

USF
HEALTH



Ph.D. in
Medical Sciences
Handbook
2016-2017



Ph.D. Program in
*Integrated **B**iomedical **S**ciences*

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Introduction

Welcome to the graduate program of the University of South Florida's Morsani College of Medicine.

The Ph.D. Program in Integrated Biomedical Sciences (PIBS) offers students an outstanding educational and training environment that facilitates their development as independent academics, scientists and biomedical researchers. The integrated program provides students with a diverse array of academic courses, research opportunities and exposes students to a talented faculty with a broad array of research interests. Participating faculty are primarily drawn from departments in the Morsani College of Medicine, including Molecular Medicine, Molecular Pharmacology and Physiology, Neurosurgery, Obstetrics and Gynecology, Otolaryngology, Pathology and Cell Biology, Pediatrics, Psychiatry and Behavioral Medicine. Affiliated institutions include the Byrd Alzheimer's Institute, the James A. Haley and Bay Pines V.A. hospitals, and the USF Center for Biological Defense.

Faculty expertise and laboratory facilities are available in all of the main subject areas in the biomedical sciences including anatomy, biochemistry, cancer biology, cell biology, immunology, infectious disease, microbiology, molecular biology, neuroscience, pharmacology and physiology. The Morsani College of Medicine offers over 150 graduate courses that provide exceptional learning opportunities.

The strength of the program resides in the combined expertise of its diverse faculty, their commitment to academic excellence and student development. In addition, the ability of students to select from a variety of interdisciplinary curricula allows students to develop individual expertise targeted towards their future professional careers.

This handbook is intended as a quick policy guide for navigating the Ph.D. program. The information and procedures described in the handbook are subject to change and may vary according to the specific program requirements for each of the various concentrations. We recommend that you use this handbook as an initial reference tool and basis for further inquiry with your advisors or program coordinators. In addition to the items described here, the integrated Ph.D. program follows the guidelines outlined by the USF Office of Graduate Studies. The current USF Graduate Catalog may be found at <http://www.grad.usf.edu/catalog.asp>. It is your responsibility as a graduate student to maintain your progress in accordance with program policies and to meet relevant deadlines. All questions regarding college graduate policies should be directed to the individual graduate concentration coordinators, to the Associate Dean and/or Assistant Director of Ph.D. and Postdoctoral Programs, or to the Office of Graduate and Postdoctoral Affairs.

Disclaimer: Remember that all information contained in this handbook is provided as a guideline and may not reflect current University or Department policy.

Office of Graduate Affairs

The role of the Office of Graduate and Postdoctoral Affairs is to provide administrative leadership, support and coordinate the missions and goals of the various graduate programs. The office features a student-focused approach with a dedicated staff that is committed to both student advancement and success. Services range from developing and hosting the annual “new student” orientation, to assisting with course registrations, to helping students with poster printing, and the planning and execution of their final dissertation defenses.

The Office of Graduate & Postdoctoral Affairs is located in Suite MDC 1054 on the ground level of the research building within the Health Sciences complex on the westernmost edge of the main University of South Florida campus in Tampa.

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Summary of Degree Requirements

All students are required to successfully complete the following didactic courses:

GMS 6001 Foundation in Biomedical Sciences	6 hrs
GMS 6091 Responsible Conduct in Research	1 hr
GMS 6094 Experimental Design & Analysis	3 hrs
GMS 6002 Success Skills in the Biomedical Sciences	1 hr
BCH 6935 Grant Writing & Scientific Communication	2 hrs

Students are also required to complete at least one semester of Laboratory Rotations in Biomedical Sciences, GMS 6942 (1-3 credit hours).

Each student shall complete a minimum of 24 credit hours of didactic course work (excluding journal clubs, seminars, laboratory rotations, directed research, etc.). In addition to the required courses listed above (13 credit hours), the student shall fulfill the 24 credit hour minimum by completing coursework in their chosen concentration. There are 6 concentrations requiring specific courses. The student will work with his/her advisory and dissertation committees to choose appropriate courses from the course list for their chosen concentration.

Minimum GPA and grade requirements

Students must maintain a minimum GPA of 3.0. Those falling below 3.0 will be placed on academic probation, and will have two semesters in which to meet the minimum GPA requirements. If the student does not have at least a 3.0 GPA after these two semesters, the student will be dismissed from the program.

Students must earn at least a “B” in all required courses (core and concentration-specific). If the student earns a grade less than a “B” in a required course, then the student will have the opportunity to take the course a second time. However, the student’s stipend and tuition waiver may be suspended. If the student earns less than a “B” in the same required course for the second time, the student will be dismissed from the program. This “second chance” rule does not supersede the requirement to maintain a minimum overall 3.0 GPA throughout the Ph.D. program.

Formal Research Seminars

Starting in their second year, each student shall present one full-length formal research seminar per year as part of a MCoM student research seminar course offered within the student’s chosen concentration.

Journal Clubs

Students are encouraged to participate in one journal club per fall and spring semester.

Directed and Dissertation Research

Students will register for laboratory research throughout their tenure in the graduate program. Prior to completing the Comprehensive Qualifying Examination, the student will register for GMS 7910, Directed Research. Following successful completion of the Comprehensive Qualifying Examination, the

student will register for GMS 7980, Dissertation Research. A minimum of 24 credit hours Dissertation Research is required.

Program Summary

Collaboration among laboratory scientists of all disciplines is encouraged. The programs of study allow students to tailor their programs to individual needs and interests. Thanks to faculty research awards, students have the opportunity to participate in cutting-edge research projects. Medical Sciences Ph.D. graduates progress to become deeply involved in research sponsored by academic, industrial and government institutions. Candidates for the Ph.D. in Medical Sciences enter into an integrated program enabling them to major in one of the following concentrations:

- Allergy, Immunology, and Infectious Diseases
- Cardiovascular Biology
- Molecular Medicine
- Molecular Pharmacology & Physiology
- Neuroscience
- Pathology & Cell Biology

Students are free to study under the mentorship of USF COM credentialed graduate faculty conducting research in the following institutions:

- University of South Florida's College of Medicine
- H. Lee Moffitt Cancer Center
- James Haley Veteran's Hospital
- Tampa General Hospital

Total Program Credits (minimum)

90

Forms required throughout the Ph.D. program can be found at the following website:

<http://gradaffairs.health.usf.edu/forms.html>

In addition, PPIBS follows the guidelines outlined by the USF Graduate School. The current USF Graduate Catalog can be found at <http://www.grad.usf.edu/catalog.asp>.

The First Year of Study

Within the first year of study, a student selects a major professor, a formal dissertation committee is assembled and the student is appointed in the appropriate basic science department. The student, in collaboration with the major professor, also selects one of the concentrations. The dissertation committee assists the student in planning their research, choosing the appropriate concentration and curriculum, evaluates the student's progress, supervises the comprehensive qualifying examinations, and conducts the final dissertation defense.

The Second Year of Study

By the end of the second year, a student has usually completed sufficient course work and has met the other research requirements to take the Comprehensive Qualifying Examination. Successful completion of this examination leads to formal candidacy for Ph.D. admission.

Doctoral Student Supervisory Committee Composition

The Doctoral Student Supervisory Committee will be formed within six months of the assignment of a major professor, and no later than four terms (including summer) after entering the program. If a student enters the Ph.D. program following completion of the M.S. in Medical Sciences (from USF MCoM), then the Doctoral Dissertation Committee must be formed by the end of the first semester in the Ph.D. program. The committee will consist of a minimum of three credentialed Morsani College of Medicine graduate faculty members in addition to the major and co-major professors, who are experts in fields relevant to student's research area. At least two members shall hold primary appointments in the student's home department, and will be appointed by the department Chair. At least one committee member shall hold a primary appointment in another department. As per University guidelines, the Doctoral Committee is officially designated by the College of Medicine's Associate Dean for Ph.D. and Postdoctoral Programs. The Graduate Student Advisory Committee Appointment Form may be found at http://gradaffairs.health.usf.edu/word_files/form_committee_form_2006.doc.

Comprehensive qualifying examination (CQE) procedure

Students who have not yet completed the mandatory course work, or who are on academic probation, may not take the CQE. The student's doctoral student supervisory committee must be approved by the Associate Dean for Ph.D. and Postdoctoral Programs prior to the start of the CQE process. When all prerequisites are met, the student may begin the CQE process.

The following is the formal and mandatory Comprehensive Qualifying Examination procedure. The examination serves as the formal process for Admission to Ph.D. Candidacy. The student is solely responsible for all aspects of the exam. Students typically complete the CQE process in Year 3, fall semester. The CQE checklist can be found at <http://gradaffairs.health.usf.edu/forms.html>.

The student will inform the graduate program coordinator for their concentration that they plan to proceed with the CQE. At that time, the graduate program coordinator will arrange for a CQE Committee Chair to be named. The CQE Committee Chair will be an experienced graduate faculty member expert in the student's concentration, but not a member of the student's supervisory committee. The role of the CQE Chair is outlined in the CQE checklist that may be found at <http://gradaffairs.health.usf.edu/forms.html>. The student will prepare a Specific Aims page describing a possible dissertation research proposal. Following approval to proceed by the student's CQE committee, the student will prepare a dissertation research proposal.

The topic of the proposal shall be related to the student's area of research. The text of the proposal must be distinct from the major professor's funded grant proposals. The proposal is limited to a total of 13 single-spaced pages, including the Specific Aims page. The document should be written in the

style of a typical research grant proposal that contains the following sections immediately following the Specific Aims page: 1) Background & Significance, 2) Preliminary Data, and 3) Research Design & Methods. All relevant literature should be cited in a separate section (and will not be considered part of the 13 page limit).

Students will prepare and present a formal public seminar of their dissertation research proposal. This seminar can be coordinated (and take the place of) one of the annual formal research seminars. Immediately following the seminar, the student will be examined by the CQE examining committee which is comprised of the student's dissertation committee (except the major professor) and one additional graduate faculty member, serving as CQE Committee Chair named by the concentration Director. This oral examination is designed to determine whether the student is proficient in their chosen concentration. Also, the student should be prepared to defend the proposed research plan. The written proposal, oral examination and defense will serve as the student's Ph.D. qualifying examination.

The student will have a total of six weeks to complete the CQE process from the date on which the student's CQE committee approves the Specific Aims. The written proposal shall be distributed to the student's CQE committee at least two weeks prior to the oral examination and defense, giving the student four weeks to write the proposal. Students will be admitted to Ph.D. candidacy only following successful completion of both portions of the examination. Each member of the CQE committee will evaluate the student performance, in writing, based on five areas: 1) general knowledge within the student's chosen concentration, 2) quality of the proposed research/problem solving ability, 3) understanding of the proposed methodology, 4) organization/written and oral communication, and 5) knowledge of the literature. The CQE evaluation forms may be found at:

<http://gradaffairs.health.usf.edu/forms.html>. The minimal passing score in each category must average 3 or higher (5 is maximum), and the average total score (the sum of scores from each of the five categories) must be 18 or higher (25 maximum). With the successful completion of the CQE, the student may receive an M.S. in Medical Sciences, and be admitted to Ph.D. candidacy after completing the "Master's Degree Certification" and the "Admission to Doctoral Candidacy" forms, respectively. The forms may be found at <http://gradaffairs.health.usf.edu/forms.html>. Students must register for a minimum of 2 credit hours during the semester in which the CQE was completed successfully. Early in the semester in which the M.S. degree is to be conferred, students must complete the "Graduate Degree Graduation Application." Students will apply online under their OASIS account, student tab.

If a student fails on the first attempt, they will have a second opportunity to pass the CQE within one month of the first examination unless extenuating circumstances warrant an extension

Additional CQE procedures may be found at: <http://gradaffairs.health.usf.edu/forms.html>, and the complete CQE procedure checklist with description of CQE Chair role is listed below:

CQE Procedures

Before CQE

- Graduate Student Supervisory Committee Appointment
 - Graduate Student Supervisory Committee Appointment Form:
 - http://gradaffairs.health.usf.edu/word_files/form_committee_form_2006.doc
 - **This form should be completed the term prior to taking the CQE**
 - The Graduate Student Supervisory Committee will monitor the student's progress and serve as members of the student's CQE committee and the student's dissertation committee.
 - Composition of the Graduate Student Supervisory Committee
 - The committee will consist of a minimum of **three** credentialed Morsani College of Medicine graduate faculty members **in addition to the major and co-major professors**, who are experts in fields relevant to student's research area
 - If committee member is not employed by USF - must have CV
 - **At least, two** members of the committee must have a faculty (core/full/current) appointment in the student's home department.
 - **One** member of the committee needs to have a faculty appointment outside the student's home department.
- Student CQE Committee
 - The CQE Committee consists of the members of the Graduate Student Supervisory Committee (**excluding** the Major and co-Major Professors), and an additional faculty member who is not on the student's supervisory committee to serve as Chair of the CQE Committee.
 - The CQE Committee Chair will be appointed by the concentration coordinator and is an experienced graduate faculty member expert in the student's concentration, but not a member of the student's dissertation committee
 - **Role of the CQE Chair:**
 1. The CQE Committee Chair will be charged with facilitating the CQE. S/he will ensure that all of the CQE procedures are followed as described in the student handbook that can be found at:
<http://gradaffairs.health.usf.edu/pdf/PhDHandbook.pdf>.
 2. The CQE Chair will also ensure that the CQE assessment rubrics are completed individually by all CQE Committee members ***including that of the CQE chair***, and will inform the student of their relative performance in each assessment area and whether or not they passed the CQE.
 3. If the student does not pass, the CQE Chair will also inform the student, in writing, the specific set of conditions that the student should follow in order to have a greater chance of success when the CQE is taken again (i.e., what portions of the exam were assessed as inadequate, and how might the student work to improve in those areas before the next exam).

CQE

- Preparation for Written and Oral CQE
 - Apply for MS degree online at the start of the semester of the CQE. Application is done through your student OASIS account (last link underneath *STUDENT- APPLY TO GRADUATE*- Must inform Mrs. Danielle Gamboni in OGPA when you plan to do this).
 - Seven weeks** before the Oral CQE – The Specific Aims page must be submitted to the CQE Committee. The CQE committee should decide whether to approve to proceed with the CQE within one week of submission.
 - Six weeks** before the Oral CQE – If approved to proceed, then the Student may proceed with the Written CQE and making arrangements for the Oral CQE (*e.g.*, date and room reservation).

- Oral CQE date and Room Reservation
 - Graduate Student must set CQE date after consulting with CQE Committee.
 - Graduate Student must inform the Ph.D. Program Associate Dean (Dr. Bennett), the Assistant Director (Dr. Combie), Ph.D. Concentration Coordinator, Dept. Chair, Dept. academic services administrator (if applicable) of the Oral CQE date.
 - Dr. Combie and the department will create and disseminate your CQE announcement
 - Two weeks** before the Oral CQE – Research Proposal (i.e., the written portion of the CQE) must be submitted to the CQE Committee.
 - One week** before the Oral CQE - Graduate Student must submit a copy of his/her transcript to the External Chair of the CQE Committee (***Ask Dr. Combie for assistance***).
 - On the day of the CQE**, take a copy of your unofficial transcript to the oral CQE
 - **Oral CQE** – consists of presentation/seminar followed by defense of proposal and general examination.

After Successful CQE

- Applications and Certifications
 - Student must apply for Admission to Doctoral Candidacy (ADC):
http://www.grad.usf.edu/inc/linked-files/A2C_form.pdf
 - Student's current transcript needs to be attached to ADC showing at least 3.0 GPA (*student may access it through OASIS or request that Dr. Combie print it through Banner*).
 - Student must apply for Master's Degree Certification (College of Medicine):
http://gradaffairs.health.usf.edu/pdf/Certification_for_Master's_Degree.pdf

- Once the above documents are approved and signed, the student should submit them to Dr. Combie for signature by the Associate Dean (Dr. Bennett) and for inclusion in the student's files in OGPA, and provide a copy to their home department.
- Student will receive an e-mail from OGPA when the documents have been approved and/or if any additional paperwork is needed.

Doctoral Degree Completion

The final phase of the program emphasizes research and independent study, which leads to a written dissertation. The Ph.D. degree is awarded upon successful completion and oral defense of the dissertation. Similar to the CQE, each member of the dissertation committee will evaluate the student performance, in writing, based on five areas: 1) knowledge/understanding of the literature, 2) quality of the research, 3) understanding of the methodology used, 4) problem solving, and 5) organization/communication. The minimal passing score in each category must average 3 or higher (5 is maximum), and the average total score (the sum of scores from each of the five categories) must be 18 or higher (25 maximum). The dissertation and oral defense evaluation forms may be found at: <http://gradaffairs.health.usf.edu/forms.html>. The additional dissertation defense procedures may be found at: <http://gradaffairs.health.usf.edu/forms.html>, and are listed below:

PROCEDURES FOR Ph.D. DISSERTATION DEFENSES USF MORSANI COLLEGE OF MEDICINE

The Graduate School provides deadline dates each semester found at: www.grad.usf.edu. We used these deadlines to outline a user-friendly, checklist for you to follow below.

1. **During the term PRIOR to the term during which you plan to graduate:** you must register for and take the ETD course delivered by the Office of Graduate Studies on formatting and electronic submission procedures for the dissertation. Details may be found at <http://www.grad.usf.edu/ETD-res-main.php>.
2. **During the term PRIOR to the term during which you plan to graduate:** please notify Dr. Combie in the USF MCOM Office of Graduate & Postdoctoral Affairs (OGPA), your department academic services administrator and concentration Ph.D. coordinator that you plan to defend during the upcoming term.
3. **Early in the semester that you plan to graduate:** you must submit a *Graduate Degree Graduation Application*. You Apply ONLINE through your OASIS student account.
4. **As soon as you have established a defense date:** notify Dr. Combie in OGPA and your department room scheduler (likely the Academic Services Administrator) so a room can be reserved for your defense. In some departments, it is the student's responsibility to reserve the room. *Reserve the room for at least a four-hour block.*
5. **Before nominating an external chair,** you will need to provide an update on your publications to the Associate Dean and Assistant Director.
6. **At least five weeks before your defense, an External Chair of your Dissertation Defense Committee must be nominated:** The external chair is nominated by your Major Professor (and you), but must be approved by your Major Professor, your Department Chair and the Associate Dean for Ph.D. and Postdoctoral Programs (Dr. Bennett) PRIOR to the person being formally invited. The external chair cannot be a formal collaborator with your lab on any project related to your

dissertation, and should be an academic with experience in training Ph.D. students who is expert in the discipline of your dissertation. The nominee's CV must be sent to the Chair of your department, who, upon approval, will nominate the individual by forwarding a copy of his/her CV to the Associate Dean for Ph.D. & Postdoctoral Programs and copying Dr. Combie **at least five weeks prior to your defense date**. Upon approval by the Associate Dean, an official invitation letter from OGPA will be sent to the external chair approximately four weeks before the defense date. Your major professor is responsible for organizing the complete agenda for the external chair's visit, including planning and advertising his/her seminar. Dr. Combie will assist in disseminating the flyers electronically in the college and across campus.

7. **At least three weeks or more before your defense:** An electronic copy of your dissertation must be sent to Dr. Bennett, Dr. Combie, and every member of your dissertation committee and to the outside chair.
8. **At least two weeks before the defense:** The signed *Request for the Dissertation Defense Form* <http://gradaffairs.health.usf.edu/forms.html> must be sent to Dr. Combie in OGPA. **Note:** This form must be signed by all USF dissertation committee members and the department chair. The committee member is supposed to read through the dissertation PRIOR to signing the form. Please plan ahead because committee members can be difficult to track down for signatures. After securing the signature of the department chair, submit form to Dr. Combie for Dr. Bennett's signature as "College Dean".
9. **At least two weeks before you defend:** The student is responsible for completing the defense announcement form, found on: <http://gradaffairs.health.usf.edu/forms.html> and should provide electronic copies to Dr. Combie in OGPA as well as the Academic Services Administrator for their respective department.
10. Dr. Combie in OGPA will distribute the announcement (and copy Graduate Studies, Basic Science Depts., and the MCoM community).
11. **The day of your defense:** Prepare one copy of the following: *Electronic Thesis & Dissertation (ETD) Certificate of Approval* located at http://gradaffairs.health.usf.edu/student_resources.html and *Successful Defense Form* and **take them to your defense**. Following a successful defense, committee members will sign the forms in black ink; please return signed forms to Dr. Combie (OGPA). The ETD form will then be signed by Dr. Bennett; once done, submit the original to the USF Office of Graduate Studies (Mr. Matthew Cordner) with the NORC survey (<https://sed.norc.org/showRegister.do>), and the plagiarism check <http://www.grad.usf.edu/ETD-plagiarism.php>. Current ETD deadlines are available here http://www.grad.usf.edu/ETD_Deadlines.php
12. **Within 30 day after your defense and after you have made any corrections to your dissertation:** Upon ETD approval (an email from Graduate Studies), email the ETD approved PDF to biomedPhD@health.usf.edu, specifying the binding color (15 options). You will receive a copy, your major professor(s) will receive a copy(ies), your department will receive a copy, and OGPA will receive one. The Ph.D. and Postdoctoral Programs office can advise you if you would like to purchase additional copies.

NOTE: If copies of the dissertation are not submitted to the Office of Graduate & Postdoctoral Affairs for binding, you will not be certified to graduate.

Common graduation requirements

Prior to the successful completion of all requirements for the Ph.D., students will be expected to publish a minimum of two peer-reviewed original research articles, at least one of which must be a first author publication related to their dissertation research. Very rare exceptions to this rule may be made with the consent of the student's Doctoral Dissertation Committee and the USF College of Medicine Graduate Education Committee. Petitions for such exceptions must be made by the student's major professor and approved by both committees prior to scheduling the defense of the dissertation.

Stipends / Tuition/ Insurance - Financial Assistance for Ph.D. Students

Graduate research assistantships, supported primarily from research grants held by individual faculty members, are available through individual College of Medicine departments.

Benefits for students who are admitted into the Ph.D. program include:

\$26,000 annual stipend - All students receiving a Graduate Assistantship or Graduate Research Assistantship, and working full-time (at least 40 hours/week), will receive a \$26,000 stipend.

Tuition waivers (excludes student fees)

All students appointed as a GA or GRA within the MCOM, are eligible for a tuition waiver. Forms found at: <http://gradaffairs.health.usf.edu/forms.html> and must be submitted every term. Students are to register for 12 credit hours in the fall and spring semesters and 8 credit hours in the summer term. Exceptions to this include the term in which the student completes the dissertation defense. The USF MCOM Office of Graduate & Postdoctoral Affairs has no role in determining or administering the fees for which students are responsible, which can be found at:

http://usfweb2.usf.edu/uco/cashaccounting/Current_Tuition.asp.

Medical insurance contribution - All students appointed through the MCOM as a GA or GRA (0.5 FTE) will receive 100% contribution toward student health insurance. Information and a link to sign-up online can be found at: <http://usfweb2.usf.edu/human-resources/benefits/graduate-assistant-insurance.asp>

Student travel awards - Each semester, the MCOM graduate student organization awards small travel awards to students presenting their research at national/international meetings. Please contact the president of AMSGS for details.

Federal Financial Aid

There are new regulations regarding Federal Financial Aid (FFA) eligibility that you should consider if you plan to apply for FFA while a Ph.D. student. Details may be found at:

http://usfweb2.usf.edu/finaid/other/satisfactory_progress.aspx.

Briefly, students are no longer eligible for FFA once they exceed 50% above the minimum credit hours required for the Ph.D. For our program, 90 credit hours are required, and therefore, once a student exceeds 135 hours, s/he will no longer be eligible for FFA. Given that PPIBS students take 32 hours/year, students become ineligible for FFA after the fall semester of his/her 5th year in the program. In addition, if a student has taken ANY graduate level courses (*at USF or any other institution*) prior to enrollment in the Ph.D. Program, these credit hours are included in the total with

respect to FFA eligibility. Should one need to request an exemption in order to receive FFA, please find the exemption request form at the following link:

http://usfweb2.usf.edu/FinaidPDF/internet/1314/1314_SAPPGP.pdf.

Incentive Program

Students who apply for and receive external (of the MCoM) student fellowships will be rewarded for their accomplishment by receiving an additional 15% of the fellowship value added to their \$26,000 stipend, pending approval and financial ability of the major professor. That is, the total compensation received by the student would be \$26,000 + 15% of the fellowship value. If a single fellowship pays between \$26,000 and \$29,600, total compensation will be capped at \$29,600. No bonus will be paid for fellowships paying more than \$29,600 annually.

Outside Employment

The rigorous courses and requisite research efforts of the Ph.D. Program does not allow time for additional employment. Thus, the Program does not permit students with Graduate Assistantship or Graduate Research Assistantships to have outside employment, and the students are expected to work full-time. Students who seek outside employment will lose their stipend support and subsequently their tuition waiver.

Progress reports

At the end of each academic year (the summer term), the students and their committee members will complete a progress report that highlights the student's accomplishments of the past year and the goals and objective of the coming academic year. This form and other Graduate forms may be found at the following URL: <http://gradaffairs.health.usf.edu/forms.html>

Verification of Degree

Students needing verification that they have met all requirements to receive the Ph.D. prior to the conferment of the degree should contact Dr. Christoph Combie in the Office of Graduate and Postdoctoral Affairs.

Concentration Curricula

The following is a list of specific courses required for each of the six concentrations for the Ph.D. in Medical Sciences. Students will choose one of the following five concentrations in consultation with their major professor. The course and other curricular requirements specific to each concentration are in addition to the common curriculum, Comprehensive Qualifying Examination procedure, and graduation requirements described above.

The screenshot displays the website for USF Health's Graduate & Postdoctoral Affairs. At the top, the USF Health logo and navigation links are visible. The main header reads "Graduate & Postdoctoral Affairs" and "College of Medicine". A secondary navigation bar includes "COLLEGE OF MEDICINE | RESEARCH | ABOUT US | STUDENT | ALUMNI | CONTACT US | VISIT US" and the phone number "813-974-4181".

The central banner features a photograph of students in a meeting and the text: "Graduate & Postdoctoral Affairs Graduate Programs in Biomedical Sciences" with a prominent "Apply Now" button. Below this, there are links for "Ph.D. Program (Read More)", "Master's Program (Read More)", "100% Online Master's (Read More)", and "Master's Degree in Medical Sciences (Read More)".

The main content area is titled "Welcome to Graduate & Postdoctoral Affairs" and contains a welcome message: "Welcome to the College of Medicine's graduate community. Our website is designed to provide accurate and accessible information regarding graduate education in the College School of Biomedical Sciences. The School comprises a group of talented and energetic faculty and staff who are fully committed to our student's success in both education and research." It also includes a "Why USF-Health" section with a photo of a smiling woman.

The left sidebar contains a vertical menu with links: Home, Accepted New Student Information, Current Students, Ph.D. Information, Current Students, Master's Information, One-Year/Medical Sciences Research, Interdisciplinary Research, M.D./Ph.D. Information, Certificate Information, Admissions Information, Further Goal, FAQ, Graduate School, Office of Research, and Contact Us. Below the menu are sections for "Living in Tampa" and "USF Virtual Tour".

The right sidebar includes "Student Profiles" with a video player, "Social Media" with Facebook and Twitter icons, and "Current Students" with links for Student Profile, New Student Checklist, Important Student Resource & Forms, Academic Calendar, Blackboard Login, and USF Campus Resources.

I. Allergy, Immunology and Infectious Disease

Research and education in the Ph.D. in Medical Sciences Program, concentration in Allergy, Immunology and Infectious Diseases, is focused on interdisciplinary approaches to the study of how microbes interact with the host to cause disease and how the immune system responds to allergens, infection and neoplasms. Students who elected the SIPAID (Signature Interdisciplinary Program in Allergy, Immunology, and Infectious Disease) curriculum currently are pursuing research projects in areas including emerging infectious diseases, bacterial pathogenesis, cancer immunotherapy, microbial drug resistance, malaria, regulation of immunity and inflammation, oncogenic viruses and respiratory viruses in acute and chronic diseases.

Training will include an interdisciplinary blend of coursework, journal clubs, seminar series, as well as significant research experience.

Required Courses:

GMS 6103	Foundations in Medical Microbiology and Immunology (Spring)	4 Hrs
GMS 6101	Molecular and Cellular Immunology (Fall)	3 Hrs

Students are required to register for GMS7930 Selected Topics – SIPAID Seminar/Journal Club once they select the SIPAID concentration

Electives – Students must complete at least four credit hours from the following list:

BCH 6746	Structural Biology	3 Hrs
BCH 6135C	Methods in Molecular Medicine	4 Hrs
GMS 6107	Advances in Virology	2 Hrs
GMS 6114	Vaccines and Applied Immunology	2 Hrs
GMS 6110	Microbial Pathogenesis and Host-Parasite Interactions	2 Hrs
GMS 6512	Ion Channel Pharmacology and Disease	3 Hrs
GMS 6513	Principles of Pharmacology and Therapeutics	3 Hrs
GMS 6735	Neuropharmacology	3 Hrs
GMS 6840	Supervised Teaching	1 Hr
GMS 7930	Selected Topics – Clinical Allergy	3 Hrs
GMS 7930	Selected Topics – Infectious Disease	3 Hrs
GMS 6115	Medical Parasitology and Mycology	3 Hrs

Students in the program may register for alternative electives, following approval by the student's Dissertation Committee and the SIPAID Graduate Coordinator.

Allergy, Immunology and Infectious Disease Graduate Coordinator: Dr. Burt Anderson,
banderso@health.usf.edu

II. Cardiovascular Biology

Under the broad heading of cardiovascular research, with an emphasis on vascular biology, a Concentration in Cardiovascular Biology provides training in such diverse fields as gene regulation and differentiation in smooth muscle, molecular biology of smooth and cardiac muscle, receptor function and signal transduction in smooth muscle and endothelial cells, matrix and adhesion molecules in endothelial cell function, cell-cell communication, vascular development and inflammation, angiogenesis, and remodeling. Training includes a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience. The interdisciplinary structure permits considerable flexibility in training; each student's training is tailored to meet individual requirements.

Required Courses:

GMS 6410 Cardiovascular Regulation	4 Hrs
GMS 6440 Basic Medical Physiology	3 hrs
GMS 6505 Basic Medical Pharmacology	3 hrs

Electives – Students must complete at least five credit hours from the following list:

BCH 6746 Structural Biology	3 Hrs
BCH 6135C Methods in Molecular Medicine	4 Hrs
GMS 6407 Smooth and Skeletal Muscle	4 Hrs
GMS 6431 Cell Physiology	4 Hrs
GMS 6422 Cell Physiology	4 Hrs
GMS 6501 Membrane Physiology	4 Hrs
GMS 6513 Principles of Pharmacology and Therapeutics	3 Hrs
GMS 6840 Supervised Teaching	1 Hr
GMS 7930 Selected Topics	1-3 Hrs.

Students in the program may register for alternative electives, following approval by the student's Dissertation Committee.

Cardiovascular Biology Graduate Coordinator: Dr. Jerome Breslin, jbreslin@health.usf.edu

III. Molecular Medicine

The Ph.D. Program concentration in Molecular Medicine is focused on interdisciplinary approaches to the study of the molecular basis of disease, providing graduate students with a fundamental understanding of biochemical and genetic principles basic to pathophysiological processes. In this program students will examine molecular mechanisms that underlie the cellular aberrations in clinical disorders; and incorporate fundamental principles learned in course work to medical research. Detailed information on specific research areas of the faculty is available at the Department of Molecular Medicine website under Faculty.

Areas of interest include:

- Alzheimer's disease
- Signal transduction/Cancer
- Heme biosynthesis
- Regulation of bacterial virulence
- Tumor virology
- Tumor biology & therapeutics
- Genomics, genetics, replication
- Cellular immunology
- Protein intrinsic disorder
- Structure based drug design
- Tumor Immunology and signal transduction

Required Courses:

BCH 6627 Molecular Basis of Disease	4 hrs
GMS 7939 Graduate Seminar	1 hr
GMS 6940 Supervised Teaching	2 semesters

Electives - Students must complete at least eight credit hours from the following list. A minimum of 24 didactic credit hours are required for graduation.

BCH 6746 Structural Biology <i>{recommended to be taken with Proteomics}</i>	3 hrs
BSC 6932 Chemical Biology/Proteomics	3 hrs
GMS 6707 Basic Medical Neuroscience	3 hrs
GMS 6054 Cancer Biology I (PCB 6230)	
GMS 6055 Cancer Biology II (PCB 6231 Immunology)	
GMS 6103 Foundations in Microbiology & Immunology	4 hrs
GMS 6101 Cellular & Molecular Immunology	3 hrs
GMS 6110 Microbial Pathogenesis and Host-Parasite Interactions	2 hrs
GMS 6115 Medical Parasitology & Mycology	3 hrs
GMS 6334 Pathobiology of Human Cancer	
GMS 6610 Advanced Neuroanatomy	3 hrs
GMS 6735 Neuropharmacology	3 hrs

GMS 7930 Bioinformatics I & II
PCB 6939 Cancer Biology III (Cancer Genetics)

4 hrs

Students in the program may register for alternative electives, following approval by the student's Dissertation Committee. Students are also required to give a seminar one time per year and meet with their committee at least twice a year.

Supervised teaching (GMS 6940):

The Molecular Medicine Ph.D. program provides graduate students with supervised training in college and university teaching. After completion of the CQE, students are required to perform two semesters of supervised teaching – one semester of classroom teaching and one semester of online teaching. During their teaching activities the students will be directly supervised by experienced Molecular Medicine faculty members. Each student will be paired with a faculty member and will participate in the different aspects of college teaching, such as: topic selection, syllabus preparation, lecture planning, lecture delivery, exam creation and grading, and awarding of grades.

Molecular Medicine Graduate Coordinator: Dr. Gloria C. Ferreira, gferreir@health.usf.edu

IV. Molecular Pharmacology & Physiology

Research and education in the Ph.D. in Medical Sciences Program, concentration in Molecular Pharmacology and Physiology is focused on interdisciplinary approaches to the study of the nervous and cardiovascular systems and related disorders, including Alzheimer's disease and other neurodegenerative disorders, cardiovascular disease and stroke, diabetes, and neuropsychiatric disorders such as depression and drug addiction. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience.

Areas of interest include:

- Alzheimer's disease
- Brainstem central chemoreceptors
- Cardiac hormones
- Cell signaling networks and the regulation of heart rate
- Cellular and molecular mechanisms of CNS oxygen toxicity
- Computational neuroscience
- Extracellular matrix proteoglycans and their degrading proteinases
- Gene & stem cell therapies for heart disease and diabetes
- Glycobiology
- Hyperbaric neurophysiology
- Molecular mechanisms of septic shock
- Neural networks that control breathing and cardiovascular function
- Neural plasticity with neurodegenerative disease and after brain injury.
- Regulation and development of ion channels, synapses, and cell excitability
- Renal function and blood pressure regulation
- Therapies for stroke
- Alcoholic liver injury

Required courses:

GMS 6440	Basic Medical Physiology	3 hrs
GMS 6505	Basic Medical Pharmacology	3 hrs
AND, one of the following:		
GMS 7930	Advanced Medical Physiology	2 hrs
GMS 7930	Advanced Medical Pharmacology	2 hrs

Electives - Students must complete at least eight credit hours from the following list:

GMS 6707	Neuroscience	3 hrs
GMS 7930	Advanced Neuroscience	2 hrs
GMS 6401	Kidney, Fluids and Electrolytes	4 hrs
GMS 6403	Endocrine Mechanisms	4 hrs
GMS 6404	Systems Neurophysiology	4 hrs
GMS 6407	Smooth and Skeletal Muscle	4 hrs
GMS 6410	Cardiovascular Regulation	4 hrs

GMS 6433	Membrane Physiology	4 hrs
GMS 6735	Neuropharmacology	3 hrs
GMS 7930	Mechanisms of Memory	3 hrs
GMS 7930	Stem Cells and Brain Repair	3 hrs
GMS 7930	Spinal Cord Development, Pathology and Therapy	3 hrs
GMS 7930	Neuroimmunology	3 hrs

Appropriate additional or alternative courses may be substituted for electives with consent of the student's dissertation committee.

Molecular Pharmacology and Physiology Graduate Coordinator: Dr. Daniel Yip, dyip@health.usf.edu

V. Neuroscience

Research and education in the Ph.D. in Medical Sciences Program, concentration in Neuroscience is focused on interdisciplinary approaches to the study of the nervous systems and related disorders, including Alzheimer's disease and other neurodegenerative disorders, stroke, and neuropsychiatric disorders such as depression and drug addiction. Areas of expertise include biochemistry and cellular and molecular neuroscience, neural systems and computational neuroscience, behavioral neuroscience, developmental neuroscience, neuroimmunology, and neuropsychopharmacology, among others. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience. The interdisciplinary structure permits considerable flexibility in training; each student's training is tailored to meet individual requirements.

Areas of interest include:

- Alzheimer's disease
- Parkinson's Disease
- Neurobiology of Aging
- Age and disease related changes in learning and memory
- Computational neuroscience
- Gene & stem cell therapies for neurodegenerative disease
- Hyperbaric neurophysiology
- Neural networks that control breathing and cardiovascular function
- Neural plasticity with neurodegenerative disease and after brain injury.
- Regulation and development of ion channels, synapses, and cell excitability
- Therapies for stroke and traumatic brain injury
- Brainstem central chemoreceptors
- Cellular and molecular mechanisms of CNS oxygen toxicity

Required:

GMS 6707 Neuroscience	3 hrs
GMS 7930 Advanced Neuroscience	2 hrs

Strongly recommended:

GMS 6610 Advanced Neuroanatomy	3 hrs
GMS 6735 Neuropharmacology	3 hrs
GMS 6708 Neuroimmunology	3 hrs

Remaining course credits can be chosen from the following electives. A minimum of 24 didactic credit hours are required for graduation.

GMS 6440 Basic Medical Physiology	3 hrs
GMS 6505 Basic Medical Pharmacology	3 hrs
GMS 6404 Systems Neurophysiology	4 hrs
GMS 6433 Membrane Physiology	4 hrs

GMS 7930 Advanced Medical Physiology	2 hrs
GMS 7930 Advanced Medical Pharmacology	2 hrs
GMS 7930 Mechanisms of Memory	3 hrs
GMS 7930 Stem Cells and Brain Repair	3 hrs
GMS 7930 Spinal Cord Development, Pathology and Therapy	3 hrs

Students in the program may register for alternative electives, including special topics courses following approval by the student's Dissertation Committee. Students are also required to give a seminar one time per year in Neuroscience Seminar and should take 3 journal club courses prior to graduation.

Neuroscience Graduate Coordinator: Dr. Paula Bickford, pbickfor@health.usf.edu

VI. Pathology & Cell Biology

The Ph.D. Program concentration in Pathology & Cell Biology is focused on interdisciplinary approaches to the study of cancer, reproductive pathobiology, neurological disease & injury and related diseases, including cancer biology, angiogenesis and morphogenesis, gene discovery, neurobiology, cell biology and new educational technologies. Training will include a unique interdisciplinary blend of didactic coursework, journal clubs, seminar series, as well as significant research experience.

Areas of interest include:

- Angiogenesis
- Brain cancer
- Brain injury
- Cancer biomarkers
- Cancer pathobiology
- Cell biology
- Experimental cancer therapy
- Extracellular matrix and tumor invasion
- Gene and transcriptional regulation
- Genitourinary oncology
- Molecular and cellular oncology
- Myocardial injury
- Neurobiology
- New educational technologies
- Signal transduction and drug discovery
- Tumor immunology
- Women's cancers

Required courses:

GMS 6334	Pathobiology of Human Cancer	3 hrs
<u>or</u>		
GMS 6608	Advanced Microscopic Anatomy	4 hrs

Electives - Students must complete their remaining credit hours from the following list:

GMS 6020	Neuroscience	5 hrs
GMS 6054	Cancer Biology	4 hrs
GMS 6111	Basic Medical Pathology	3 hrs
GMS 6112	Biochemical Pathology	3 hrs
GMS 6601	Methods of Electron Microscopy in Medical Research	3 hrs
GMS 6410	Cardiovascular Regulation	4 hrs
GMS 6602	Neural Correlates of Behavior	3 hrs
GMS 6604	Human Embryology	3 hrs
GMS 6608	Advanced Microscopic Anatomy	4 hrs
GMS 6609	Advanced Gross Anatomy	6 hrs
GMS 6610	Advanced Neuroanatomy	3 hrs
GMS 6735	Neuropharmacology	3 hrs
BCH 6746	Structural Biology	3 hrs
GMS 7930	Bioinformatics	4 hrs
GMS 6671	A Brief History of Anatomy and Pathology	2 hrs

Students in the program may register for alternative electives, following approval by the student's Dissertation Committee.

Pathology and Cell Biology Graduate Coordinator: Dr. Patricia Kruk, pkruk@health.usf.edu

Course descriptions (Listed by course number)

Required Core Courses

Semester(s) Offered:

GMS 6001 *Foundation in Biomedical Sciences*

Fall

A multidisciplinary course in the cellular, molecular, biochemical, and genetic basis of biomedical sciences, designed as a comprehensive first semester course for most incoming biomedical sciences graduate students.

GMS 6002 *Success Skills in the Biomedical Sciences*

Spring

This course will introduce the tasks and skills required of a successful biomedical graduate student and biomedical scientist.

GMS 6091 *Responsible Conduct in Research*

Fall

This course will introduce the tasks and skills required of a successful biomedical graduate student and their responsibilities and rights as a scientists. Issues of ethical and responsible conduct will be emphasized throughout.

GMS 6094 *Experimental Design and Analysis*

Fall

This course is designed to serve as an introduction to the experiments and analyses frequently encountered in the biomedical sciences. Students will be instructed on fundamental concepts of experimental design and data analysis, and will actively participate in the development of specific sample experiments complete with controls and limitations, and analyses of expected data.

BCH 6935 *Grant Writing & Scientific Communication*

Spring

An introduction to principles of scientific writing of research articles and grants.

GMS 6942 *Laboratory Rotations in Biomed. Research*

All

Students will actively participate in experiments performed within several laboratories in the College of Medicine.

GMS 7910 *Directed Research (ends when Comprehensive Qualifying Examination is completed)*

GMS 7939 *Graduate Seminar*

Variable

This course is a seminar series in which each student will give one formal presentation of his/her research.

GMS 7980 *Doctoral Dissertation Research (starts when Comprehensive Qualifying Examination is completed)*

Concentration Specific Courses and Electives:**Semester(s) Offered:*****BCH 6135C Methods in Molecular Biology******Summer***

An introduction to modern molecular biological techniques and instrumentation.

BCH 6627 Molecular Basis of Disease***Fall***

The overall objectives of *Molecular Basis of Disease* are to provide graduate students with a fundamental understanding of biological and genetic principles basic to pathophysiological processes; to explain the molecular mechanisms that underlie the cellular aberrations in clinical disorders; and to understand, synthesize, and incorporate the fundamental principles learned as they apply to medical research.

BCH 6746 Structural Biology***Spring***

The theory and application of modern physical biochemical techniques.

GMS 6020 Neuroscience***Spring***

An introduction into basic structure and function of the central nervous system. Emphasis is on an integrated approach that focuses on several levels of organization from molecular to cellular, from neural systems to behavior.

GMS 6054 Cancer Biology I; the Basics of Molecular Oncology***Fall***

An introduction to the basics of molecular oncology. Topics will include cytoplasmic and nuclear oncogenes, cell cycle control, apoptosis, tumor suppressor genes and cancer drug discovery.

GMS 6055 Cancer Biology II; Immunology & Applied Molecular Oncology***Spring***

A continuation of Cancer Biology I. Topics will include a comprehensive review of immunology as it relates to cancer and modern methods of cancer treatment.

GMS 6103 Foundations in Medical Microbiology and Immunology***Spring***

An in depth survey of modern microbiology including bacterial agents, parasitic and fungal organisms and how they cause disease.

GMS 6107 Advances in Virology

The main objective of this 2 credit hour course is to provide students with basic concepts in Virology, and the fundamentals of medically important viruses. The second objective of this course is analysis of scientific articles published in Virology.

GMS 6110 Microbial Pathogenesis and Host-Parasite Interactions

The main objective of this 2 credit hour course is to provide students with an understanding of the basic concepts in microbial pathogenesis using select medically important microorganisms as examples.

GMS 6111 Basic Medical Pathology***Fall - online***

This online lecture course focuses on disease processes and their causes.

GMS 6112 Biochemical Pathology

This course focuses on the cell-cell and cell-matrix interactions important for normal cell growth and differentiation and their dysregulation in pathological conditions such as tumor metastasis, cardiovascular disease and infection by pathogens.

GMS 6114 Vaccines and Applied Immunology

To encourage students to understand the principles of vaccination and how this information can be utilized to create more effective vaccines and immunotherapies against bioterrorist agents. The course will stress the applied aspects of vaccines.

GMS 6115 Medical Parasitology and Mycology

Alternate calendar

This course provides students with a detailed understanding of medical parasitology and mycology using select medically important parasites and disease causing fungi as examples to examine the multi-faceted adaptations of these eukaryotic microbial pathogens to survive in the human host and cope with the host's immune defense.

GMS 6130 Molecular Biology of Tumor Viruses

A detailed study of human oncogenic viruses designed for students with working knowledge of Virology.

GMS 6334 Pathobiology of Human Cancer

Spring

Using tissue-related oncology topics that complement molecular biology & experimental therapeutics, this course will provide morphologic and biologic basis of human cancer.

GMS 6401 Kidney, Fluids and Electrolytes

TBD

The course involves discussions and advanced readings of current trends in renal physiology and fluid and electrolyte balance.

GMS 6403 Endocrine Mechanisms

TBD

The course involves discussions and advanced readings of current trends in endocrine systems and reproduction.

GMS 6404 Systems Neurophysiology

TBD

The course involves discussions/advanced readings of current trends in neural circuits.

GMS 6407 Smooth and Skeletal Muscle

TBD

The course involves discussions and advanced readings of current trends in the physiology of smooth and skeletal muscle at the cellular and tissue levels.

GMS 6410 Cardiovascular Regulation

TBD

The course involves discussions/advanced readings of current trends in many aspects of the cardiovascular system including cardiac function, vascular biology, and signaling.

GMS 6433 Membrane Physiology **TBD**
The course involves discussions and advanced readings of current trends in the molecular and cellular physiology and genetic diseases of ion channels and other membrane proteins. Topics will include discussions of ion channel structure, gating, selectivity, modulation, clustering, and disease.

GMS 6440 Basic Medical Physiology **Spring**
This course will serve as an introduction into human physiology, emphasizing systemic function.

GMS 6505 Basic Medical Pharmacology **Spring**
This course will serve as an introduction into human pharmacology, emphasizing systemic function.

GMS 6512 Ion Channel Pharmacology and Disease **TBD**
This course is designed to familiarize students with the role of ion channels in the genesis of pathophysiological conditions and how these proteins may be targeted for therapeutic intervention.

GMS 6513 Principles of Pharmacology and Therapeutics **Fall**
This course is designed to familiarize students with basic principles of pharmacology and therapeutics. Students will be exposed to classical concepts of pharmacology such as drug-receptor interactions as well as modern techniques such as gene therapy.

GMS 6601 Methods of Electron Microscopy in Medical Research
This lecture and laboratory course deals with theoretical and technical issues regarding the use of the electron microscope in biomedical research.

GMS 6602 Neural Correlates of Behavior
This course focuses on the organization and function of nervous system structures that control and regulate various aspects of somatic and visceral motor behavior.

GMS 6604 Human Embryology **Spring**
This course deals with the structural and functional development of the human from conception to birth.

GMS 6608 Advanced Microscopic Anatomy **Spring**
This lecture/laboratory course examines the human organism at the microscopic level, focusing on cellular morphology and histological organization of tissues/organ systems.

GMS 6609 Advanced Gross Anatomy **Summer**
This lecture and laboratory course focuses on the anatomical relationships between various structures that comprise the human body.

GMS 6610 *Advanced Neuroanatomy*

Fall

This lecture and laboratory course deals with the structure and function of the human nervous system. The course is organized using both regional and systemic approaches

GMS 6671 *A Brief History of Anatomy and Pathology*

Summer

The course is provides students with a historical perspective of medical sciences including Anatomy, Pathology, Dentistry, Pharmacy, Medicine and Cell Biology from the early written records of scientific thought to the present.

GMS 6708 *Neuroimmunology*

Fall

GMS 6735 *Neuropharmacology*

Summer

This course will familiarize students with information on the biochemical basis of neural regulatory systems in the brain and the application of the latest approaches to the study of neurotransmitters and drug action in the nervous system.

GMS 6830 *Supervised Teaching*

Variable

The overall objectives of *Supervised Teaching* are to provide graduate students with a “hands on” experience in teaching. The student will learn the fundamentals of writing instructional objectives and how to use the instructional objectives in assessment of performance.

GMS 6940 *Supervised teaching*

Variable

This course is designed for Ph.D. students who passed their qualifying examination and wish to participate teaching in a course related to their thesis project.

GMS 7930 *Bioinformatics I & II*

Fall

Bioinformatics I & II is a 4 credit advanced course designed to introduce graduate students to the growing area of science that uses computational approaches to answer biological questions.

GMS 7930 *Selected Topics - Aging and Neuroscience*

This course covers topics of interest in aging including theories of aging including oxidative stress and inflammation as well as translational research covering neurodegenerative diseases of aging such as stroke, ALS, Parkinson’s disease and Alzheimer’s disease.

GMS 7930 *Selected Topics – SIPAID*

GMS 7930 *Selected Topics – Immunology*

GMS 7930 *Selected Topics - Clinical Allergy*

GMS 7930 *Selected Topics - Infectious Disease*

GMS 7930 *Selected Topics - Molecular Pharmacology & Physiology*

STUDENT PLEDGE OF HONOR
University of South Florida
College of Medicine Student Honor Code

PREAMBLE

In the tradition of the high standards of professional and personal conduct established over two thousand years ago by our ancestral physicians and scientists, the student of the University of South Florida College of Medicine create this Honor Code.

It is our intention that these standards guide us not only during our medical training, but also during our lives as physicians, researchers, and community leaders. In these roles, we hope to pursue actively the respect of our patients, peers, and fellow men and women, rather than to accept passively any respect that may be given our title.

We recognize that the practice of medicine is a great privilege and carries with it the responsibility to uphold certain expectations of character and behavior. These principles have long been held as the foundation of ethical medicine, and we must recognize that fact as we now enter the medical community. The central elements of the oaths and creeds repeated over history by those entering medicine comprise the ideals of Self-discipline, Judgment, Conscience, and Personal Responsibility.

SELF-DISCIPLINE: We will strive to master the information presented to us in the classroom, laboratory, and clinic, and will conduct ourselves in a manner befitting our role as healers, scientists, and leaders.

JUDGEMENT: We will adopt only the highest standards and ideals to shape our actions and decisions concerning academic, professional, and personal affairs.

CONSCIENCE: We will hold life in the highest regard, whether human or animal and will strive to uphold human dignity.

PERSONAL RESPONSIBILITY: We will deal honestly with our patients and colleagues, and will encourage such behavior in others by example. We recognize that personal accountability can be delegated to no higher authority than oneself.

Appendix: Guidelines for Student Conduct (as described in the GMS 6001 syllabus):

Academic Dishonesty & Disruption for Academic Process Policy

See <http://www.ugs.usf.edu/catalogs/9697/ADADAP.HTM>

Plagiarism & Punishment Guidelines for Plagiarism:

See <http://www.ugs.usf.edu/catalogs/9697/ADADAP.HTM>

Plagiarism is defined as “literary theft” and consists of the unattributed quotation of the exact words of a published text, or the unattributed borrowing of original ideas by paraphrase from a published text. On written papers for which the student employs information gathered from books, articles, or oral sources, each direct quotation, as well as ideas and facts that are not generally known to the public at large, or the form, structure, style of a secondary source must be attributed to its author by means of the appropriate citation procedure. Only widely known facts and thoughts and observations original to the student do not require citations. Citations may be made in footnotes or within the body of the text. Plagiarism, also, consists of passing off as one’s own, segments or the total of another person’s work.

Cheating is defined as follows:

- (a) the unauthorized granting or receiving of aid during the prescribed period of a course-graded exercise: students may not consult written materials such as notes or books, may not look at the paper of another student, nor consult orally with any other student taking the same test;
- (b) Asking another person to take an examination in his/her place;
- (c) Taking an examination for or in place of another student;
- (d) stealing visual concepts, such as drawings, sketches, diagrams, musical programs and scores, graphs, maps, etc., and presenting them as one's own;
- (e) Stealing, borrowing, buying, or disseminating tests, answer keys or other examination material except as officially authorized, research papers, creative papers, speeches, etc.
- (f) Stealing or copying of computer programs and presenting them as one's own. Such stealing includes the use of another student's program, as obtained from the magnetic media or interactive terminals or from cards, print-out paper, etc.

Punishment for such Academic Dishonesties will depend on the seriousness of the offense and may include receipt of an “F” or “O” grade on the subject paper, lab report, etc., an “F” in the course, suspension or expulsion from the University. The University drop policies and forgiveness policies shall be suspended for a student accused of plagiarism or cheating or both.



Ph.D. Program in
Integrated Biomedical Sciences

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USF Health
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