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

Revised July 2012

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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 is granted jointly by the Graduate School and the department or graduate program in which the student plans to study. For admission to the Graduate School, an applicant must hold either (1) a bachelor's degree from a U.S. regionally accredited institution or (2) a postsecondary degree that is equivalent to a U.S. baccalaureate degree earned from an officially recognized degree-granting international institution. The applicant needs to demonstrate satisfactory completion of a course of study that will prepare him/her for

entrance into 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., grade point average (GPA)), and language proficiency. While there is no strict minimum requirement for GPA, the graduate school recommends that a GPA of 2.5 or better be maintained during the junior and senior years of undergraduate schooling. It the educational experience is outside the US, confirmation of equivalent coursework will be evaluation. The Anatomy Graduate Program will accept scores from either GRE or MCAT (or similar) examinations for the Master's Degree program, but require that GREs are taken for the doctoral program. 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. New GRE testing will begin in 2011 with a new scoring system ranging from 130-170; analytical writing will continue to be scored 0-6. A total GRE score (verbal and quantitative) of 310 is desirable. GRE scores from tests taken more than 3 years prior to matriculation are not acceptable.

Language requirements. Proficiency in English is a requirement of the Graduate School, as well as the Anatomy Graduate Program. The language of instruction at Penn State University 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) prior to being fully accepted and matriculation. The minimum acceptable score for the TOEFL is 550 for the paper-based test, or a total score of 80 with 23 on the speaking section of the internet-based test (iBT). 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

The Master of Science Degree in Anatomy is an academic degree and requires a minimum of 30 graduate credits with at least 18 credits at the 500-level or above. A GPA of 3.0 is required at the time of graduation. There are 4 required Anatomy courses (15 credits) that include ANAT 503 (6 credits), ANAT 512 (2 credits), ANAT505 (2 credits), and ANAT 506 (2 credits); NEURO 511 (3 credits) is highly recommended but is optional for graduation. In addition students will register for 1 semester of colloquium (ANAT 590) assigned an "R" grade, one semester of Biomedical Ethics (1 credit), two graduate Core Courses (BMS 502, BMS 501; each for 3 credits), as well as 3-6 credits of an electives; remaining credits to fulfill full-time status can be research credit. Each of the 4 anatomy courses (i.e., ANAT) must be completed with a grade of "B-"or better; however an overall GPA of 3.0 is required to graduate.

In addition, ANAT 600 is required by the university for academic Master of Science degree students. ANAT 600 (Graded Research) is a 6 credit course, given quality grades, usually taken in the last semester when the student is preparing to defend their thesis research. Any course (e.g., laboratory research ANAT 596) that is given an "R" grade is not included in the GPA. 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 Anatomy Program 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.

In 2009 the Graduate School instituted a new requirement for training in the Responsible Conduct of Research that requires completion of a training module provided by CITI and at least 5 hours of discipline specific, discussion based ethics (fulfilled by completion of BMS 591).

Students who receive the grade of C- or less in any one of the 4 required Anatomy courses will be asked to leave the program. If a student receives the grade of C or C+ in one of the required Anatomy courses, the student may petition to retake the course, but the original grade will remain on the transcript. This will often necessitate remaining in the program for a 5th semester, and requires the approval in writing of the student's advisor and the Program Director. The student will no longer receive a 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, they may 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. Requirements for the Master of Science degree are found online at www.psu.edu/bulletins/whitebook/front/gradreqs.htm

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/Electives, 2 credits of colloquium; at least 4 credits of graduate education-based courses including the required Ethics and Statistics; and 3 credits of graded teaching (if an assistantship is awarded). In 2009 the Graduate School instituted a new requirement for training in the Responsible Conduct of Research that requires completion of a training module provided by CITI and at least 5 hours of discipline specific, discussion based ethics. 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 (such as Colloquium) 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 oral candidacy examinations, (b) written and oral comprehensive examinations, and (c) written and oral defense of thesis. Students must demonstrate competency in the English language (usually fulfilled by successful completion of the oral and written candidacy examinations).

Any student who receives a grade of C or C+ in any one (1) of the five (5) required Anatomy courses will be required to retake the course, and may be asked to withdraw from the doctoral track and pursue the master's track in anatomy. If a student receives the grade of C or C+ in two (2) or more courses, they will be asked to leave the graduate program. Required courses taken in the second year (i.e., BMS 501 and BMS 502) are included in the GPA for comprehensive examinations. If the student's GPA drops below 3.0, the student cannot be tested for candidacy or comprehensive exams, and may be terminated from the doctoral track. The student may petition for admission to the Master's Degree program.

C. Courses

Required Anatomy Courses:
ANAT 503 (Gross Human Anatomy)
ANAT 512 (Human Embryology)
ANAT 505 (Human Microscopic Anatomy)
ANAT 506 (Human Microscopic Anatomy)
NEURO 511 (Human Neurobiology)
ANAT 590 (Colloquium; 1 or 2 semesters)

Required Core Courses:
BMS 501 (Regulation of Cellular and Systemic Energy Metabolism)
BMS 502 (Cell and Systems Biology)

Required Ethics training:
Online SARI course (completion mandated by May of the first year)
BMS 591 (1 credit)

Required Statistics training for PhD students: This requirement (3 credits) can be met with PHS520, PHS 525, STATS 500 or STATS 897 from the World Campus.

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

YEAR 1	FALL SEMESTER	PhD TRACK
ANAT 503	**Gross Anatomy**	**6 credits**
ANAT 512	**Embryology**	**2 credits**
ANAT 505	**Histology**	**2 credits**
ANAT 506	**Histology**	**2 credits**
ANAT 590	Colloquium, "R" grade	1 credit

YEAR 1	SPRING SEMESTER	PhD TRACK
NEURO 511	**Neurobiology**	**3 credits**
BMS 591	Ethics	1 credit
ANAT 596	Indep Study, Research Rotations, "R" grade	1-3 credits
PHS 520	Statistics for Laboratory Scientists	3 credits

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
	Selectives, electives*	3-6 credits
ANAT 590	**Colloquium, Quality grade**	**1 credit**
PHS 520	Statistics (or equivalent)	3 credits (if not taken earlier)
BMS 591	Ethics	1 credit (if not taken earlier)
ANAT 596	Indep Study, Research Rotations, "R" grade	1-6 credits

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

For Ph.D. students, the **Candidacy Examinations** are scheduled in late May or June 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, with the exception of ANAT 602 (Teaching) which is not included in the overall GPA. "R" graded courses do not contribute to the GPA.

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

YEAR 1	FALL SEMESTER	M.S. Degree
ANAT 503	**Gross Anatomy**	**6 credits**
ANAT 512	**Embryology**	**2 credits**
ANAT 505	**Histology**	**2 credits**
ANAT 506	**Histology**	**2 credits**
ANAT 590	Colloquium, "R" grade	1 credit

YEAR 1	SPRING SEMESTER	M.S. Degree
NEURO 511	Neurobiology (optional)	3 credits
	Selective or Elective*	3 credits
BMS 591	Ethics	1 credit
ANAT 596	Indep Study, Research Rotations, "R" grade	1-6 credits

YEAR 2	FALL SEMESTER	M.S. Degree
ANAT 602	Teaching	1-3 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
ANAT 596	Research, "R" grade	1-3 credits

YEAR 2	SPRING SEMESTER	M.S. Degree
	Selective or Elective*	3-6 credits
ANAT 600	Thesis Research, graded	6 credits
IBIOS 591	Ethics (if not already taken)	1 credit

* 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 a required course will be asked to repeat the class, pass a remedial examination, or withdraw from 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.

Thirty credits are required for the Master's Degree, 18 credits of which are 500 or higher level graded courses.

International students must register for 9 credits to fulfill the INS visa requirement.

E. Selectives/Electives

All students must complete at least one 3-credit elective/selective. Courses should be selected and approved by the Thesis Advisor and Program Director prior to enrollment. Some Selective courses are designed as 3 independent modules for 1 credit. Not all courses are offered each semester; course offerings are available online (eLion). PHS525 (Statistics) may serve as an elective course for Master's degree students.

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 written 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 for Colloquium, required annual seminars, formal scientific presentations, and/or the oral Candidacy examination. 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 medical Gross Anatomy (SBMP 715) during the second year in the program; overall academic performance must be in good standing at time of registration (i.e., 3.0 or better GPA). 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. At this time, grades for ANAT 602 are not included in calculations of the GPA.

H. Transition between Master's Degree and Doctoral Tracks

Transition from MS to PhD Status

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 application so that his/her credentials will be added to the pool of candidates, and evaluated as any other prospective applicant. Completion of the Master's degree <u>does not guarantee</u> 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 PhD to MS Status
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 be initiated in writing at the request of the student, and require approval from the Program Director.

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. The student's GPA must be 3.0 in order to participate in all examinations. 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

A student who has been admitted to a program in which the doctorate is offered may begin working toward that degree but has no official status as a doctoral student and no assurance of acceptance as a doctoral candidate until a candidacy examination administered by the major department or committee has been passed. 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. 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. It will occur within 4 months of 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 disciplines (e.g., gross anatomy, embryology, histology, and neuroanatomy). The written examination consists of a number of questions that must be answered, or statements that must be defended or refuted. The oral candidacy examination is the presentation of a powerpoint "lecture" on an assigned topic. During the oral presentation, the student must present and answer questions without support of any kind. Written examinations are closed book, and may encompass a full-day of testing. Guidelines for the examinations will be distributed at least 3 weeks prior to the examinations.

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. The overall examination process is graded as Outstanding, High Pass, Pass, or Fail; no letter grades will be assigned. Each committee member is required to assign a "descriptive" evaluation and sign the graduate college forms. A majority of passing grades are required for successful completion of the Comprehensive 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. In special circumstances, students may be 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.

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. Details concerning format and requirements for a thesis are located at: www.gradsch.psu.edu/current/thesis.html or www.etd.psu.edu. All theses are submitted electronically.

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. The written thesis should be provided to the committee members no later than 4 weeks prior to the established date of the oral defense.

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 recommended by the Graduate School for scheduling this examination. The dissertation should be delivered to the members of the doctoral committee four 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)
- Obtain *Manual for Graduate Students and Thesis Information Bulletin* from The Graduate School, University Park as source for thesis preparation.
- 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.

PSU Code of Conduct outlines acceptable behaviors. Failure of the Code of Conduct is handled by the Judicial Affairs policies outlined: http://www.sa.psu.edu/ja/pdf/jamanual.pdf. If it is determined that misconduct was committed, the assistantship may be terminated upon approval by the Program Director in consultation with the Associate Dean for Graduate Education at Hershey, without proceeding with a performance improvement meeting. Acts of misconduct include, but are not limited to, theft, fraud, physical altercations, sexual harassment, or ethical violations.

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.
http://www.gradsch.psu.edu/policies/student/appendix4.html

C. Termination of the Assistantship for Inadequate Performance

Termination of the Assistantship related to inadequate performance in research must be documented in writing in a timely manner, 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.gradsch.psu.edu/policies/student/appendix4.html (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

The duties and responsibilities for individual laboratories vary widely. It is recommended that each student communicate with their advisor on the expectations of the particular laboratory; an "Expectations" document (see section F below) is provided to each student during the first semester. This document can serve as a minimal set of requirements; advisor and students should amend as appropriate.

If a graduate assistant fails to meet acceptable standards of performance as prescribed in writing by the advisor, the Program Director should be notified and a meeting scheduled within 3 days. Upon review of the situation if it is concluded that the graduate assistant has failed to meet acceptable performance, the Program Director may terminate the assistantship appointment. Written documentation of this action must be submitted to the Dean of the College, Associate Dean of the Graduate school, as well as the student. Consequences regarding healthcare and/or other benefits must be made known to the student.

Information regarding an appeal process is provided online.

D. Withdrawal from Class and Repeating Courses

Penn State University does not condone withdrawal from classes for purposes of repeating courses to achieve higher grades; see section 47-80 on Repeating courses in the Graduate Senate Policy. The program policy is outlined below.

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 recommended action is obtained from the student's advisor <u>and</u> 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; BMS 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, half-time research assistantship may be provided for either one or more semesters while in good standing in the Master's Program. Awardees receive financial support plus waiver of tuition. A 3.0 GPA is required to be considered for an assistantship and will be awarded at the discretion of the director pending available funding. Assistantships will be withdrawn if a 3.0 GPA is not maintained. Students are responsible for costs of books (~$400/year), activity fees, and medical insurance.

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 every 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 received financial support plus tuition at the established College of Medicine rate. Students are responsible for costs of books (~$400/year), activity fees, thesis fees, and medical insurance. Medical insurance is strongly advised for Anatomy Graduate students, but not required. 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. Time off for vacations, sick leave, and unrelated research purposes must be approved by the mentor prior to the event. 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.

Assistantships are made on an annual basis, and are not *automatically* extended for the duration of the student's academic career.

Other Fees. A thesis fee (~$95 for PhD, ~$25 for MS) is required for all students. In addition, computer-IT, and activity fees may be imposed by the university on all graduate students.

B. Financial Awards

Doctoral students are encouraged to compete for national research fellowships including those provided by NIH (F31) and NSF. A few awards may be available from the American Association of Anatomists, and the American Association of Student Anatomists.

Other possible sources for financial assistance include:

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 the advisor for all first year students. Once a student has selected a laboratory, the PI (mentor) becomes the advisor. The Program Director continues in the position of overall advisor and mentor. The advisor assists in course selection, committee selection, and the writing and presentation of the research thesis.

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 June and July.

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 includes:

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

G. Leaving a Laboratory at Student's Initiative

Students who are concerned that their choice of thesis advisor may not have been appropriate need to discuss the situation with their Program Director as soon as possible. If the student ultimately decides that they would like to identify a new thesis advisor, the student will provide at least four weeks notice, in written form. Ongoing studies will be completed, and all laboratory notebooks, reagents (antibodies, cell lines, etc.) and experimental protocols will be provided to the thesis advisor. During this time, the student must identify a new advisor willing to accept them into the laboratory (and assume financial responsibility for them) at the end of their time in the current laboratory, unless alternative arrangements are made with the Program Director. From the CoM document: "The Graduate Student - Thesis Advisor Relationship"

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 (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)

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 doing research in the Department of Neural & Behavioral Sciences are expected to attend on a regular basis the NBS Departmental Seminar series, and will be expected to participate yearly in the seminar series beginning in the Spring semester of their 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. Students must have an academic GPA of 3.0 in order to serve in any capacity as a teaching assistant and to receive stipend reimbursement from the Graduate Program. If the student is ineligible to teach during the first semester of the second year, they will be encouraged to bring their grade up to 3.0 in order to be eligible for teaching in the 3rd year.

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).

B. Vacation and Sick Leave

Vacation: First year students enrolled full time in classes are eligible for scheduled university breaks that occur 3 times each calendar year: one week at Thanksgiving, 2 or more weeks during the December holidays; 1 week of spring break in March. All other students, and particularly those receiving stipends, are eligible for 2 weeks vacation over the 52-week year. This time should be scheduled with the advisement of their mentor and/or program director.

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.

New Parent Accommodation for any parent, male or female, of any child, natural or adopted, is provided by the University for a period of up to six weeks of paid leave if the student is a graduate assistant.

Accommodations with respect to courses (e.g., deferral of grades) are addressed at the following website: http://www.registrar.psu.edu/grades/deferred.cfm.

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. If the reason for the leave of absence is medically related, the student may petition to return to the program after a mutually agreed period of time. Letters from the attending physician are requested for reinstatement.

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; consultation with the Program Director and thesis advisor prior to accepting outside employment is encouraged.

X. GRADUATE PROGRAM FACULTY & ADVISORY COMMITTEE

A. Faculty in the Graduate Anatomy Program

Alistair J. Barber, Ph.D., Associate Professor, Ophthalmology ajb19@psu.edu
Room: C4800 (x6506-office) (x5542-lab) MC: H166

Colin J. Barnstable, D.Phil., Professor and Chair, Neural & Behavioral Sciences cjb30@psu.edu
Room C3801 (x8652) Lab: C3744 (x283128) MC: H109

Cheston M. Berlin, M.D., Professor, Pediatrics cmb6@psu.edu
106 Long Lane (x8006) MC: HS83

Kirsteen N. Browning, Ph.D., Assistant Professor, Neural & Behavioral Sciences knb13@psu.edu
Room: C3739B (x8267) Lab: C3765 (x280477) MC: H109

Neil D. Christensen, Ph.D., Professor, Pathology, Micro & Immunology ndc1@psu.edu
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Room: C3848 (x4541) MC: H110

Henry J. Donahue, Ph.D., Professor, Vice Chair of Basic Science Research, Orthopaedics and Rehabilitation hjd5@psu.edu Room: C3803 (x4819) MC: HO89

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Patricia J. McLaughlin, D.Ed., Professor, Neural & Behavioral Sciences pxm9@psu.edu
Director, Graduate Program in Anatomy Room: C3727 (x6414) MC: H109

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Samual Zhang, M.D., Ph.D., Assistant Professor, Neural & Behavioral Sciences ssz3@psu.edu Room C3802 (x8480) MC: H109

B. Administrative assistant

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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 and at least two (2) other graduate faculty members of the Anatomy Program. Membership on this committee may rotate among all members of the faculty in the Graduate Program in Anatomy.

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 request to be removed from the program will be granted the request.