HANDBOOK FOR FACULTY and STUDENTS
PROGRAM ON EDUCATION IN HUMAN STRUCTURE
GRADUATE PROGRAM IN ANATOMY

Pennsylvania State University
College of Medicine
Milton S. Hershey Medical Center
Hershey, Pennsylvania

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I. INTRODUCTION

This handbook serves as an aid to faculty and graduate students in the Graduate Program in Anatomy, Program on Education in Human Structure. Information and degree requirements for the Pennsylvania State University Graduate Program in Anatomy and criteria for inclusion as Graduate Faculty in the Program in Anatomy are provided. Additional University requirements can be found in The Pennsylvania State University Graduate Programs Bulletin (www.psu.edu/bulletins/whitebook) and the Thesis Information Bulletin (www.gradsch.psu.edu/enroll/thesisguide.html). Both students and faculty are encouraged to consult these sources for additional information.

A. Degree Programs

The Graduate Program in Anatomy at the Penn State University College of Medicine confers the Master of Science (M.S.) degree and the Doctor of Philosophy (Ph.D.) degree. Both degrees include didactic course work and original research, as well as a written and oral defense of research. The objectives of both programs are to prepare students to demonstrate excellence in scholarship in Anatomy and associated fields, and to demonstrate excellence in research and scientific understanding in relevant disciplines.

B. Goals of Graduate Education in Anatomy

The goal of the Graduate Program in Anatomy at The Pennsylvania State University College of Medicine is to educate and prepare individuals for advanced professional degrees in anatomy, histology, embryology and related topics. The graduate program is directed toward students who plan to pursue either the Master of Science (M.S.) degree or the Doctor of Philosophy (Ph.D.) degree. The Master of Science in anatomy is an academic degree awarded for the satisfactory completion of a program of study that includes both didactic coursework and original research. It is expected that a student will expend a minimum of two academic years of study in a full-time capacity to complete this degree. Both the Ph.D. and Master’s programs provide students with a quality education encompassing teaching and research. Completion of either degree track implies that the student will have satisfactorily (1) mastered knowledge that is unique to the field of human structure, (2) mastered knowledge in human anatomy that is necessary to perform in a professional, academic, or corporate setting, or related area, (3) demonstrated competence in scientific research, (4) demonstrated ability to read, write, and evaluate scientific literature, and (5) demonstrated a work ethic that supports scholarship and promotes the highest standards of academic integrity.

C. Requirements for Admission to the Anatomy Program

Admission to the Anatomy Program is based on several factors including pre-admission testing (GRE, MCAT), letters of recommendation, academic performance in undergraduate school (i.e., GPA, science GPA), and language proficiency. The Anatomy Graduate Program will accept scores from either GRE or MCAT (or similar) examinations. While the program does not officially have minimum requirements in these tests, a total...
MCAT score of 22 or higher is desirable, and a total GRE score (verbal, quantitative) of 1050 is desirable.

Proficiency in English is a requirement of the Graduate School, as well as the Anatomy Program. The language of instruction at Penn State is English. International applicants must take and submit scores for the TOEFL (Test of English as a Foreign Language) or the IELTS (International English Language Testing System). The minimum acceptable score for the TOEFL is 550 for the paper-based test, 213 for the computer-based test, or a total score of 80 with 23 on the speaking section of the internet-based test. The minimum composite score for the IELTS is 6.5. International applicants are exempt from the TOEFL/IELTS requirement if they have received a baccalaureate or master degree from a university where English is the language of instruction (e.g., Scotland, British West Indies).

II. ACADEMIC REQUIREMENTS

A. Requirements for Master of Science Degree

Students must earn a total of 30 credits, of which at least 18 credits must be 500 or 600 level courses that provide letter grades. A GPA of 3.0 is required at the time of graduation. There are 5 required Anatomy Program courses (15 credits) that include ANAT 503 (6 credits), ANAT 512 (2 credits), ANAT505 (2 credits), ANAT 506 (2 credits), and NEURO 511 (3 credits). In addition students will register for 1 semester of colloquium (ANAT 590) assigned an "R" grade and 9 credits comprising 2 graduate Core Courses (BMS 502, BMS 501) as well as at least 3 credits of Electives or Selectives; remaining credits to fulfill full-time status can be research credit. All 5 required courses must be completed with a grade of "B-" or better; however an overall GPA of 3.0 is required to graduate. Any course (e.g., laboratory research) that is given an "R" grade is not included in the cumulative average. A maximum of 6 credits of research may be awarded a letter grade; usually these are assigned during the last semester in the program when the student is preparing to defend their thesis research. Each student is encouraged to teach in at least one module (i.e., 5 or 6 week period) of SBMP (dependent on academic status); and must participate in both modules (11 weeks) if an assistantship is awarded. Each student must successfully complete a research project which includes a written thesis and successful presentation of the work to their committee. Presentation in an open, public form is strongly urged.

Students who receive the grade of C- or less in any one of the 5 required Anatomy courses will be asked to leave the program. If a student receives the grade of C or C+ in one of the 5 required Anatomy courses, the student may petition to retake the course, but the original grade will remain on the transcript. This will necessitate remaining in the program for at least a 5th semester, and requires the approval in writing of the student's advisor and the Program Director. The student will no longer receive stipend from the Anatomy Program beginning in the following semester and will not be allowed to teach in SBMP 715. If a student receives a grade of C or C+ in more than one required Anatomy course, he/she will be asked to leave the program.

The Master's Degree program must be completed in 3 academic years or 6 semesters unless the student has received prior approval (due to extenuating circumstances) for an extended course of study.
B. Requirements for Doctor of Philosophy Degree

The Doctor of Philosophy degree in Anatomy is conferred on students in recognition of high attainment in academia of the anatomy curriculum and related research. Scholastic requirements include: 5 required Anatomy courses (15 credits); at least 9 credits of Core Curriculum (BMS 501 and BMS 502 are required) and/or Selectives and/or Electives, 2 credits of colloquium; at least 4 credits of graduate education-based courses including the required Ethics and Statistics; and 3 credits of teaching (if an assistantship is awarded). An overall GPA of 3.0 is required at the time of taking each of the Candidacy, Comprehensive, and Dissertation Exams. The 5 required courses must be completed with a grade of “B-“ or better in each required course. Laboratory research and any courses given “R” grades are not included in the cumulative average. PhD students must satisfactorily complete at least one semester of ANAT 602 (Didactic teaching) corresponding to SBMP 715. It is expected that students participate each year in the seminar series, journal club, and/or colloquium within the department of their thesis advisor. If an assistantship is awarded the criteria of the assistantship supercedes these requirements and is outlined at the time of award. In addition, a student must satisfactorily complete the following: (a) written (and possible oral) candidacy examination, (b) written and oral comprehensive examination, and (c) written and oral defense of thesis. Students must demonstrate competency in the English language.

Any student who receives a grade of C or C+ in any one (1) of the five (5) required Anatomy courses will be automatically terminated from the Doctoral Degree track of the program. This termination will occur at the end of the semester in which the class was taken. The student may petition for admission to the Master’s Degree program.

C. Courses

Required Anatomy courses (15 credits) for both Master’s and PhD students include: ANAT 503 (Gross Human Anatomy), ANAT 512 (Human Embryology), ANAT 505/506 (Human Microscopic Anatomy), and NEURO 511 (Human Neurobiology). Master’s candidates are also required to take BMS 502 and BMS 501 in the second year. Ph.D. candidates are required to take in addition to the above courses: BMS 502 (Cell and Systems Biology) and BMS 501 (Regulation of Cellular and Systemic Energy Metabolism), and 2 courses required by the Graduate School: IBIOS 591 (Ethics in the Life Sciences – 1 credit), and statistics. The statistics requirement (3 credits) can be met with HES 515, HES 520, STATS 500 or STATS 897 from the World Campus or an equivalent. A Professional Development course (NEURO 530) is strongly recommended. Discussions focus on the set of skills required to become a successful scientist; these include writing and presenting scientific material, time management, grant writing, proper conduct at scientific meetings. Information on all courses is provided online.

A suggested schedule of courses for years 1 and 2 of the PhD track includes:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>FALL SEMESTER</th>
<th>PhD TRACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ANAT 503</td>
<td>Gross Anatomy</td>
</tr>
<tr>
<td></td>
<td>ANAT 512</td>
<td>Embryology</td>
</tr>
<tr>
<td></td>
<td>ANAT 505</td>
<td>Histology</td>
</tr>
</tbody>
</table>
ANAT 590  Colloquium, "R" grade  1 credit
ANAT 596  Indep Study, Research  1 credit
                      Rotations, “R” grade

YEAR 1  SPRING SEMESTER  PhD TRACK
ANAT 506  Histology  2 credits
NEURO 511  Neurobiology  3 credits
IBIOS 591  Ethics  1 credit
ANAT 596  Indep Study, Research  1-2 credits
                      Rotations, “R” grade
HES 515  Biostatistics  3 credits
NEURO 530  Professional Development  1 credit

YEAR 2  FALL SEMESTER  PhD TRACK
ANAT 602  Teaching  3 credits
          Introduction to Core Curriculum  0 credit
BMS 502  Cell and Systems Biology  3 credits
BMS 501  Regulation of Cellular and
          Systemic Energy Metabolism  3 credits

YEAR 2  SPRING SEMESTER  PhD TRACK
ANAT 590  Colloquium  1 credit
HES 515  Biostatistics (or equivalent)  3 credits (if not taken earlier)
IBIOS 591  Ethics  1 credit (if not taken earlier)
ANAT 596  Indep Study, Research  1-6 credits
                      Rotations, “R” grade

* See Section E for a listing of acceptable Selectives and Electives.

For Ph.D. students, the Candidacy Examination is scheduled in late April or May
(required Anatomy Coursework typically ends by the first week of March) after the first year of
coursework and the Comprehensive Examinations are scheduled for late Spring or
Summer following completion of didactic coursework, usually in the second year. Successful
completion of the comprehensive exams allows for significant reduction in tuition. Post-
comprehensive coursework is designated as ANAT 601 – taken for 0 credits and no letter
grade.

Details on the Candidacy Examinations and Comprehensive Examinations are
included in section III.

Required core courses are listed in Bold and must be satisfactorily completed with a
"B-" or better. A 3.0 GPA is required in order to take the candidacy and the comprehensive
examinations. The 3.0 GPA takes into consideration all courses providing “letter” grades. "R"
graded courses do not contribute to the GPA.
Students who receive less than a B- in any one of the five (5) required Anatomy Program courses during the first year will be asked to leave the program.

A representative schedule of courses for years 1 and 2 of the Masters Degree track follows:

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>FALL SEMESTER</th>
<th>M.S. Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 503</td>
<td>Gross Anatomy</td>
<td>6 credits</td>
</tr>
<tr>
<td>ANAT 512</td>
<td>Embryology</td>
<td>2 credits</td>
</tr>
<tr>
<td>ANAT 505</td>
<td>Histology</td>
<td>2 credits</td>
</tr>
<tr>
<td>ANAT 590</td>
<td>Colloquium, &quot;R&quot; grade</td>
<td>1 credit</td>
</tr>
<tr>
<td>ANAT 596</td>
<td>Indep Study, Research Rotations, &quot;R&quot; grade</td>
<td>1 credit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 1</th>
<th>SPRING SEMESTER</th>
<th>M.S. Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 506</td>
<td>Histology</td>
<td>2 credits</td>
</tr>
<tr>
<td>NEURO 511</td>
<td>Neurobiology</td>
<td>3 credits</td>
</tr>
<tr>
<td>Selective or Elective*</td>
<td>3 credits</td>
<td></td>
</tr>
<tr>
<td>ANAT 596</td>
<td>Indep Study, Research Rotations, &quot;R&quot; grade</td>
<td>1 credit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>FALL SEMESTER</th>
<th>M.S. Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 602</td>
<td>Teaching Introduction to Core Curriculum</td>
<td>1-3 credits</td>
</tr>
<tr>
<td>BMS 502</td>
<td>Cell and Systems Biology</td>
<td>3 credits</td>
</tr>
<tr>
<td>BMS 501</td>
<td>Regulation of Cellular and Systemic Energy Metabolism</td>
<td>3 credits</td>
</tr>
<tr>
<td>ANAT 596</td>
<td>Research, &quot;R&quot; grade</td>
<td>1-3 credits</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>YEAR 2</th>
<th>SPRING SEMESTER</th>
<th>M.S. Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANAT 600</td>
<td>Selective or Elective*</td>
<td>3-6 credits</td>
</tr>
<tr>
<td>Thesis Research, graded</td>
<td>1-6 credits</td>
<td></td>
</tr>
</tbody>
</table>

* See Section E for a listing of acceptable Selectives and Electives.

Required core courses are listed in Bold and must be satisfactorily completed with a "B-" or better. The 3.0 GPA required for candidacy/comprehensive exams and to graduate takes into consideration all courses providing "letter" grades."R" graded courses do not contribute to the GPA. Any student who receives less than a B- in any one (1) of the five (5) required Anatomy Program courses during the first year will be asked to leave the program.

D. Credit Loads

Credit loads for students appointed to Graduate Assistantships are defined by the Graduate School. For assistantships the minimum is 9 credits per semester. Specific
teaching requirements for maintaining assistantships are stated in section V. A total of 30 credits are required for the Master’s Degree.

E. Selectives/Electives

It is recommended that all students take 6 credits of Selectives. These courses may be selected from the list of newly structured courses or may be selected by the thesis advisor. Courses other than those listed below may be considered upon special request and approved by the Thesis Advisor and Program Director prior to enrollment.

Each 3 credit Selective course is designed with 3 independent modules for 1 credit each (except immunology which must be taken as a 2-credit course). Not all courses are offered each semester.

ANAT/PHARM 584 Human Anatomy and Development A: Human Development (1)
ANAT/PHARM 585 Human Anatomy and Development B: General Human Anatomy (1)
ANAT/PHARM 586 Human Anatomy and Development C: Stem Cell Biology and Regener Med (1)

BCHEM 581 Enzymology – A: Structure (1)
BCHEM 582 Enzymology – B: Energetics (1)
BCHEM 583 Enzymology – C: Function (1)

BCHEM 584 - Glycobiology A: Carbohydrate Chemistry (1)
BCHEM 585 - Glycobiology B: Glycoconjugates (1)
BCHEM 586 - Glycobiology C: Glycans in health and disease (1)

GENET 581 - Genetics of Model Organisms A: Bacterial and Viral Pathogenesis (1)
GENET 582 - Genetics of Model Organisms B: Molecular Genetic Analysis of Signaling Pathways (1)
GENET 583 - Genetics of Model Organisms C: Analysis of Cancer Genetics (1)

GENET 584 - Human Genetics A: Human Chromosomes (1)
GENET 585 - Human Genetics B: Non-mendelian genetics (1)
GENET 586 - Human Genetics C: Complex Traits (1)

MICRO 581 - Principles of Immunology A (1)
MICRO 582 - Principles of Immunology B (1)
MICRO 583 - Viral Vectors (1)

PSIO/Pharm 581 - Maintaining Homeostasis – A: Heart and Vasculature (1)
PSIO/Pharm 582 - Maintaining Homeostasis – B: Cardiovascular Pharmacology (1)
PSIO/Pharm 583 - Maintaining Homeostasis – C: Kidney (1)

PSIO 584 Practical Bioinformatics A: Analysis of Biological Databases (1)
PSIO 585 Practical Bioinformatics B: Protein and Structural Biology (1)
PSIO 586 Practical Bioinformatics C: Gene and Protein Expression (1)
F. Competence in Written and Spoken English

The Graduate School requires that all Ph.D. candidates demonstrate a high-level competence in the English language, including reading, writing and speaking. All students (domestic and international) will be evaluated for their writing competence as part of their Candidacy exam. If the performance is not acceptable as judged by the Advisory Committee, the student will be directed to additional English Composition courses offered at other Penn State campuses.

To assess the speaking competence, all students will be evaluated in formal situations where the student has prepared powerpoint presentations either for annual required seminars, Colloquium presentations, or as part of the Professional Development course. Competence in the English language must be demonstrated prior to the Comprehensive Examination.

G. Teaching Requirement

Each student (Master’s and Doctoral) is strongly recommended to assist in teaching a laboratory segment associated with Gross Anatomy during the second year in the program; overall academic performance must be in good standing at time of registration. Doctoral students may be required to assist in additional classes depending on type of assistantship, and career choices. All students receiving Assistantships are required to participate in teaching. As teaching assistants, students are expected to attend all laboratory sessions and correlated lectures. Teaching assistants (TAs) are required to be present only for the duration of the laboratory session as outlined in the syllabus. In addition, assistants will participate in the setting up, proctoring, and grading of practical exams as requested by the course directors. TAs may tutor students outside the regular class hours at their own discretion. Students should register for ANAT 602 (1 or 3 credits) in the first semester of their second academic year; participation in the entire SBMP 715 course is required for 3 credits. Performance will be graded with letter grades.

H. Transition between Master’s Degree and Doctoral Tracks

Although it is expected that most students will complete the academic track selected at matriculation, some students may wish to move from the Master’s degree directly into the Ph.D. track. Movement from the M.S. track to Ph.D. track can be done following satisfactory completion of requirements for a Master’s Degree, including defense of research thesis. An overall GPA of 3.0 is required at the time of petition. During the last semester in the Master’s program, the student should make a formal petition to the Advisory committee stating their interest in pursuing a Ph.D. It is recommended, but not necessary, that the student have identified a laboratory in which they are interested in working. Although the student does not need to complete a formal application, the student should submit an online pre-application so that his/her credentials will be added to the pool of candidates, and evaluated as any other prospective applicant. Successful completion of the Master’s degree does not guarantee admission into the doctoral program.

During the first semester following the transition (presumably the 5th semester of graduate school), the student will be required to complete a candidacy examination, the nature of which may be modified depending on the student’s academic performance. The
student will be required to enroll in IBIOS 591 (Ethics), statistics, and any other selectives or core courses not already completed. In addition, the student must prepare for the Comprehensive Examination which will most likely be administered during the Spring or Summer semester of the third year and follow the guidelines outlined in this Handbook (section III B).

Transition from the Ph.D. track to the M.S. track may occur at the recommendation of the Advisory Committee or at the voluntary choice of the student. In all cases, this transition will require approval from the Program Advisory Board.

I. Transfer of Credit

Transfer of Credit from an external institution. Rules for transfer of credits are dictated by the Graduate Council. In general, a maximum of 10 credits of graduate work done at an accredited institution may be applied toward the requirements for the master’s degree. No credit earned to complete a previous master’s degree at any institution may be applied to a second master’s degree at Penn State.

Transfer of credits for a doctoral student is a maximum of 10 credits carried out at an accredited institution. Courses that are acceptable for transfer must be taken within 3 calendar years of matriculation at Penn State. If a Master's degree is awarded at Penn State and the student is transferring to the Anatomy Program, special consideration will be made to limit the number of additional courses required. However, all of the course requirements for the Program must be completed satisfactorily.

Transfer of Credit from Penn State University Graduate Programs. Transfer of credits for a doctoral student is a maximum of 10 credits carried out at an accredited institution. Courses that are acceptable for transfer must be taken within 3 calendar years of matriculation at Penn State. If a Master's degree is awarded at Penn State and the student is transferring to the Anatomy Program, special consideration will be made to limit the number of additional courses required. However, all of the course requirements for the Program must be completed satisfactorily. If a student is transferring from another Graduate Program at Penn State University, course requirements for the Anatomy Program will remain in place (not waived), however other credits earned at Penn State will presumably be acceptable to complete required Selective and Electives requirements.

III. Graduate School Examinations and PhD Checklist

All doctoral candidates at the Penn State University Graduate School are required to successfully complete a candidacy examination, written and oral comprehensive examination, and oral defense of their written dissertation. Usually the candidacy examination is held in the Spring of the first year following coursework, and serves to establish the student as a "candidate" for a doctoral degree. The comprehensive examination is overseen by the student's thesis committee and the Program Chair, and is usually held at the end of the second year. The doctoral dissertation must be satisfactorily completed within 6 years of the Comprehensive Examination, otherwise a new examination must be completed.
A. Candidacy Examination

1. Purpose

The purpose of the Candidacy Exam (for doctoral degree students only) is to assess whether the student is capable of conducting doctoral research based on evidence of critical thinking or other measures that the Graduate Faculty in Anatomy view as important to a successful doctoral student. Specifically, the Candidacy Exam in Anatomy is to establish that the student has acquired sufficient proficiency in the discipline of Anatomy for admission to Candidacy for the Doctoral Degree. The Candidacy Exam is taken at the end of the first year of the doctoral program after the student has earned at least 18 course credits beyond the baccalaureate, but not later than three semesters (or 18 calendar months) after the student has entered the doctoral program, or immediately upon transition from Master’s to Doctoral program. The exam may consist of both written and oral components (usually dependent on the student’s performance in the requisite courses). The Candidacy Exam is administered by the Anatomy Program Advisory Committee, which may solicit propositions from program faculty. Subject matter is limited to the 5 required courses completed during the first year curriculum. As prescribed by the Graduate School, students must have a minimum grade-point average of 3.0 to be eligible to take the Candidacy Examination and grades of B- or better in all required courses; any research credits may not be included in the cumulative average. [See the Graduate Programs Bulletin]. The comprehensive exam may not be administered until the candidacy exam has been passed.

2. Format

The Candidacy Examination usually consists of a written and/or oral examination that encompasses knowledge covered in the 4 major courses (e.g., Gross Anatomy, Embryology, Histology, and Neuroanatomy). The examination consists of a number of questions that must be answered, or statements that must be defended or refuted. If an oral candidacy examination is warranted, one of the statements will be prepared for oral presentation and will be evaluated by at least 2 faculty. During the oral presentation, the student must present and answer questions without support of any kind. Written examinations are closed book, and are conducted over a full-day of testing.

3. Evaluation

Written answers are graded by at least two (2) faculty, one of which is the person responsible for writing the question answered. Exams are graded as Outstanding, High Pass, Pass, or Fail; no letter grades will be assigned. Exams will not be returned to the student. In the event of failure of one or more questions, or failure of the entire oral and/or written component, the Anatomy Program Advisory Committee will determine whether the student may take another examination. The student may take the candidacy examination only twice within the same academic program. If performance on the candidacy examination is low, students may be asked to resign from the program.

B. Comprehensive Examination

1. Purpose

The Comprehensive Exam (for doctoral degree students only) is designed to test the student’s ability to comprehend the field of selected research and to assimilate this
knowledge in such a way as to be able to phrase questions and identify areas in which to contribute to this knowledge base. At the time of preparation of this handbook, this exam is usually taken at the end of the second year, and serves as the transition from didactic learning to full-time researcher. The examination consists of a written research proposal followed by an oral examination. The Comprehensive Examination is administered by the student's doctoral committee. It is a rule of the Graduate School that students must have a minimum grade-point average of 3.0 at the time of the Comprehensive Examination to be eligible to sit for the Comprehensive Examination. In addition it is a rule of the Program that a minimum grade-point average of 3.0 not include any research credits, and that all required Program courses be completed with a grade of B- or better. The student must also have satisfied the English competence requirement and should have completed all required coursework. The oral examination must be formally scheduled by the Associate Dean of the Graduate School at University Park, which requires three weeks’ notice. [See the Graduate Programs Bulletin for additional details.]

2. Written Proposal.

The proposal may be on any topic, including the student's prospective thesis research, and follows the format of a NIH Predoctoral Fellowship (F31) application. The topic of the proposal must be agreed upon by the student and his/her thesis committee. After agreeing to the topic, the student's committee should have as little to do with the proposal as possible. This means that the student must limit verbal or written communication with the committee about the examination topic until completion of the requirement. The student is free to utilize any published or electronic papers that are available, but the logic, experimental design, and writing must belong entirely to the student. The written proposal must be completed and delivered to the members of the doctoral committee seven (7) days before the oral examination. The written proposal should not exceed 15 pages (single spaced), with an additional 4 page limit for references.

3. Oral Examination

Students are expected to present the rationale and general approach of their proposal (approx. 30-45 minutes), followed by an oral examination by the committee on the proposed experiments, predicted results, interpretation of data, and knowledge of relevant background material. The oral examination usually should be scheduled within 7 days (no later than 14 days) after submission of the written examination. The oral examination is scheduled through the Office of Graduate Education at University Park and as such, acknowledges formation of the committee, and completion of one milestone in the Graduate Education process.

4. Evaluation

Students are judged on their combined performance in the written and oral portions of the exam. A favorable vote of at least two-thirds of the committee is required for passing. In the event of failure, the examining committee will determine whether the student may take another examination. No letter grades are assigned to this examination.

Guidelines for evaluation include, but are not limited to:

Is the research original?
Is there a testable hypothesis?
Are proper experimental designs used?
Are appropriate techniques, including animal care, patient care described?
Are results interpreted accurately?
Is the candidate able to defend the methods and conclusions?
Does the candidate show sufficient knowledge of the literature?
Is the research worthy of publication or submission to a funding agency?

A 6-year limit is in place between completion of the comprehensive examination and oral thesis defense. If the 6-year limit is exceeded, a new comprehensive examination must be rescheduled.

5. Post-comprehensive Registration Requirements

In most cases, all formal coursework should be completed prior to the scheduling of the comprehensive examination. However, students are eligible to take courses following successful completion of the exam. Students should consult with their thesis advisor and/or Chair of the Graduate Program as necessary.

For all semesters after completion of the comprehensive examination, students should register for Thesis Preparation (ANAT 601) for 0 credits and ANAT 602 for 1-3 credits.

C. Dissertation & Thesis Defense

Completion of the requirements for a Ph.D. degree in Anatomy entails the preparation of a dissertation (written thesis), a final oral examination (thesis defense), and formal acceptance of the thesis by the student’s doctoral committee.

1. Thesis Preparation

The Graduate School has strict guidelines for the preparation and format of the written thesis; see the Graduate Programs Bulletin for details. Extensive consultation with the thesis committee is strongly encouraged: it is expected that the student should distribute one or two drafts of the dissertation to committee members for review and critique prior to the defense. Students should plan to provide a first draft of the dissertation no less than 2 months before the anticipated date for the final oral examination. The goal is that the dissertation should be in final form prior to the oral examination.

The final written thesis must be submitted to the thesis advisor and/or committee chair no later than 8-12 weeks prior to the established date by the graduate office for the anticipated graduation.

2. Oral Examination

The final oral examination consists of a public presentation of the thesis research, followed by a closed meeting with the student’s doctoral committee. The examination should be scheduled after the student has fulfilled all of the graduate school requirements for the degree; three weeks’ notice is required by the Graduate School for scheduling this examination. The dissertation should be delivered to the members of the doctoral committee two weeks before the defense. A favorable vote of at least two-thirds of the thesis committee is required for passing the final oral examination.

3. Thesis Acceptance
This is the final step of the process. The thesis must be accepted, as indicated by the signatures of two-thirds of the doctoral committee, and by the program director.

D. Ph.D. Degree Checklist

The following items must be completed satisfactorily in order to graduate from the Pennsylvania State University. Graduation ceremonies are held for the Hershey campus only in May. However, if the requirements are met for graduation at other times of the year, students may graduate at University Park along with other Graduate School ceremonies.

The checklist includes:
- Proper admission to Graduate School
- Selection of advisor
- Candidacy examination (end of second semester)
- Appointment of doctoral committee (selection of chair and thesis advisor)
- Complete communication requirements
- Comprehensive examination (written and oral)
- Approval by committee on an annual basis of progress in research
- Approval to proceed to the final oral examination (granted by doctoral committee)
- Schedule final oral exam (3 weeks prior to date)
- Distribute completed thesis to doctoral committee members (3 weeks prior to final oral examination)
- Successful completion of final oral examination
- Public seminar
- Amend thesis as requested
- Obtain final approval and signatures of committee
- Submit thesis to The Graduate School
- Provide one bound copy of thesis to Program Director; copies to committee members are optional

E. Residency Requirement

All students must meet the residency requirements as stated in the PSU Graduate School handbook.

IV. UNSATISFACTORY SCHOLARSHIP, FAILURE OF ACADEMIC INTEGRITY, AND DISMISSAL FROM THE PROGRAM

Students in the PhD track are required to have a minimum grade-point average of 3.0 for both the doctoral candidacy (year 1) and eligibility to take the comprehensive examination (year 2). A cumulative grade-point average below 3.0 may be considered evidence of unsatisfactory scholarship and be grounds for dismissal from the University [see the Graduate Programs Bulletin]. The Program Advisory Committee may initiate action. The Advisory Committee may also place the student on academic probation for one or more
semesters. Specific criteria related to satisfactory/unsatisfactory scholarship are stated in sections II-A (Master's Degree) and II-B (Doctoral Degree).

A. Failure of Academic Integrity

The Graduate School at Penn State holds several policies regarding unprofessional behavior. Guidelines for dismissal of a student from a laboratory, or more seriously, dismissal of a student from the Program, are outlined: http://www.psu.edu/dept/oue/aappm/G-9.html. In general, written documentation of the student's behavior is required for dismissal.


B. Termination of the Degree Program for Unsatisfactory Scholarship

Termination of the degree program for unsatisfactory scholarship may include, but are not limited to, inadequate GPA (3.0), failure to obtain satisfactory grades in required courses for the program (B-), failing of the candidacy, comprehensive, or final oral examinations. In such events, the student must be given advance notice in writing explaining the reasons for termination. Procedures are outlined: http://www.gradsch.psu.edu/policies/student/appendix3.html

Please see sections II-A and II-B for specific scholarship requirements, as well as criteria for termination due to unsatisfactory scholarship, and possible transition to the Master's Degree track from the Doctoral track.

C. Termination of the Assistantship

Termination of the Assistantship related to inadequate performance in research must be documented in writing, and preferably acknowledged in writing by both student and faculty indicating diligent and numerous attempts by both parties to resolve unsatisfactory issues.

Policies and procedures for the dismissal of students from either an investigator's laboratory, from an assistantship, or from the Program shall follow the rulings established by the University Graduate Council and are outlined herein: http://www.psu.edu/bulletins/whitebook/front/appendix3.htm (dismissal for unsatisfactory scholarship and termination of the Degree Program) http://www.psu.edu/bulletins/whitebook/front/appendix4.htm (termination of assistantship due to inadequate performance)

D. Withdrawal from Class and Repeating Courses

Penn State University does not condone withdrawal from classes; see section 47-80 on Repeating courses in the Graduate Senate Policy.
Anatomy courses. The Anatomy Graduate Program does not permit withdrawal from any of the 5 required Anatomy Program courses at the discretion of the student. A course in which a grade of C or C+ was obtained may be repeated if written evidence of consultation is obtained from the student’s advisor and Program Director. This petition must be submitted to the Office of the University Registrar. Any course may be repeated only once, and both grades are included on the transcript.

Non-anatomy courses. For other courses (e.g., BMS 502; IBIOS 591), the policy of the course instructor determines whether the course can be repeated. In general, courses may be repeated if original grades are unsatisfactory and the student presents a reasonable justification for this action. A student may repeat a course in which a grade of D or F was received. Any course repeated under this policy may be counted no more than once, and both grades are included in the computation of the grade-point average.

V. FINANCIAL SUPPORT

A. Graduate Assistantships

Master’s Degree Program. For selected students, a half-time or quarter-time research assistantship may be provided for either one or both years in the Master’s Program. Awardees receive financial support ($22,260/year for 2009/2010) plus waiver of tuition. Assistantships will be withdrawn if a 3.0 GPA is not maintained.

Students are responsible for costs of books (~$400/year), an activity fee, and medical insurance. Medical insurance is required for all students. Medical insurance policies are negotiated periodically but for the 2008-2009 year, Penn State paid 80% of the annual premium cost for the basic plan of the Penn State Student Health Insurance Policy (MEGA).

Doctoral Program. For most doctoral students, a half-time research assistantship will be provided by the Anatomy Program for both semesters of the first year. Negotiations for assistantships in subsequent years are the responsibility of the student and their selected mentor. The Anatomy Graduate Program will provide monetary assistance for the 3 month period of time during which the student is teaching in SBMP 715. This usually occurs by reimbursement of the faculty mentor, but in some circumstances could be direct payment to the study under work-study arrangements. Assistantships may also be granted from various university or foundation sources. Awardees receive financial support ($22,260/year for 2007/2008) plus tuition.

Students are responsible for costs of books (~$400/year), an activity fee, and medical insurance. Medical insurance is required for all students – Penn State will pay 80% of the annual premium cost for the basic plan of the Penn State Student Health Insurance Policy (MEGA).

Terms of assistantship. Research assistantships are based on NIH guidelines and provide sufficient support to allow students full-time devotion to their graduate studies. Half-time assistantships span 18 weeks each semester, but are paid over the entire 52 week year. Stipulations of the assistantship may include, among other things, 20 hours of work for the mentor, unrelated to thesis research. The College of Medicine, as well as each graduate faculty member is encouraged to devise their own “Expectations” document that is
supplied to students entering a laboratory (see Section VI-F). It is the responsibility of both the student and the mentor to review these expectations, particularly with regard to payment and expectations of receipt of stipend/assistantship. Some normal expectations associated with an assistantship include attendance at classes, study time for each course taken, in-laboratory research, and preparation of abstracts, manuscripts, and thesis. For students who register for teaching in SBMP 715, the hours of teaching are restricted to those that fall within the normal 8:00 am through 5:00 pm workday; additional time spent with students is considered voluntary and students are under no obligation to do so. In return, the student can register for 3 credits of ANAT 602.

Assistantships have federal tax withheld.

The assistantship is automatically terminated upon graduation from the program or when the graduate assistant is no longer in the program. Assistantships may be revoked and/or not renewed dependent on the student’s academic integrity and/or performance.

Other Fees. An $85 thesis fee (based on 2008-2009) is required for all students. Computer and/or IT fees may be imposed for all students.

B. Financial Awards

Doctoral students are encouraged to compete for University-wide awards such as the Graham award that recognizes undergraduate excellence. Award criteria include GRE scores, undergraduate academic performance, recommendation letters, and the quality of undergraduate research experience. Other sources of funding include:

- International Student Scholarships and Awards
- National Science Foundation Graduate Research Fellowship Program
- Howard Hughes Medical Institute Predoctoral Fellowships in Biological Sciences
- US EPA STAR Fellowship Program
- Dept of Defense National Defense Science & Engineering Fellowships

VI. ADVISORS & MENTORS

A. Faculty Advisor

The Program Director serves as a student’s advisor during the first year, although another program member can be appointed as advisor if necessary. The faculty advisor is available for specific questions about the program and for more general discussions of a student’s progress. The faculty advisor also oversees course registration during the first year. After a student has selected a thesis advisor, that faculty member will assume these responsibilities.
B. Laboratory Rotations

1. Number and Length of Laboratory Rotations
   The Graduate Program in Anatomy is responsible for advising and oversight of first-year students. To ensure that each student experiences the breadth of research opportunities within the Program, first-year students participate in laboratory rotations. Students on the PhD track rotate through 3-4 laboratories during their first year of study; Master's students can rotate through 1-2 laboratories during their first year of study. Each rotation is approximately 6 weeks in length. The purpose of these rotations is to provide students with the opportunity to become acquainted with the personnel and research projects within a laboratory, as well as for students to learn particular techniques. A laboratory rotation involves minimally 20 hours weekly in the laboratory. In theory, the rotations should be carried out during November and December, mid-February through March, and April through mid-May. If a 4th rotation is necessary, it should be carried out in May and June.

2. Choosing Laboratories
   The Director of the Graduate Program sets the dates for each rotation period, accommodating the coursework throughout the semesters. Faculty members will be solicited for the number of students and preferences for rotation periods. This information is distributed to students, and the Director of the Program, along with the Advisory Committee will assist in matching students to laboratories. Students will be introduced to faculty and laboratories during ANAT 590. As soon as students have identified a laboratory that they are interested in joining, discussions should ensue between faculty and students.

   Students may choose any member of the Anatomy Program for a rotation. Upon petition by the student, the student may rotate in the laboratory of a graduate faculty member not in the Anatomy Program. Students will be provided with the potential projects available from each member of the Program. It is the student's responsibility to make an appointment with the faculty to discuss the rotation.

3. Rotation Reports
   The rotation advisor should provide the student with a defined project and clear expectations as to the amount of work involved and the work schedule; the advisor should also meet regularly with the students to discuss the progress of the rotation. Upon completion of each rotation a brief synopsis of the project should be prepared by the student and submitted to the mentor and Program Director. This report serves to evaluate the writing skills of the student, and in part, to help the faculty assess English competency requirements. Moreover, the quality of the report is considered in the assignment of an “R” grade.

   Each report should be approximately 2 pages (single-spaced; 12-point font) in which the student describes the project including: background, goals, experimental design/techniques, predicted outcomes, actual results (if any), and discussion of results (or discussion of predicted results). References and presentation of data (figures/tables) should be included.

   The faculty mentor will also submit a report on the rotation.
C. Thesis Advisor

For Master’s Degree students, the thesis advisor and permanent laboratory should be selected by December, no later than March 1, of the first year. For Ph.D. students, the thesis advisor and permanent laboratory must be selected by the end of the first academic year (July 31) following rotations and successful completion of the candidacy examination. A student may choose any good standing member of the Anatomy Program faculty, provided the faculty member is willing to accept the student and provide appropriate space and resources (i.e., tuition and/or stipends) in their laboratory. In the event that the student initiates a petition to have a graduate faculty member outside of the Anatomy Program serve as advisor, the Advisory Committee for the Graduate Program in Anatomy must approve such advisor prior to the student beginning work in this laboratory. For all advisors, a letter from the Chair of the relevant Department is required that acknowledges the financial responsibility of that advisor and/or Department for the student during the entire course of the student’s training.

It is the responsibility of the thesis advisors and graduate committees for the judicious timing of meetings and examinations. There is a standardized tracking form in place for the mandatory yearly evaluation of each student.

D. Master’s Degree Committee

The Master’s committee consists of three (3) or more members of the Graduate Faculty of Penn State University and includes at least two (2) members from the Graduate Program in Anatomy. The Chair of the committee must be a member of the Graduate Program in Anatomy, be a member of the Graduate Faculty, and represent the same field of research.

The responsibilities of the Master’s degree committee are to provide general guidance for the student and to insure successful completion of the thesis research. Students will prepare a thesis proposal for their committee’s review prior to beginning research (spring term of the first year). The committee will meet again in the spring term of the second year to assess the progress of the research and approve the final Master’s thesis.

The Director of the Graduate Program should be listed on the signatory page of the thesis but does not need to be a member of the committee.

E. Doctoral Degree Committee

In the fall of the second year, after the student has passed the candidacy examination, the student will form a doctoral committee in consultation with their thesis advisor. The doctoral committee consists of four (4) or more members of the Graduate Faculty and includes at least two (2) members from the Program in Anatomy and one Outside member. The “Outside” member represents the Graduate School and must have a primary appointment in a department other than the one represented by the student’s advisor, and must have no financial or intellectual connection with the advisor. The Chair of the committee most likely is the student’s thesis advisor; however it is not a requirement. As stated in section C above, the chair of the thesis committee may be a graduate faculty member outside of the Program in Anatomy, only if the Advisory Committee grants permission.
The responsibilities of the doctoral committee are to provide general guidance for the student and administer the Comprehensive Examination and Thesis Defense. Committee members should be knowledgeable and interested in the general area of the proposed research. Students are advised to consult with their advisor when choosing the members of their thesis committee; all committees are approved by the Penn State University Graduate Council. Students will prepare a thesis proposal for their committee’s review following successful completion of the Comprehensive Examination (most likely early in the third year). It is recommended that the student meet with the doctoral committee every six months, but no less than once each year.

In some cases, faculty who are not members of the graduate faculty may be instrumental in one portion of a thesis and might want to serve as Special Members or Special Signatory Members. For both cases, the rules outlined by the PSU Graduate School prevail.

F. Expectations Documents

An Expectations policy has been implemented to provide open communication between students and mentors regarding expectations of each other in laboratory rotations, and particularly, in commitment to a laboratory for thesis research. It is advised by the Program for each faculty member to provide in writing a document, and to discuss with students, that outlines specific expectations of his/her laboratory. As faculty who should serve as role models, and as students who seek to become professionals, these codes of conduct will serve as guidelines. It is strongly urged that both student and mentor discuss the Expectations between both persons before written formal agreement has been established.

A recommended list of topics for consideration has been accepted by all Program Directors of Graduate Education at Penn State University College of Medicine and include:

1. Expectations of Graduate Students within a Laboratory
   Professionalism – Honesty, Communication, Behavior
   Work Ethic – Attitude, Time in Lab, Time outside Lab
   Laboratory Manners
   Self Motivation

2. Expectations of Thesis Advisors
   Professionalism
   Work Environment
   Access (to mentor)
   Expected Productivity
   Guidance

VII. RESEARCH

A. Master’s Degree Thesis
An original research project is required that consists of both a written thesis and oral defense of the research. Given the shorten period of time in which to conduct the research, projects should be selected that can be completed within 18 months. No formal laboratory
rotation is required, but the student is advised to begin discussion of research projects early in the first year. A written research proposal is required and is submitted to the thesis committee for review and discussion with the student. A final presentation of the thesis research is made to the committee, along with the final written thesis.

B. Doctoral Degree Thesis

Thesis Proposal. Within the first few months after passing the comprehensive examination, and not later than December of the third year of graduate study, the student will submit a thesis proposal to his/her Doctoral Committee. This proposal should include the history, background, and description of the chosen research problem, and a detailed description of the experiments that will be performed to investigate the problem. The student's Doctoral Committee will review the proposal with the student and the student may revise or modify the proposal.

Research-related Progress Reports. As recommended by the Office of Graduate Education, a written review of the student must be prepared by the student and reviewed and approved by each committee member at least once each academic year. These reports will be retained by the Anatomy Program Office. Likewise, the student may submit to the Anatomy Program Office any written report outlining problems and/or obstacles in the completion of their research.

Policies and procedures for the dismissal of students from either an investigator's laboratory, from an assistantship, or from the Program shall follow the rulings established by the University Graduate Council and are outlined herein:
- [http://www.psu.edu/bulletins/whitebook/front/appendix3.htm](http://www.psu.edu/bulletins/whitebook/front/appendix3.htm) (dismissal for unsatisfactory scholarship and termination of the Degree Program)
- [http://www.psu.edu/bulletins/whitebook/front/appendix4.htm](http://www.psu.edu/bulletins/whitebook/front/appendix4.htm) (termination of assistantship due to inadequate performance)

VIII. NON-CURRICULAR PROGRAM REQUIREMENTS

A. Attendance at Seminars and Departmental Journal Clubs

As a researcher and scientist, all students should seek to listen and learn about the research of as many professional scientists as possible. Opportunities to associate and learn from mentors include attendance at seminars and journal clubs. Graduate students should make a concerted effort to attend on a regular basis each year a seminar series sponsored by the department where their research is being conducted or another program/department that is strongly aligned with their research. Students should discuss these choices with their advisor at the beginning of each academic year.

Students in the Department of Neural & Behavioral Sciences are expected to attend on a regular basis the Neuroscience Seminar series, and will be expected to participate yearly in the seminar series beginning in the Spring semester of the second year.
B. Teaching

Students supported by Graduate Assistantships are expected to teach in SBMP715 within the medical student curriculum during the first semester of their second year. See section V(A) for discussion of Graduate Assistantship rules and expectations.

C. Post-comprehensive Registration

After the student has passed the comprehensive examination, no further registration for credit courses is required by the Graduate School. Anatomy students should register for Thesis Preparation (ANAT 601) with only payment of the thesis preparation fee. It is important that students register for ANAT 601 because it involves a substantial reduction in tuition. If courses are taken during this interval, however, tuition must be paid and ANAT 601 cannot be used. To avoid this extra expense, all students should complete their coursework and comprehensive examination during the first two years of graduate work.

IX. GENERAL INFORMATION

A. Stipends

Monthly stipends are distributed by direct deposit to the student’s account. Stipends are distributed over a 12-month period of time (August 1 – July 31). The 2009-2010 stipend is $22,290.

B. Vacation and Sick Leave

The status of ‘student’ at Penn State University provides a level of oversight by the Graduate Program Director and/or mentor for the general whereabouts of the student. For students receiving stipends (assistantships), this negotiation establishes a line of communication that is ongoing such that any absences from the laboratory need to be explained and/or requested. Full-time graduate students (year 2 and forward) in the Anatomy Graduate Program who receive stipends are permitted 15 calendar weekdays of vacation leave per academic year (July 1 to June 30). In addition to the 2 weeks, first year students are granted leave associated with coursework (i.e. seasonal/winter/holiday breaks). Leave should be arranged with either the Director of the Graduate Program (1st year students) or thesis advisor (2nd year forward) at least 2 weeks in advance. Documentation of the request by email is advisable. A response by the Director or advisor should occur within 72 hours if not immediately (again, email documentation is advisable). Students will not be granted vacation leave while enrolled in formal coursework.

Additional vacation leave may be awarded at the discretion of the thesis advisor. Vacation leave days do not accrue from year to year. Holidays designated by The Pennsylvania State University (Jan 1, Jan 15, Memorial Day, July 4, Labor Day, Thanksgiving, and Christmas) are separate and are in addition to vacation days.

Sick leave will not be formally assigned or earned, but may be used as necessary with approval of the student’s thesis advisor or Graduate Program Director. It is the student’s responsibility to contact their thesis advisor or Graduate Program Chair when he/she is
absent from the classroom or laboratory due to illness. Sick leave cannot under any circumstances be used as a substitute for vacation leave.

C. Leave of Absence

There is no formal leave of absence recognized by the Graduate School. If the student has a valid reason for requesting a leave, approval for a leave of absence from the program will be considered by the student's advisor, with final approval granted by the Advisory Committee for the Graduate Program in Anatomy.

D. Employment

Enrollment in the graduate program with accompanying stipend is considered full-time commitment and is not compatible with outside employment. If outside employment is required, the student should be prepared to relinquish the stipend, and consult with the Program Director, and thesis advisor prior to accepting outside employment.

X. GRADUATE PROGRAM FACULTY & ADVISORY COMMITTEE

A. Faculty in the Graduate Anatomy Program

David A. Antonetti, Ph.D., Associate Professor, C& M Physiology daa5@psu.edu

Alistair J. Barber, Ph.D., Associate Professor, Ophthalmology ajb19@psu.edu

Colin J. Barnstable, D.Phil., Professor, Chair, Neural & Behavioral Sciences cjb30@psu.edu

Cheston M. Berlin, M.D., Professor, Pediatrics cmb6@psu.edu

James R. Connor, Ph.D., Professor, Vice Chair of Neurosurgery Research jrc3@psu.edu

Henry J. Donahue, Ph.D., Professor, Vice Chair of Basic Science Research, Orthopaedics and Rehabilitation hjd5@psu.edu

H. Paul Ehrlich, Ph.D. Professor, Surgery pehrlich@psu.edu

Loren A. Evey, Ph.D. Assistant Professor, Neural & Behavioral Sciences lae2@psu.edu

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Charles H. Lang, Ph.D., Distinguished Professor, Vice Chair, Cell and Molecular Physiology chl1@psu.edu

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David X. Liu, Ph.D., Assistant Professor, Neural & Behavioral Sciences  dxl39@psu.edu
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Director, Graduate Program in Anatomy

Christopher Niyibizi, Ph.D., Associate Professor, Orthopaedics and Rehabilitation  cun1@psu.edu

David S. Phelps, Ph.D., Professor, Pediatrics  dsp4@psu.edu

Joseph W. Sassani, M.D., Professor, Ophthalmology  jxs14@psu.edu

Thomas C. Vary, Ph.D., Distinguished Professor, Cell & Molecular Physiology  tcv1@psu.edu

Ian S. Zagon, Ph.D., Distinguished Professor, Neural & Behavioral Sciences  isz1@psu.edu
Director, Program in Human Structure

Christopher M. Yengo, Ph.D., Associate Professor, Cell & Molecular Physiology  cyengo@psu.edu

Shaomin Samuel Zhang, M.D., Ph.D., Assistant Professor, Neural & Behavioral Sciences  ssz3@psu.edu

B. Administrative assistant

Dee Clarke, Room C3801, x 8651, oyc2@psu.edu

C. Advisory Committee

The Graduate Program in Anatomy has one standing subcommittee to assist in establishing policy - the Graduate Program in Anatomy Advisory Committee. The Advisory Committee shall consist of the Director of Graduate Program in Anatomy, the Director of the Program on Education in Human Structure and at least one (1) and not more than three (3) other faculty members of the Anatomy Program. Membership on this committee shall rotate among all members of the faculty in the Graduate Program in Anatomy.

The committee for the academic year 2009-2010 consists of:

Patricia J. McLaughlin, D.Ed. (Director of Graduate Program in Anatomy)
Professor of Neural & Behavioral Science

Ian S. Zagon, Ph.D. (Director of Program on Education of Human Structure)
Professor of Neural & Behavioral Science
Any modification or addition/deletion to these policies and guidelines must be approved by the Graduate Program in Anatomy Advisory Committee, with written notification of any and all significant changes made to each student within 30 days of change. The handbook distributed at the time of matriculation should be followed throughout the course of the student’s tenure unless otherwise recommended by the Anatomy Advisory Committee.

D. Criteria for Membership in the Anatomy Graduate Program

1. Appointment of Faculty

Candidates for appointment to the faculty of the Program in Anatomy will be considered either Full-standing Regular Members or Associate Members. Regular members are so designated because of a substantial involvement in teaching of the core courses for the Graduate Program in Anatomy. Both Regular and Associate Members have full privileges within the Program.

Faculty members in the Program of Anatomy will be requested to participate in the following activities:

- serve as instructors or facilitators in graduate courses in anatomy
- supervise students undertaking rotations
- advise students conducting thesis research
- serve on doctoral committees
- serve on program committees
- interview prospective students
- attend student and faculty seminars
- participate in orientation sessions for new students

2. Review of Program Faculty

Faculty members of the Program in Anatomy may be reviewed from time to time for their contributions/participation to the program. The reviews will be conducted by the Advisory Committee. The following decisions shall be adhered:

- Faculty members who have made significant contributions, particularly in teaching, advising and service, will be approved for continued membership.

- Faculty members who have not made significant contributions in the previous years will be re-reviewed in one year. Faculty who continue to have little or no contribution to the Program will be removed from active membership.

- Faculty members who do not participate in their review process will be removed from active membership in the Program.