Selection should be weighted toward grant-funded laboratories.

All full-time students in the graduate program in Physiology should have a dissertation advisor identified by the end of the Fall semester of their first year. This assignment should be mutually agreeable to the student and to the advisor. Students without a dissertation advisor and dissertation committee are unable to stand for the Candidacy Exam for the PhD (Section IV). The student's Advisory Committee **must** meet at least **once per semester**. It is the responsibility of the student to schedule meetings so that all members can attend. Students will be expected to update the committee on progress of coursework and rotations and outline their steps for the next semesters until their candidacy exam.

Upon selection of an advisor the student will notify the GSC chair of his/her choice in writing. The faculty member selected as advisor will concurrently notify the GSC chair in writing of his/her willingness to assist the student and to accept the responsibility of directing the doctoral dissertation. If a change of the advisor-advisee relationship is requested at a later date, the GSC will work with the student to identify a new lab, with mutual consent between GSC and the Department chair.

The AC is purposely set up of faculty across the different ranks and research areas in the department, to provide the students with a maximum exposure to different scientific approaches and concepts in the discipline. The members of the AC may also become the members of the Graduate Advisory Committee (GAC, s. below). It is understood that the scientific development of the student's project may be better served by year 2 by faculty

other than those originally assigned to the AC. Therefore, the original AC may be modified in the spring of the second year to better reflect the research thrust and to meet the student's needs. The primary advisor of the student should notify the GSC of any change in the composition of the AC or the GAC (s. below) and add this information to the student's semester evaluation.

**D. Graduate Advisory Committee (GAC)**

Students obtain candidacy status after the successful completion of written and oral parts of the comprehensive examination in the 3<sup>rd</sup> year of their studies (s. page 14-15). As a default option, the AC remains in place until that time to guide the student, when the research-driven Graduate Advisory Committee (GAC) takes over. However, if the research plan for the student develops early and requires faculty with different expertise than present in the AC, a GAC can replace the AC as early as in the spring of the 2<sup>nd</sup> year of the student's time in the program. In either case, advisor and student will recommend members in the form of a list, to serve on their Graduate Advisory Committee (GAC) or thesis committee to the GSC for approval. The student's advisor will serve as the chair of the student's GAC. This committee is to be composed of at least four graduate faculty members (chairman of the GAC and three other voting members). Three of the GAC members must be part of the Graduate Faculty in the Department of Physiology, and at least one member must be a member of the Graduate Faculty in another department or institution. External members from other institutions may need to submit a request to obtain Graduate Faculty status with the Brody School of Medicine. Student and advisor will submit the committee composition to the GSC. The GSC will review the committee composition for compliance.

The student's GAC is responsible for establishing the student's program of study in final detail, approval of the research program, regular counseling and monitoring of the student's progress, administration and evaluation of the doctoral examination, criticism of the dissertation, and administration and evaluation of the dissertation defense. The GSC should be informed of any change in the composition of the GAC by the student's primary advisor, and this information should be added to the student's semester/annual evaluation. The final program of study for the Ph.D. degree shall be formulated and approved by the student's GAC in consultation with the student. Form GSC-2 must be submitted to the GSC within four weeks after approval of the proposed program of study by the GAC.

The student's Graduate Advisory Committee **must** meet at least **once per semester and submit reports on the progress of the student to the GSC once per year.** It is the responsibility of the student to schedule meetings so that GAC members can attend. Students will be expected to update the committee on progress and plans towards completion of the Specific Aims in their Dissertation Research Proposal. The GAC will assess the progress and provide guidance on proposed experiments. The chairman of the GAC will submit a written summary of each meeting to the GSC for inclusion in the student's file and provide copies to the student and to each committee member. The meeting summary must cite any deficiencies that the committee has identified, as well as the relevant



action the committee has prescribed to correct the problem. The summary must be signed by the primary thesis advisor and all members of the GAC, and copies will be provided to the student and all members of the student's GAC. This report will be forwarded to the Departmental Chairman by the GSC and kept in the student's permanent file.

If no progress report has been sent to the chair of the GSC by the end of the spring semester, the GSC, after consultation with the department chair (or vice chair when appropriate), will contact the student and chair of the GAC. If the form is not returned by the end of the following summer session, the department reserves the right to withhold travel approvals for the student until the form is completed and submitted.

If the Dissertation Advisor leaves this institution, the student's GAC must insure prior to the advisor leaving that the student's progress toward the degree can continue at this or another institution. If the Dissertation Advisor goes on a Leave of Absence or becomes otherwise incapacitated, the remaining members of the GAC will appoint an Acting Chair, and submit their decision for approval to the GSC and the Department Chair.

### **III. GRADUATE CURRICULUM IN PHYSIOLOGY**

#### **A. Research Requirement**

All graduate students in Physiology are required to design and conduct an original, independent research project under the supervision of their Dissertation Advisor. The research project is a major component of the graduate curriculum. The student is expected to present their research presentations at regional and at least one national or/and international scientific meetings, and also to submit and publish their findings in form of manuscript to at least one peer-reviewed journal, which the student's thesis committee deems appropriate in that field of research. Upon completion of the research project, a dissertation describing the research project and the results must be prepared under the direction of the student's Dissertation Advisor as specified in the Graduate Catalog.

#### **B. Course Requirements**

Students enrolled in the Physiology concentration must meet all requirements specified in their approved program of study in order to obtain a degree. However, the student's GAC may modify the approved program requirements when such changes are beneficial to the student. Recommended changes in the program of study must be submitted in writing to the GSC for review and forwarded to the Departmental Chair for approval. Completion of the required coursework must be confirmed prior to the dissertation defense by submission of a Request-to-Schedule-Student-Defense form (available from the BSOM Office of Research and Graduate Studies).

As a general rule, a minimum of 40 semester hours of course work is required for the doctoral program. The Core Curriculum presented on the following page serves as a template for a typical student's program. The details of an individual student's approved program of study are the responsibility of the student's GAC. In general, the major courses in the 1st semester are: Foundational Biomedical Sciences (BMSC 7002 / PHL Y 7002) Graduate Neuroscience (PHLY 7703), Introduction to Research (PHLY 7740), Seminar/Forum (PHLY 7715). **All of these courses are required** for the PhD in Biomedical Sciences with a concentration in Physiology. Students also can choose to take a graduate elective in cell biology, molecular biology, or genetics. The elective is chosen based on the student's background and career goals. In the 2nd semester, students will take Foundational Biomedical Sciences (BMSC 7003 / PHL Y 7003), Graduate Organ Systems Biology (PHLY 7702) and can take Introduction to Research Course (PHLY 7740) or Advanced Topics in Physiology (PHLY 7710). In the first year, students will also need to take 2 seminar courses (the cohort-wide course (PHLY 7715, section 1) and Seminar Forum (PHLY 7715, section 2). Statistics and Ethics are required core course of the Biomedical Sciences umbrella program and are generally taken in the Spring semester of the 1<sup>st</sup> or the Fall semester of the 2<sup>nd</sup> year. The summer session of the 1<sup>st</sup> year is spent in a research internship, working in a laboratory and reviewing literature with the faculty.

In the Fall of the 2<sup>nd</sup> year, students usually take Translational Physiology (PHLY 7705, required), Seminar Forum (PHLY 7715, required), and electives according to their research plans. In the Spring of their 2<sup>nd</sup> year, the remaining required courses are Physiological Proteogenomics (PHLY 7704) and Seminar Forum (PHLY 7715), plus electives to meet the 9-hrs enrollment minimum for a full-time student.

Students are expected to attend departmental seminars throughout their course of study whether or not they are enrolled for credit in any given semester. Additional credits in graduate courses chosen from the Department of Physiology including Dissertation Research (PHLY 9000) as well as courses from other departments' offerings are required for a total of 76 credits. Students may enroll for more than the maximum credits for these courses and these will appear on the transcript. However, the above limits will be used to determine the 76 credits for the degree. Core courses and first and second year elective courses will be used for calculating grade point averages required to remain in good standing in the department. The details of an individual student's approved program of study are the responsibility of the student's GAC. Below is a typical program for the first two years of study in the physiology graduate program:

**Generalized Course Layout for years 1 and 2**  
**(Concentration-required course are highlighted in BOLD)**

<i>Fall 1st Year</i>	<i>Course Number</i>	<i>Credit Hours</i>
<b>Foundational Biomedical Sciences</b>	<b>BMSC 7002 / PHLY 7002</b>	<b>4</b>
<b>Graduate Neuroscience</b>	<b>PHLY 7703</b>	<b>3</b>
<b>Introduction to Research</b>	<b>PHLY 7740</b>	<b>3</b>
<b>Seminar/Forum</b>	<b>PHLY 7715, section 1</b>	<b>1</b>
<b>Seminar/Forum</b>	<b>PHLY 7715, section 2</b>	<b>1</b>
Fall Electives		0
<b>Spring 1st Year</b>		
<b>Foundational Biomedical Sciences</b>	<b>BMSC 7003 / PHLY 7003</b>	<b>4</b>
<b>Graduate Organ Systems Physiology</b>	<b>PHLY 7702</b>	<b>3</b>
Research Ethics	GRADS 7004	2
Practical Biometry	PHAR 7777	3
<b>Seminar/Forum</b>	<b>PHLY 7715</b>	<b>1</b>
Spring Electives		0-5
<b>Summer 1st Year</b>		
Laboratory Research	Full time	
<b>Fall 2nd Year</b>		
<b>Translational Physiology</b>	<b>PHLY 7705</b>	<b>4</b>
Adv. Topics in Physiology	PHLY 7710	3
<b>Seminar/Forum</b>	<b>PHLY 7715</b>	<b>1</b>
Fall Electives		2-5

<b>Spring 2nd Year</b>		
<b>Physiological Proteogenomics</b>	<b>PHLY 7704</b>	<b>4</b>
Advanced Topics in Physiology	PHLY 8710	2
Adv. Topics in Physiology	PHLY 8710	2
<b>Seminar/Forum</b>	<b>PHLY 7715</b>	<b>1</b>

**Summer 2nd Year**  
 Comprehensive Exams  
 Laboratory Research Full time

**Recommended Electives Examples**

	<b>Course Number</b>	<b>Credit Hours</b>
Graduate Cellular Physiology	PHLY 7701	3
Biochemistry 1	BIOC 7301	4
Molecular Biochemistry	BIOC 7310	3
Molecular/Cell Biology	MCBI 7410/ANAT 7202	4
Toxicology	PHAR 7680	4
Biostatistics I	BIOS 7021	3
Regulation of Metabolism	EXSS8334/BIOC8320	4
Immunology	MCBI 7450	4
Cardiovascular Pharmacology	PHARM 7660	3

**C. Grading**

The grades used in evaluating the performance of doctoral students are:

- A - Excellent
- B - Good
- C - Low Pass
- F - Fail
- I - Incomplete
- IP - In Progress

No grade less than B in **any graduate course** is acceptable for the Ph.D. degree credit requirements. **Any class where a grade of C or less is earned must be re-taken.** A student who receives more than 6 hours of C or less in any portion of his or her program will be excused from the program.

The grade of "I" is given for a deficiency in the quantity of work done in a course. A grade of "I" not removed during next semester in which the student is enrolled in the University automatically becomes a failure. The grade of "IP" is given only for Dissertation Research. The completion of the research and defense of the dissertation changes this grade to a "Pass".

Withdrawal from any doctoral course is only allowed for extenuating circumstances and must be authorized by the Graduate Advisor and Departmental Graduate Studies Committee prior to submission of the request to the Registrar.

**C. Transfer of and Credit for Previously Performed Graduate Coursework**

In some cases, students can obtain credit for graduate courses completed at other institutions or as part of other programs, or test out of coursework by demonstrating competency on an examination administered by the Graduate Studies Committee. Acceptance of credits from transfers or examinations is subject to approval by the Graduate Studies Committee, the Departmental Chair, the Graduate School Administrative Board, and the Dean of the Graduate School. With the approval of the GSC and Departmental Chair, one or both portions of the doctoral candidacy examination requirement **may** be waived for transfer students who have successfully passed an equivalent candidacy examination in their former graduate work. Transfer of credit is subject to further approval by the dean of the Graduate School.

#### **IV. ADMISSION TO CANDIDACY FOR THE DOCTORAL DEGREE**

Admission to candidacy is conferred upon successfully passing the doctoral candidacy examination. The student's Graduate Advisory Committee will determine a student's eligibility for the examination and conduct the examination. The examination consists of written comprehensive assessments of the general knowledge acquired in the curriculum (section 1), and the development and successful defense of a research proposal (section 2, generally presented during the 3<sup>rd</sup> year).

Upon passing all parts of the Comprehensive Examination, the student will be recommended for admission to candidacy for the degree of Doctor of Philosophy in Biomedical Sciences, concentration Physiology. Every effort should be made to complete the examination process by the end of the 3<sup>rd</sup> year in the program.

##### **A. Section 1: Cumulative assessment:**

The examination for PhD candidacy consists of three (3) written parts and one oral examination in section 2 (outlined below).

The written exams will be administered in three parts:

Part 1: in the Fall semester of year 1, students will need to successfully pass the Foundational Biomedical (BMSC 7002 / PHL Y 7002) and the Neuroscience (PHLY 7703) course with their instructor-driven exams;

Part 2: In the Spring semester of year 1, students will need to successfully pass the Foundational Biomedical (BMSC 7003 / PHL Y 7003) and the Organ Systems Physiology (PHLY 7702) course with their instructor-driven exams.

Part 3 of the written examination will be held after the end of the Spring semester of the 2<sup>nd</sup> year. This part will test the student's competence in developing a research plan using an "open-book" session in a field related, *but not identical*, to the student's overall research. This "open book" session will address the student's originality and ability to design a research study in the area of his or her dissertation research and should be limited to 3 days. This proposal should consist of a Specific Aims page and an outline of the proposed experiments, the total not to exceed 3-4 pages. The student's GAC advisor will grade part 3 and present the graded document to the AC. If a majority of the committee feels that major deficiencies in part 3 of the written exam are apparent, then the student must re-take part 3 during the summer of the second year where the AC will re-evaluate part 3 again. If the student fails to achieve a passable grade (B or higher, based on a majority vote from the AC), on the re-vised part 3, then the student will be dismissed from the program.

The student will then develop a PhD research proposal in the Fall semester of the third year, which needs to be successfully defended at the end of the Fall or the beginning of the Spring semester (December / January), s. below.

### **Section 2: Oral Candidacy Examination**

The oral candidacy examination will require the student to develop a research proposal and present it in an open setting to the departmental faculty at large. Ideally, but not required, the format under which the proposal is prepared may lend itself to a submission as a pre-doctoral research grant for the student. The area of research proposed should be in the area of their proposed dissertation research. The written background and research sections should be based on the format of a F31 (NIH) or American Heart Association (AHA) pre-doctoral training grant, and address specific aims, background, significance, research design and approach, expected results and alternative approaches. Budget pages are not required for this purpose. The final version of the grant application will be submitted to the GAC for approval no less than two weeks before the examination, to allow for feedback prior to the defense of the research proposal.

The student will present the research proposal in an open forum to the faculty and field questions from the faculty at large and subsequently, behind closed doors, from the GAC. The GAC will then excuse the student and vote on a pass/fail decision on the student's performance, with a majority vote considered passing. If the student passes the proposal defense, he/she will be recommended for candidacy for PhD. The student's Thesis Committee chair will then be responsible for submitting the forms: "Results of Doctoral Candidacy Examination" and "Doctoral Candidacy Examination Report" to the GSC. The outcomes for both the written and oral defense portions are recorded on this form.

If the student does not pass the research proposal defense on the first attempt, the thesis committee will develop a remediation plan and an appropriate time frame, which will entail a revision of the project and/or the oral presentation. Students have two opportunities to pass the oral exam. Only the portion of the research proposal defense failed in the first attempt needs to be repeated in the second attempt. The re-examination should be finalized by the end of the 3<sup>rd</sup> year in the program. However, a second failure is considered a failure of the entire exam and the student will be excused from the program.

## **V. DOCTORAL DISSERTATION**

### **A. Dissertation Requirements**

Following the requirements of the Graduate Catalog of East Carolina University, each candidate shall prepare a dissertation proposal. The dissertation proposal should meet the guidelines specified in The Graduate Catalog, Section 8, Brody School of Medicine, Doctoral Dissertation:

- 1) A review of the literature pertinent to the research,
- 2) A short statement on the nature of the project and the objectives of the proposed research,
- 3) An outline of an experimentally feasible research program.

The dissertation proposal must be approved by and may be changed as needed by the student's Graduate Advisory Committee.

The dissertation must reflect original, independent research, which contributes new knowledge to the candidate's major field. A high quality of experimental design, research technique, and communication must be demonstrated along with a clear perception of historical foundations, strengths, weaknesses, and implications of the results.

The student will write a dissertation under the direction of his/her advisor. With the Advisory Committee's approval, the student will submit a complete typed draft of the dissertation to each advisory committee member. The timing of thesis submission to defense date should follow a schedule of 1 week plus 2 weeks:

1. Student submits the complete thesis draft to all committee members 3 weeks prior to the projected defense date. The committee members have one week for a first read and to suggest substantive revisions.
2. After that first week, the student collects comments/revisions AND simultaneously gets committee member signatures on the "Request to Schedule Student Defense" form, which the student must submit to the BSOM Office of Research and Graduate Studies. The advisor and student should schedule a defense 2 weeks from the submission date of this form. A revised thesis manuscript should be distributed to the committee one week before the defense.
3. After successful completion of the defense, the committee may submit minor further corrections to the student. The student should include these corrections as a final revision prior to Electronic Submission (ETD) and submission to the ECU Graduate School. The student can only graduate after all documents have been forward to and accepted by the Graduate School.

In cases where there are serious extenuating circumstances (e.g. acute health issues, unavailability of student funding, etc.), the timing may be altered by consent of the student's advisor, the Program Director and the Department Chair.



Electronic submission of theses is required by the ECU Graduate School through the ETD system. Details pertaining to the preparation and electronic submission of the dissertation are specified on the graduate school's web site.

**B. Dissertation Defense**

The dissertation defense will consist of an oral presentation of the dissertation research in a publicly announced departmental seminar to which all interested persons are invited followed by a student Advisory Committee meeting. The candidate should successfully defend the research findings by responding to all questions and criticism. If the presentation is unsatisfactory the defense will be re-scheduled. If the research findings contain major weaknesses, the candidate will be offered an opportunity to obtain additional data before re-scheduling a defense. Immediately following the seminar, the student's Advisory Committee will convene in private to ask additional questions if deemed necessary and to vote on the student's dissertation. The vote will be recorded. Voting shall be a roll call vote with no abstention. Successful defense requires no more than one negative vote. Recommendation to the Dean to award the degree will be made by the committee and the Department chair.

The doctoral degree program is usually completed after 4-5 years and must be completed before the end of the twelfth semester, excluding summers, following initial enrollment. If special circumstances require, a student may request an extension from the GSC with endorsement from his/her Thesis Committee. The GSC will review the request and will make a recommendation to the Department chair. Only one extension of not more than two semesters, summers included, will be approved.

The doctoral degree program is considered complete when the dissertation has been successfully defended a copy of the signed signature page forwarded to the Graduate School, and the dissertation uploaded to ProQuest.

**C. Application to Graduate**

Each semester, the University establishes deadlines for submission of materials necessary to graduate. Failure to meet the deadlines will delay the student's graduation until the next semester. Some of the deadlines are early in the semester, and therefore all students should contact the Office of Research and Graduate Studies at the beginning of their last semester in residence to obtain the University's deadlines for submission of forms and material required for graduation. At the start of the final semester, the student must submit an Application for Graduation to the Registrar's Office. The application can be obtained from the Office of Research and Graduate Studies. By mid-semester, the following forms must be submitted to the Office of Research and Graduate Studies: Graduate Student Graduation Certification Completed (includes Graduate Student Graduation Summary and

RG312), Dissertation Agreement form, and Survey of Earned Doctoral Degrees. Students must be registered for the semester in which they graduate. If a student is not in residence at this time, they can petition the Graduate School to waive student fees by submitting the Continuing Studies Form to the Graduate School.

## **VI. ACADEMIC PERFORMANCE**

### **A. Grade Point Average**

Students in the doctoral program must maintain a program grade point average (GPA) of at least 3.0 for all graduate courses. The GPA will be calculated in the department based on courses in the student's program of study that do not exceed the maximum credits allowed for courses that may be repeated for credit (see III. B.). If the student's GPA falls below a 3.0, the student has one full academic year to complete the necessary coursework or repeat necessary coursework in order to return the GPA to a 3.0 or higher. At the discretion of the student's Graduate Advisory Committee and the GSC additional course work may be added to the program of study to allow the student to bring the cumulative GPA to 3.0. A cumulative program GPA of 3.0 is a prerequisite for the administration of the doctoral candidacy examination. Only core (required) courses with a grade of "B" or better may be used to satisfy the minimum 76 credit hours required for the Ph.D. degree. Any required course in the Department in which a student makes a "C" grade must be repeated, and a grade of B or better must be obtained. A failure to achieve a B or better on the repeated class will result in dismissal from the program.

A grade of "F" is grounds for immediate termination of a student's program of study. Students have the right to petition to continue their program. The petition must be approved by the student's GAC, the GSC, and the Department Chair. If approved, the student must repeat the course and earn a grade of "B" or better before the proposal for the dissertation will be accepted. The course (credits and grade) can be counted only once for graduation. If the petition is denied, the Graduate Studies Committee will request the Graduate School to terminate the student's enrollment in the doctoral program.

### **B. Progress Evaluations**

As briefly described in preceding paragraphs, students and their AC or GAC advisors are required to submit progress reports to the chair of the GSC by the end of each spring semester that the student is enrolled in the program. This progress report should include the student's grades, research accomplishments and a summary written by the student of their progress for the academic year. The report should also include an evaluation by the GAC advisor or initial advisory committee advisor that objectively discusses the student's academic performance to date. The report should be signed by both the student and advisor

and then turned over to the GAC or advisory committee at the year-end meeting for discussion. The report should be then signed by the committee and turned into the chair of the GSC indicating satisfactory or unsatisfactory progress. If by majority vote, the committee feels that student is not making satisfactory progress in the program the student and advisor will need to devise a plan to improve progress for the next academic year. The plan should be signed by both individuals and approved by the GAC or the advisory committee, then handed in to the chair of GSC. If in the next review, the GAC finds evidence of inadequate progress by the student, as determined by major vote of the GAC, then student and advisor will be required to meet with the GSC and department chair to determine appropriate next steps that could include actions such as termination from the graduate program or moving to a new GAC advisor depending on the circumstances.

Examples of unsatisfactory performance include poor grades, non-compliance with regulations, irresponsibility, insufficient effort on dissertation research, and unsatisfactory progress in writing the dissertation, scientific misconduct, and unethical behavior.

### **C. Student Appeal Policy**

Graduate students may appeal decisions concerning unsatisfactory performance on comprehensive assessments, academic probation for reasons of unsatisfactory progress toward the degree other than insufficient grade point average, termination of or election to void an assistantship for reasons set forth in the terms and conditions applicable to graduate assistant appointments, or dismissal from the graduate program. This policy does not apply to the appeal of decisions regarding course grades. The procedure can be found in the ECU Graduate Catalogue (see Appendix). The policy to appeal a grade can be found in the ECU Graduate Catalogue (see Appendix).

### **D. Leave of Absence Policy**

A Leave of Absence to address serious extenuating circumstances can be submitted by the chair of the GAC with final approval from the Department Chair. Such Leaves are discouraged due to the time restrictions placed on doctoral programs and resource allocations required for successful completion of doctoral research. Requests for Leave of Absence are considered on a case-by-case basis. The student must submit a Request of Leave of Absence form (GSC-7) to the student's Graduate Advisory Committee, with a full explanation of the circumstances leading to the request. The GSC-7 containing the request and the Advisory Committee's recommendation will be forwarded on to the Graduate Studies Committee. The Graduate Studies Committee will then make a recommendation to the Departmental Chairman, who will inform the student and Graduate School in writing of the terms for the Leave.

## **VII. APPENDIX**

ECU website:

<http://www.ecu.edu>

ECU Graduate School website:

<http://www.ecu.edu/cs-acad/gradschool/applicationinfo.cfm>

ECU Graduate Catalog:

[http://catalog.ecu.edu/content.php?catoid=13&navoid=1011#The Graduate Catalog](http://catalog.ecu.edu/content.php?catoid=13&navoid=1011#The_Graduate_Catalog)

ECU-wide Forms:

<http://www.ecu.edu/cs-acad/gradschool/Academic-Policies-and-Forms.cfm>

ECU Policies:

<http://www.ecu.edu/cs-acad/gradschool/Academic-Policies-and-Forms.cfm>

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