

UNIVERSITY OF CENTRAL FLORIDA

MD-PhD Biomedical Sciences Graduate Program Handbook 2020-2021

Revised April 2020

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The Biomedical Sciences MD-PhD program reserves the right to make any changes or amendments to the Program/Handbook information, rules, or policies within the students' period of study upon majority approval of the program faculty, director and coordinators.

Welcome to the Biomedical Sciences Graduate Program at UCF!



We are excited that you have chosen UCF and our Graduate Program to continue your training and education in Biomedical Sciences. We offer a wide range of training opportunities in important areas of biomedical research including Cancer Biology, Cardiovascular Disease, Neurosciences and Infectious Disease and Immunology. In the past years, the Program has grown in the numbers of both students and faculty mentors. Our researchers have also experienced a rapid rise in our funding for impactful research projects, as well as in our reputation for outstanding training of the next generation of Biomedical Scientists. We look forward to having you as an important part of our Graduate Student Community.

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PhD Program Coordinators Introduction & Welcome

Welcome to the Interdisciplinary Biomedical Sciences Ph.D. program at the University of Central Florida (UCF)! As a doctoral student, you will face many new experiences that can be both rewarding and challenging. Your studies will involve foundational coursework and laboratory research. You will have the opportunity to work closely with faculty members from the Burnett School of Biomedical Sciences (BSBS) as well as other schools and colleges within UCF and affiliated partners in the Orlando area. Within the BSBS, investigative work is being performed in the major fields of cardiovascular and metabolism science, neuroscience, infectious disease and cancer. Collaborative research is an integral part of the Biomedical Ph.D. program. As a result, you will have also the opportunity to interact with scientists performing cutting edge research in related fields such as biomedical engineering, biology, chemistry, physics and nanoscience.

The Biomedical Sciences Ph.D. program will prepare you for a career in academic research, higher education or biotechnology. Expectations are for you to go beyond the assigned classroom readings and use your curiosity to explore new research areas, building a knowledge base to support your career as an independent scientist. Oral presentations and writing assignments will teach you the skills needed to effectively communicate your discoveries to the scientific community.

The process of achieving a doctoral degree will demand dedication and effort that go far beyond your undergraduate experiences. The expectations are high but also are the achievements and rewards. With the support of your advisor and committee, you will be part of an intellectual collaboration that will highlight your graduate career at UCF and provide a firm underpinning for the rest of your scientific endeavors.

The program director, the associate director, the program coordinators, the faculty and the staff are available to help you succeed in the program. You are encouraged to interact with your peers and to participate in the intellectual life of the university. You are committed to upholding the academic and ethical standards of UCF and the discipline of Biomedical Sciences. If you have any questions or problems, please ask for advice.

We wish you the utmost success during your graduate experience at UCF!



We are here to help!



Dr. Saleh Naser

Dr. Jihe Zhao

FACEBOOK

Like us on Facebook!

https://www.facebook.com/BurnettSchoolGraduatePrograms/

MD/PhD Track Description

The College of Medicine offers an integrated MD/PhD curriculum that enables students to fulfill all requirements and earn the Doctor of Medicine and the Doctor of Philosophy.

This program provides opportunity for MD students to obtain advanced research and training experience and for PhD students to obtain medical training. The program develops physician-scientists with preparation for both academic research and teaching careers. Physician-scientists are in an excellent position to facilitate bench-to-bedside translation of applicable research findings.

MD/PhD Track Coordinator



Dr. Steven N. Ebert, MD/PhD Coordinator

Welcome to the MD/PhD Program at UCF!

This is a dual-degree program that provides exciting opportunities enabling students to pursue advanced research and clinical training to become true physician scientists.

We are here to help you achieve success and will do all that we can to facilitate your education and progress in this program.

Associate Professor, Burnett School of Biomedical Sciences Division of Metabolic and Cardiovascular Sciences (D-MACS) UCF College of Medicine BBS Bldg, Room 421 6900 Lake Nona Blvd Orlando, FL 32816 Office: (407) 266-7047

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MD-PhD Program Handbook

Together, the <u>Graduate Student Handbook</u> and your graduate program handbook should serve as your main guide throughout your graduate career. The Graduate Student Handbook includes university information, policies, requirements and guidance for all graduate students. Your program handbook describes the details about graduate study and requirements in your specific program. While both of these handbooks are wonderful resources, know that you are always welcome to talk with faculty and staff in your program and in the Graduate College.

The central activities and missions of a university rest upon the fundamental assumption that all members of the university community conduct themselves in accordance with a strict adherence to academic and scholarly integrity. As a graduate student and member of the university community, you are expected to display the highest standards of academic and personal integrity.

Here are some resources to help you better understand your responsibilities:

- Academic Honesty
- Academic Integrity Training Open to all graduate students at no cost
- Plagiarism

Introduction

Mission Statement and Overview

Mission:

The Biomedical Sciences MD-PhD training program at the University of Central Florida, College of Medicine, provides the highest quality education and research opportunities for training the next generation of physician-scientists.

The Program is an interdisciplinary program enriched with graduate faculty with diverse investigative biomedical research interest and highly qualified students who are pursuing top education and cutting edge discoveries.

The Graduate Faculty includes over 100 reputable scientists with established achievements in diverse aspects of biomedical sciences including metabolic disorders, cardiovascular sciences, infectious disease, neuroscience, cancer, nanoscience, biomedical engineering, drug discovery, and much more.

Visit: https://med.ucf.edu/biomed/graduate-programs/graduate-faculty/

Our students are recruited from outstanding programs from all over the United States and over 18 other countries. They are supported by competitive scholarships and prestigious fellowships. Our students receive top tier education, rigorous training in basic and clinical research, outstanding mentoring, and lifelong professional development. They become well trained in research and regulations while conducting experiments involving the use of human subjects and animals. They learn, retain, and apply fundamental knowledge in biomedical sciences. They graduate from the program as scientists with excellent education, research training, and focused career goals. Many go on as postdoctoral fellows, academics, scientists, and researchers.

Visit: https://med.ucf.edu/biomed/graduate-programs/wherearetheynow/

The curriculum of the Biomedical PhD program is continuously adapting to rapid changes in technology, science, ongoing research, public health, and evolving microbiome and genetic discoveries. All students must successfully complete core courses with a focus on fundamental knowledge in molecular and cell biology, microbiology, biochemistry, immunology, neuroscience, bioinformatics, stem cell, metabolic, cancer, drug discovery and delivery, and more.

The program administrators, faculty and staff are dedicated to educate, train, and mentor tomorrow's scientists and future colleagues and collaborators. Our Graduate Student Association plays the big brother/sister role to complement the role of our faculty to help our students feel at home and succeed.

College Awarding the PhD Degree in Biomedical Sciences

PhD students in the interdisciplinary PhD Biomedical Sciences Program will graduate with the Doctor of Philosophy in Biomedical Sciences Degree, under the college of the faculty advisor.

Student Responsibility to Keep Informed

It is the student's responsibility to keep informed of all rules, regulations, and procedures required for graduate studies. Graduate program regulations will not be waived or exceptions granted because students plead ignorance of the regulations or claim failure of the adviser to keep them informed.

Student Accessibility Services

Student Accessibility Services (SAS) views disabilities as an integral part of the rich diversity at the University of Central Florida. To that end, we work collaboratively with students, faculty, and staff to create an inclusive educational environment for students. BSBS students with disabilities must contact the professor at the beginning/or prior to the semester to discuss the needed accommodations. Students who need accommodations must be registered with the Student Accessibility Services office. For more information, please contact sas@ucf.edu or (407) 823-2371.

UCF Golden Rule

The Golden Rule Student Handbook is a compilation of various policies and procedures from 10 different UCF departments and was specifically created to provide the answers to many of your questions regarding University rules and regulations. This publication attempts to define your rights and responsibilities and give you a better understanding of your role as a member of the UCF community. http://goldenrule.sdes.ucf.edu/

M.D. Program & BSBS PhD Program Orientation

All new graduate students are required to attend the Medical School Orientation which is held during the first week of August and the BSBS Graduate Program Orientation, which is held one week before Fall classes begin. New MD/PhD students will meet with program leaders who will give an overview of the program choreography, guidelines, and expectations for the MD & PhD graduate program. New graduate students will also attend our Welcome Colloquium, financial/contract information session and complete all program orientation requirements including lab & safety and animal safety training.

Research Divisions

Division of Cancer Research

Researchers in the Division of Cancer Research are on the vanguard of cancer biology, investigating:

- How patients' genes play a role in their cancer risk.
- What causes cancer and cancer metastasis.
- How cancer cells communicate with the neighboring normal cells.
- The epigenetic changes that play a role in developing drug resistance.
- Discovering new ways to harness the immune system to fight cancer.
- Identifying new targets for companion diagnostics with treatments that reduce side effects.

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https://med.ucf.edu/biomed/divisions/cancer-research/

Division of Immunity and Pathogenesis

The mission of the Immunity and Pathogenesis Division is elucidation of the cellular and molecular mechanisms at the interface of infection, inflammation and immunity. Our group has broad interest and expertise in microbial pathogenesis, innate immunity, inflammatory signaling pathways and immunological memory. Discoveries are being translated into innovative diagnostics, vaccines, and therapeutic strategies to improve human health.

Projects are related to:

- Respiratory diseases (*Mycobacterium tuberculosis*, non-tuberculous mycobacteria, influenza, parainfluenza, respiratory syncytial virus and asthma)
- Sexually transmitted diseases (Chlamydia trachomatis, human papilloma virus and Zika virus)
- Vector-borne diseases (Lyme disease and emerging vector borne viruses)
- Inflammatory diseases (Inflammatory bowel disease, peritonitis, autoimmune arthritis and hypersensitivity)

https://med.ucf.edu/biomed/burnett-school-of-biomedical-sciences-research/divisions/immunity-and-pathogenesis/

Division of Molecular Microbiology

The Division of Molecular Microbiology conducts basic and applied research related to bacterial, parasitic, and viral diseases that are of major public health concern. Research is focused in two broad areas:

- Understanding the fundamental principles of microbial pathogenesis.
- Development of next-generation antimicrobial drugs.

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Topics of interest include HIV, tuberculosis, malaria, mechanisms of antimicrobial resistance, evolution of bacterial pathogens, genomic epidemiology, enteric diseases, toxins, and diagnostics. Student training and development are integral components of faculty research.

 $\underline{https://med.ucf.edu/biomed/burnett-school-of-biomedical-sciences-research/divisions/molecular-microbiology/}$

Division of Metabolic and Cardiovascular Sciences

The Metabolic and Cardiovascular Research Division focuses on understanding the pathogenesis, molecular mechanisms and cell signaling of metabolic and heart diseases and to bring translational research into the clinical environment to serve our community.

Major Areas of Research

- Metabolic syndrome in diabetes and aging
- Interactions of lipids and lipoproteins in atherosclerosis
- Inflammation in cardiac diseases (Myocardial infarction, heart failure, atherosclerosis)
- Vascular and angiogenesis in cardiac diseases
- Biological energy metabolism
- Oxidative stress, free radical and reactive oxygen species
- Mitochondrial alterations pathophysiology of cardiac diseases
- Molecular and cellular cardiology
- Regenerative medicine (stem cells) in heart diseases
- Cardiac genetic and non-genetic disease modeling using 3D printing
- Tissue engineering and drug toxicity with 3D printed scaffolds
- Cardiovascular epidemiology and public health

https://med.ucf.edu/biomed/divisions/cardiovascular/

Division of Neuroscience

The mission of the Neuroscience Division is to discover cellular and molecular mechanisms that govern function of the nervous system. This knowledge is then applied to expand understanding of how neurological disorders arise and may be treated.

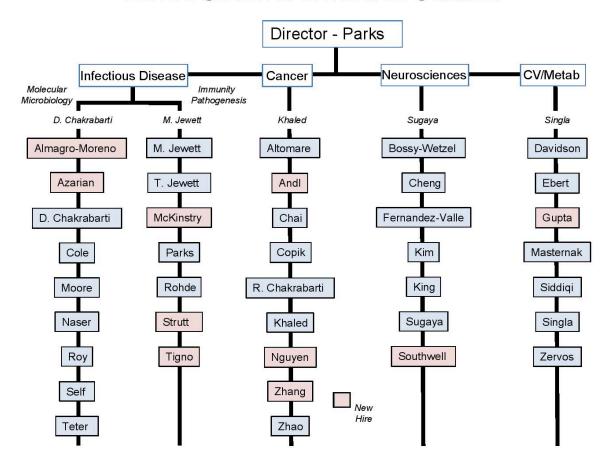
The division's researchers are conducting cutting-edge research on:

- Neurodegenerative diseases (Amyotrophic lateral sclerosis (ALS), Huntington's, Parkinson's and Alzheimer's Diseases)
- Cerebrovascular diseases (Stroke and cerebral ischemia)
- Traumatic brain injury and chronic traumatic encephalopathy (CTE) caused by concussion
- Axonal transportation dysfunctions (Charcot-Marie-Tooth disease (CMT), Perry syndrome, distal spinal and bulbar muscular atrophy)
- Sleep apnea
- Diabetes and aging-induced cardiac neuropathy
- Brain cancer such as glioblastoma multiforme (GBM) and neuroblastoma
- Optic nerve damage
- Neurofibromatosis Type 2 and schwannomatosis
- · Cancers of the head and neck including oral cancer
- Regenerative medicine and stem cell therapies
- Brain machine interface
- Induced pluripotent stem (iPS) cells

Faculty collaborate with local physicians and UCF researchers (Multidisciplinary Neuroscience Alliance (MDNA, https://med.ucf.edu/mdna/)). They are working with Mechanical Engineering, Electrical Engineering, Computer Science, the Prosthetic Interfaces faculty cluster, Nanoscience Technology Center, Material Sciences, College of Arts and Humanity, College of Optics and Photonics, and Psychology in UCF. Collaborators also include scientists and physicians from HCA Healthcare, the Veterans Affairs Medical Center, Nemours Children's Hospital, and AdventHealth (Florida Hospital), Orlando Health and other local clinics, which enrich the clinical and translational research environment in the Neuroscience Division.

https://med.ucf.edu/biomed/burnett-school-of-biomedical-sciences-research/divisions/neuroscience/

Burnett School of Biomedical Sciences



Program Curriculum

Students must fulfill all requirements for both programs to earn both the MD and PhD degrees. As indicated in the curriculum description, some medical modules can be substituted for certain graduate courses and vice versa to help reduce redundancy and streamline time to completion of this integrated program. Students will be able to complete the MD/PhD program in as few as 6 years, although most students will likely require 7-8 years to fulfill all of the requirements. An MD/PhD program committee consisting of faculty from both the medical and graduate programs will serve as the oversight committee responsible for tracking and evaluating student progress in this program.

Total Credit Hours Required: 72 Credit Hours Minimum beyond the Bachelor's Degree

Students in the integrated MD/PhD Track in Biomedical Sciences must be accepted in the College of Medicine MD program and begin working on their PhD research project during the first two years of medical school. Students take medical courses during the first two years and must successfully pass the USMLE Step 1 exam at the end of year 2 prior to beginning full-time graduate studies in the Biomedical Sciences PhD Program. Required and elective graduate courses for the PhD program are completed in years 3-4 while the student is continuing research. Clinical clerkships that are typically completed in years 3-4 of medical school will in most cases be deferred until the student has completed the PhD program requirements, though some minimum level of ongoing clinical training will continue throughout the entire duration of the program. This ensures that the student remains connected with clinical education and training even while primarily focused on the graduate portion of the MD/PhD program.

The Biomedical Sciences PhD program requires a minimum of 72 credit hours beyond the bachelor's degree, including a minimum total of 27 hours of formal course work exclusive of independent study that are required. The 72 credit hours in the PhD program consists of 23 credit hours of core courses, 12 credit hours of electives, and a minimum of 15 credit hours of dissertation research. The remaining 22 credit hours may consist of additional electives, doctoral research and/or dissertation research. Students entering with a master's degree may request that up to 30 semester credit hours of previous course work be waived as degree requirements with approval from the dissertation committee.

The MD curriculum can be found here: http://med.ucf.edu/academics/md-program/integrated-curriculum/

Programmatic deficiencies expected of applicants from diverse settings will be addressed early in the program by completion of appropriate course work. Students may register for doctoral research until they have been admitted to candidacy, after which they must register for dissertation research.

New students will rotate through at least two different laboratories to identify a faculty mentor/sponsor and research area of interest for their dissertation. Finally, a sequence of required seminars will familiarize students with field-related literature and introduce them to the conceptual and technical frameworks in which they will work. All students receiving assistantships must enroll full time.

MD/PhD students are required to maintain good academic standing in both the MD and PhD components of the curriculum. Students must first satisfactorily complete the first two years of the medical school curriculum and pass the USMLE Step 1 exam before they can begin full-time PhD enrollment.

Please visit the **Graduate Catalog** to see the current curriculum for our program.

Note: Courses listed below in bold type represent transfer credits from medical to graduate curriculum.

Required Courses—21 Credit Hours

- BMS 6001 Cellular Function and Medical Genetics 5 Credit Hours
- BSC 6433 Biomedical Sciences II 5 Credit Hours
- IDS 7692L Experiments in Biomedical Sciences 1-3 Credit Hours (lab rotation)
- IDS 7692L Experiments in Biomedical Sciences 1 Credit Hour (lab rotation)
- IDS 7690 Frontiers in Biomedical Sciences 1 Credit Hours (two semesters, 1 credit hour each)
- BSC 6431 Practice of Biomedical Sciences 3 Credit Hours
- IDS 6694 Experimental Design and Analysis in Biomedical Sciences 2 Credit Hours

Elective Courses—12 Credit Hours

At least 12 hours of electives must be taken from the following list. Any electives not on this list must be approved by the Graduate Committee before being counted toward degree credit requirements. Directed research, doctoral research and dissertation research may be used to satisfy requirements beyond the first 12 hours, with approval from the program director. Students successfully completing the first year of medical school at UCF may substitute the following medical modules to fulfill the elective course requirement:

- BMS 6006 Health and Disease 4 Credit Hours
- BMS 6050 Psychosocial Issues in Healthcare 4 Credit Hours
- BMS 6631 Hematology and Oncology 4 Credit Hours

Others: If approved by the Graduate Committee.

Additional Electives

Additional electives may be taken as needed from the following list of approved graduate courses:

- BSC 5418 Tissue Engineering 3 Credit Hours
- BSC 5436 Biomedical Informatics : Structure Analysis 3 Credit Hours
- BSC 6407C Laboratory Methods in Molecular Biology 3 Credit Hours
- CAP 5510 Bioinformatics 3 Credit Hours
- CHM 5305 Applied Biological Chemistry 3 Credit Hours
- CHM 5450 Polymer Chemistry 3 Credit Hours
- CHM 5451C Techniques in Polymer Science 3 Credit Hours
- CHS 6251 Applied Organic Synthesis 3 Credit Hours
- CHS 6535 Forensic Molecular Biology 3 Credit Hours
- CHS 6535L Forensic Analysis of Biological Materials 3 Credit Hours
- CHS 6536 Population Genetics and Genetic Data 3 Credit Hours
- GEB 5516 Technological Entrepreneurship 3 Credit Hours
- IDS 5127 Foundation of Bio-Imaging Science 3 Credit Hours
- MCB 5205 Infectious Processes 3 Credit Hours
- MCB 5208 Cellular Microbiology: Host-Pathogen Interactions 3 Credit Hours
- MCB 5225 Molecular Biology of Disease 3 Credit Hours
- MCB 5505 Molecular Virology 3 Credit Hours
- MCB 5722C Methods in Biotechnology 4 Credit Hours

- MCB 5932 Current Topics in Molecular Biology VAR Credit Hours
- MCB 5397 ST: Cellular Metabolism 3 Credit Hours
- MCB 6226 Molecular Diagnostics 3 Credit Hours
- MCB 6417C Microbial Metabolism 3 Credit Hours
- PCB 5025 Molecular and Cellular Pharmacology 3 Credit Hours
- PCB 5236 Cancer Biology 3 Credit Hours
- PCB 5238 Immunobiology 3 Credit Hours
- PCB 5265 Stem Cell Biology 3 Credit Hours
- PCB 5275 Signal Transduction Mechanics 3 Credit Hours
- PCB 5527 Genetic Engineering and Biotechnology 3 Credit Hours
- PCB 5596 Biomedical Informatics: Sequence Analysis 3 Credit Hours
- PCB 5815 Molecular Aspects of Obesity, Diabetes and Metabolism 3 Credit Hours
- PCB 5838 Cellular and Molecular Basis of Brain Functions 3 Credit Hours
- PCB 6528 Plant Molecular Biology 3 Credit Hours
- PCB 6595 Regulation of Gene Expression 3 Credit Hours
- PCB 6677 Molecular Evolution and Phylogenetics 3 Credit Hours
- ZOO 5748C Clinical Neuroanatomy 5 Credit Hours

Unrestricted Electives—24 Credit Hours Minimum

Students should take 24 credit hours of electives, directed research, doctoral research or dissertation research, in consultation with their adviser. Sample:

- BMS 6015 Practice of Medicine I 7 Credit Hours
- BMS 6910 Focused Inquiry & Research Experience (FIRE) I 5 Credit Hours
- BMS 6911 Focused Inquiry & Research Experience (FIRE) II 5 Credit Hours
- BMS 6006 Health and Disease 1 Credit Hour (split 1/5 from Electives course)
- IDS 7919 Doctoral Research 6 Credit Hours
- Others: If approved by the Graduate Committee.

Dissertation—15 Credit Hours Minimum

IDS 7980 - Dissertation Research 15 Credit Hours

BSC 6432/6433 Structure-Function-Relationships

The cumulative exam evaluates the student's ability to apply fundamental knowledge and laboratory approaches in Biomedical Sciences and related disciplines to test a hypothesis, which may have impact on biomedical research and scientific discoveries. The exam questions are included in BSC 6433 Structure-Function-Relationships of Biomedical Sciences II. The exam is administered by faculty teaching this course. Questions are based on the knowledge materials covered in this course including the current literature and focused on data interpretation and the design of experiments to test a hypothesis.

A grade below "B" in BSC 6433 Structure-Function-Relationships of Biomedical Sciences II will result in dismissal from the program.

Year 1

M1 Medical – Successfully complete first year of medical school. Laboratory rotations and confirmation of dissertation mentor completed through I-1 (FIRE) module.



Year 2

M2 Medical – Successfully complete second year of medical school. Dissertation committee formation and draft research proposal completed through I-2 (FIRE) module. Student completes and passes the USMLE Step 1 exam prior to beginning year 3 (deadline = June 30).



Year 3

Fall Semester:

- IDS 7690 Seminar Course, 1 cr
- BSC 6431 Practice of Biomed Sci, 3 cr
- IDS 7692L Expts in Biomed Sci (Lab), 3 cr
- IDS 7919 Doctoral Research, 2 cr
- Graduate Teaching Assignment (HB-1)
- First dissertation committee meeting (Nov. 30)

Spring Semester:

- BSC 6433 Core Course: Structure and Function of Biomedical Sciences, , 5 cr
- IDS 7690 Seminar Course, 1 cr
- IDS 7692L Lab Rotations, 1 cr
- IDS 6694 Expts Design & Analysis for Biomed Sci, 2 cr
- Graduate Teaching Assignment (HB-3)

Summer Semester:

- IDS 7919 Doctoral Research, 6 cr
- Candidacy exam (by June 30)



Year 4 & 5

- Dissertation research (IDS 7980), 3 cr per semester (x5 semesters = 15 credits minimum required.
- Present research at Graduate Research Forum, Spring G2 year.
- Publish at least two first-author original manuscripts based on MD/PhD dissertation research.
- Meet annually (by Nov 30) with dissertation committee. In G3 grad year, this should be your Pre-Defense meeting (see details below).
 Note: If committee does not approve of advancing to dissertation defense by spring of G3, then this will delay return to medical school until the following year.
- Spring of G3 (or G4, if needed) year: Dissertation Defense!



Year 6

Successfully complete M3 year of Medical School



Year 7

Successfully complete M4 year of Medical School

Note: The faculty mentor will provide guidance on graduate student course selections and timeline.

Laboratory Rotation

During orientation, new incoming students will attend short presentations by faculty who will highlight their research program. Students should meet with faculty of their interest for further discussion about research to help them select their lab rotations. Possible discussion points when considering a lab rotation:

- Ask about the mentor's philosophy of mentoring and the level of interaction you will have with the mentor Inquire about the expectation of rotation students and projects you could possibly be working on/hours required in the lab
- Find out the mentor's record of graduating students/time to graduate
- Ask about the labs publication record/quality of the publication journals
- It is important that you ask about funding availability for the lab (Short-term & Long-term, 4-5 yrs.)
- Does the mentor support your career goal(s)?
- Ask about the whereabouts of the mentor's past trainees including students and postdocs and the reasons why if any student failed to graduate.
- Ask about the mentor's policy regarding topics for the candidacy proposal.

Lab Visit/Lab Rotation

- · Ask for permission to visit the lab
- Observe the culture of the lab while visiting or during rotation. Consider lab space, lab resources
- Survey students, postdocs in the lab and others who have rotated through the lab about their
 experiences. Ask if students in the lab attend and present at scientific meetings. Ask about the mentor's
 strengths and weaknesses and consider their feedback
- Ask yourself if this is the right environment for you; does your personality fit the environment
- It is ok to ask a lot of questions so you can make the right decision.
- Analyze the Pros and Cons of your selection.

All new incoming students are **REQUIRED** to rotate in at least 2 different laboratories before selecting a mentor. Each rotation will be one semester long. Specific dates may change each year but generally adhere to the following schedule:

- 1st Rotation August 14 through December 14
- 2nd Rotation January 7 through May 3

First year students prior to their laboratory rotation are required to complete laboratory safety, radiation safety, biosafety, and blood borne pathogen courses.

MD/PhD students will utilize **FIRE (I-1 Module)** time in the M1 year of the MD curriculum (**4-6 hours per week on average**) to complete two rotations during the first year of medical school. The major portion of their FIRE grade is derived from these rotation evaluations (see below).

Students are required to meet with the Program Director (Dr. Griffith Parks) as soon as they identify the labs for the rotations. Students will not be able to start rotations if they have not met with Director.

Students are encouraged to identify their dissertation mentor as soon as possible after completing a minimum of two rotations, but they may opt to do a third rotation if needed. Students are expected to have identified a research mentor no later than the end of the 3rd rotation. If no suitable lab can be found within 3 rotations, the student may be dismissed from the program. Program approval is required for any additional short rotations, if necessary.

Exemptions from laboratory rotations (Direct admit to the lab)

Exemptions from laboratory rotations may be granted by the program if the student had already worked for a minimum of one year in the laboratory of one of the program faculty prior to the start of the graduate study, or in cases where a student is coming to UCF to join a specific research program.

If approved, the mentor will immediately assume full financial responsibility for the student unless the student has not fulfilled the GTA requirement. GTA support for one year will then be provided by the program.

Overall Lab Expectations

Expectations from students in each lab may vary from one mentor to another. However, all labs/mentors in the program expect the students to be at a high level of professionalism. This includes attending classes, fulfilling GTA assignments, working hard on research projects, attending seminars and meetings, presenting data in meetings, and demonstrating collegiality.

Written rotation evaluations

During rotations faculty will be evaluating your attendance, level of commitment, your laboratory skills, intellectual curiosity, communication skills, achievements and areas in which you can improve.

Written rotation evaluations (signed form or official e-mail notification from PI) must be submitted to the program coordinator by the PI for each student. The evaluations will be graded S/U. If the student receives a "U" for a rotation, the PI should briefly indicate the reasons in writing. This information should be made available to the student and also be accessible to any other PhD program faculty with whom that student is considering rotating.

Students that receive 2 "U" marks during their rotations will be automatically dismissed from the program.

The program will pursue, to the fullest of our policy, any complaint of unacceptable behavior or misconduct. This may end in placing students on probation, termination of GTA/GRA financial support, or dismissal from the program.

Committee Selection Process

MD/PhD students are required to select the dissertation committee and write up a draft research proposal before Nov 30 of their first full-time semester in the PhD Program (year 3 overall). All committee members must be approved by the college of graduate studies as program faculty.

The committee shall consist of a minimum of four faculty members representing at least two different participating units (such as divisions in the Burnett School of Biomedical Science, all departments in the college of medicine, Biology, Nanoscience Technology Center, Chemistry, Physics, Engineering, other affiliated units at or outside UCF).

The chair of the dissertation committee is the student's primary advisor (mentor) if approved by the College of Graduate Studies to serve as a chair. Program Faculty who have not previously supervised a dissertation to completion, must ask a senior UCF faculty member on the committee (and must be approved by Graduate Studies to serve as Chair) to serve as the chair. The Faculty advisor (mentor) will serve as co-chair on the committee.

This policy is only to ensure compliance with UCF graduate policies and it should not interfere with the faulty mentoring or expectations from the students.

In cases where the primary advisor is a non-UCF Investigator (i.e., Courtesy Faculty Appointments from faculty at institutions other than UCF), then one of the UCF faculty members on the student's dissertation committee will serve as co-chair of the committee together with the student's primary advisor. At least two UCF faculty members must serve on the student's dissertation committee, and at least one of these must be at the rank of Associate or Full Professor.

First Dissertation Committee Meeting and Proposal Defense

The student will convene their first dissertation committee meeting during the fall semester of their first full-time year (deadline: November 30) in the PhD program (i.e., year 3 overall). The purpose of the meeting is for the student to present the dissertation research proposal and to receive feedback from the committee. The proposal outlines should consist of a brief rationale, hypothesis, aims, approach and some preliminary data and expected to yield at least two publishable bodies of work.

The written proposal: While a full written proposal is not required at this time, it is recommended that student provides the committee members a two-page write-up summary of the central hypothesis and specific aims that support the dissertation research project at least two weeks prior to the date of the oral presentation.

The proposal defense: For the meeting, the student is expected to give an oral presentation of the dissertation research project, including relevant background and preliminary data, although less emphasis will be placed on preliminary data. During the oral presentation, the student will be evaluated by their understanding of the experimental plan. Importance will be placed on the ability of the student to explain the rationale and hypothesis that supports the research proposed. During the oral presentation, the student can receive suggestions from the committee on how to improve the proposed work. Students are required to submit a two-page write-up summary to the program office along with the Thesis Proposal Exam form.

It is the responsibility of the student to schedule a date and time, which are amenable to all committee members. Once the student has confirmed possible committee meeting date and time with their committee, the student must send an email request to the Program Office to reserve the conference rooms and IT Department reservations for HPA II 345 (main campus) or BMS 136A (main campus), and BBS 103 (Lake Nona). Please indicate which campus the meeting will be held "live." The Program Office will then notify all parties of the confirmed meeting date/time. While the student and mentor are expected to host the meeting in person in either campus, other committee members have the option to attend the meeting virtually.

Candidacy Examination

Candidacy to the degree will consist of writing and orally defending a written proposal on a research idea. The written proposal will be prepared independently, following NIH-style grant proposal format, and must be approved by the dissertation committee as outlined below.

After passing the candidacy examination and meeting other requirements as specified, the student can register for dissertation hours.

Admission to Candidacy

The following are required to be admitted to candidacy and enroll in dissertation hours:

- Successfully complete a minimum of 48 credit hours.
- Successful completion of all course work, except for dissertation hours.
- Submittal of an approved program of study. Successful defense of the written dissertation proposal.
- Successful completion of all examinations.
- Successful completion of academic integrity training requirements.
- The dissertation advisory committee is formed, consisting of approved graduate faculty and graduate faculty scholars.

The Process:

- Students are encouraged to start working on candidacy exam as soon as the dissertation committee
 approves the candidacy topic. Candidacy proposal topic can be on a dissertation-related research topic or
 outside the dissertation area this is decided in consultation with the faculty advisor before work begins on
 candidacy process. If a dissertation related idea is selected for the candidacy proposal then a written
 approval from the mentor is required. Either option will also require approval from the dissertation
 committee as outlined below.
- 1. Students who chose to do the proposal on research outside the dissertation research area must submit to the dissertation committee 3 titles including a short one-paragraph summary for each title to seek approval for one.
- 2. Students who chose to do the candidacy proposal on dissertation research-related area must submit to the dissertation committee the title of the candidacy proposal for approval. This should be submitted no later than **November 30**, the earlier the better!
- 3. Students must submit a written candidacy proposal to the committee two weeks prior to their exam.
- 4. Students must present and defend their Candidacy proposal by **June 15**.
- 5. This is an Exam. No faculty input is allowed on any aspect of the written and oral portions of the candidacy proposal.
- 6. The dissertation committee includes the mentor and three additional program faculty, including an external member.
- 7. The mentor cannot be the chair of the candidacy exam and should not interfere during the process.

The proposal should be written in the approximate style of an NIH R21 or F31 grant application. This includes one page for specific aims and up to six pages for the Research Plan. There is no page limitation for references. The specific aims page should identify the problem under study, clearly state a central hypothesis, and include two or more specific aims to test your hypothesis. A brief rationale should be provided for each aim. For the research plan, please be sure to address the following: (i) Background, (ii) Significance, (iii) Research Approach (Design & Methods), (iv) Rationale for your experimental approach, (v) Expected results, and (vi) Potential pitfalls and alternative strategies. The research plan should be feasibly achievable within 2-3 years, and each of the aims should ideally lead to tangible first-author manuscript publications for the student. Preliminary data are not necessary for the candidacy exam, but can be included to strengthen the proposal. The written format will be single-spaced using 11pt Arial font and 0.5" margins.

During the oral examination, the student should be able to answer any questions concerning how the proposed experiments will be executed. There should be a full understanding of the background literature that supports the hypothesis and the rationale behind the research proposed.

The student must be able to clearly explain the experimental procedures to be used and any alternative approaches planned.

The student may also be tested on the extent of their knowledge of biomedical sciences, specifically all materials that were covered in core classes, seminars, and other required and elective courses that the student has taken. The mentor is NOT permitted to ask or answer questions for the student during the oral presentation of the candidacy topic and examination unless specifically asked to do so by one of the committee members for the purpose of clarification only.

The student's mentor will be responsible for checking the proposal for plagiarism using iThenticate and will provide a report to the dissertation committee at the time of the oral defense of the candidacy proposal.

For the oral candidacy exam, the student's dissertation committee will pick one of its senior members (but not the student's mentor) to chair the examination meeting.

It is the responsibility of the student to schedule a date and time, which are amenable to all committee members. Once the student has confirmed possible committee meeting date and time with their committee, the student must send an email request to the Program Office to reserve the conference rooms and IT Department reservations for HPA II 345 (main campus) or BMS 136A (main campus), and BBS 103 (Lake Nona). Please indicate which campus the meeting will be held "live." The Program Office will then notify all parties of the confirmed meeting date/time. While the student and mentor are expected to host the meeting in person in either campus, other committee members have the option to attend the meeting virtually.

Oral candidacy proposal defense

The defense will start by the presentation of the proposal by the candidate to the Ph.D. dissertation committee. The presentation will start with a 5-8 minute description of the background and significance of the proposed research. This is followed by stating the hypothesis. The next step is the presentation of the specific aims with clear rationale and connection to the hypothesis. Following this, a description of the experimental design should be presented. The expected results and how conclusions will be drawn from the results should be presented. Possible pitfalls of the experimental approach, potential complications and possible alternate approaches to the hypothesis should be presented.

The total presentation is expected to last no more than 40 minutes. The faculty may interrupt the presentation to ask questions. Following the presentation, a question and answer period will follow. During this time, the committee can ask the student questions unrelated to the exact candidacy topic that test knowledge acquired during the student's first two years in the program. The total exam time is expected to last 2 hours.

The exam is evaluated by pass/fail decision. At least three out of the four regular dissertation committee members must vote positively for the student to pass. If performance during the oral exam is deemed not satisfactory, a second chance will be given to the student, which should be concluded by no later than **July 15**.

Re-examination

The process may include a rewritten proposal and another oral defense of the revised proposal, depending on the strengths and weaknesses of the first attempt.

The student will have a maximum of 30 days from the time of the exam and no later than July 15 to pass the exam. The revised proposal must be submitted to all committee members at least one week prior to any oral reexamination (if an oral re-examination is stipulated by the committee and coordinator). This will be determined by the committee at the first defense.

A student who fails the candidacy exam after the second try will be dismissed from the program.

Candidacy Exam Approval Form must be submitted to the Program Office and processed by the College of Graduate Studies.

Annual Review

Specified Deadline for Third Year and beyond PhD Students:

Nov 30: Annual dissertation committee review deadline each year.

PhD students are required to have **annual evaluations** with the dissertation committee to evaluate progress achieved towards completion of their dissertation research. The College of Graduate Studies will notify doctoral students via their Knights e-mail address each Spring term to initiate the annual review process via an electronic form. Each year, the student will be asked to complete an annual review form about their progress on program milestones, research, courses, and teaching. The student will begin by completing a self-evaluation. Students will also be asked to set their goals for the next 12 months. The mentor and committee members will complete the student's Annual Evaluation Form after the student's presentation of research.

Once the self-evaluation is submitted, the advisor and Program Director will each be prompted to provide feedback for the review. Once finalized, the student and the program will have access to an electronic copy of the annual review. Failure to complete annual evaluations will impede the student's graduation. A meeting with the dissertation committee must also be held the semester prior to graduation.

In the academic year immediately after passing candidacy, the annual meeting is not required <u>if the</u> candidacy topic was on topic related to the dissertation proposal.

It is the responsibility of the student to schedule a date and time for their annual review meeting, which are amenable to all committee members. Once the student has confirmed possible committee meeting date and time with their committee, the student must send an email request to the Program Office to reserve the conference rooms and IT Department reservations for HPA II 345 (main campus) or BMS 136A (main campus), and BBS 103 (Lake Nona). Please indicate which campus the meeting will be held "live." The Program Office will then notify all parties of the confirmed meeting date/time. While the student and mentor are expected to host the meeting in person in either campus, other committee members have the option to attend the meeting virtually.

Laboratory Performance Review

If laboratory performance is considered to be unsatisfactory by the committee, the coordinator will give a written statement advising the student of a probation period during which specific improvements are expected. The time limit for improvement is one semester.

If the committee finds lack of satisfactory improvement the student will be expelled from the PhD Program. Under extenuating circumstances, the student may file a petition to the graduate committee to stay in the program. If the graduate committee approves the student's request, the student may seek to transfer to another lab.

Graduate Research

Research is such a vital part of graduate education, particularly for doctoral students. The development of research skills and the practice of good research ethics begins with graduate study. Faculty serves a crucial role and are the primary source for teaching research skills and modeling research ethics.

Research Policies and Ethics Information

UCF's Office of Research & Commercialization ensures the UCF community complies with local, state and federal regulations that relate to research. For polices including required Institutional Review Board (IRB) approval when conducting research involving human subjects (e.g. surveys), animal research, conflict of interest and general responsible conduct of research, please see their website: https://www.research.ucf.edu/ > Compliance.

UCF's Patent and Invention Policy

UCF has three fundamental responsibilities with regard to graduate student research. They are to (1) support an academic environment that stimulates the spirit of inquiry, (2) develop the intellectual property stemming from research, and (3) disseminate the intellectual property to the general public. Students are responsible for being informed of rules, regulations and policies pertaining to research. Please see the current UCF Graduate Catalog - General Graduate Policies for details: http://catalog.ucf.edu/content.php?catoid=4&navoid=201.

- UCF research polices that involve human and animal research https://www.research.ucf.edu/ > Research Integrity and Compliance > IRB Webpage.
- Website link to the Proprietary and Confidential Information section in the Graduate Catalog.
- Website link to UCF <u>Ownership of Intellectual Property</u> in the Graduate Catalog.

UCF has a Patent and Invention Policy that applies to all graduate students. Thesis and dissertation students should discuss the patent process with their thesis or dissertation committee chair and also visit the Office of Technology Transfer site for more information on applying for a patent. The dissemination of a thesis or dissertation can be restricted for up to six months in order to allow for adequate time to apply for a patent and/or resolve propriety issues (see also Dissemination of Theses and Dissertations policy).

Dissertation Requirements

Dissertation

The dissertation should be of significant scope and depth such that the work has made significant advances in the area of biomedical science.

The PhD dissertation research must generate sufficient quantity and quality of data to support a minimum of two original manuscripts (first-authored by the student) in a mainstream peer-reviewed journal with impact factor of at least 2.0.

First co-authorship is allowed if equal contribution of the 2 first authors is documented.

Writing of the dissertation should be subjected to the General Guidelines for Alternative Organization in the <u>Thesis</u> and <u>Dissertation Manual</u> of the UCF College of Graduate Studies Thesis and Dissertation office.

Dissertation Pre-Defense

After consultation with the mentor/dissertation committee chair and approval from the program, students can proceed to hold a pre-defense committee meeting. Prior to the meeting, there should be one first-author original research article published/accepted in journal of Impact factor of at least 2. A meeting with the full dissertation committee must occur at least one semester prior to the actual defense date. In addition to meeting the pre-defense requirement for publication, a second manuscript must have been submitted and subjected to peer review before the defense.

Pre-defense form (part 1) should be completed by student and mentor and emailed to the committee one week before pre-defense meeting.

The student is expected to present to the committee a comprehensive new body of work in a form of a predefense seminar. The committee will critically evaluate whether or not the student has fulfilled all program requirements and is ready to proceed to defense. Recommendations from the committee should be very specific, and indicate in writing which issues, if any, the student must complete or resolve prior to scheduling of the final defense date. The candidate will answer questions and defend conclusions about the subject matter.

Dissertation Defense

Students should seek approval from the program to hold their dissertation defense meeting. The program in consultation with mentor/dissertation chair will confirm that the students have met all the recommendations provided from the pre-defense dissertation meeting:

- Pre-defense-requirements met (see above)
- Plus an additional first author manuscript submitted to a journal in the field with an impact factor of at least 2.0 (unless the student has satisfied the latter requirement prior to the pre-defense meeting).
- Endorsement by the PI and committee is required.

Once a student is approved to defend their dissertation work, he/she can write the dissertation. For specific formatting guidelines for the dissertation, see the general guidelines in the <u>Thesis and Dissertation Manual</u> of the College of Graduate Studies Thesis and Dissertation office. A written copy of the dissertation must be submitted to the dissertation committee at least two weeks prior to the defense date. Members of the dissertation committee may ask for a paper copy of the dissertation or an electronic copy (PDF) file. The dissertation must be submitted to the committee at least two weeks prior to the defense date.

The PhD dissertation defense will consist of a seminar of the dissertation outcome to the biomedical science program and the local scientific community, followed by questions from the audience. The seminar will be followed by a closed meeting with the dissertation committee. Student's response to questions raised by present faculty, students and guests should be considered by the committee before voting. Three out of the four regular Ph.D. committee members must vote positively for the student to pass.

It is the responsibility of the student to schedule a date and time for their annual review meeting, which are amenable to all committee members. Once the student has confirmed possible committee meeting date and time with their committee, the student must send an email request to the Program Office to reserve the conference rooms and IT Department reservations for HPA II 345 (main campus) or BMS 136A (main campus), and BBS 103 (Lake Nona). Please indicate which campus the meeting will be held "live." The Program Office will then notify all parties of the confirmed meeting date/time. While the student and mentor are expected to host the meeting in person in either campus, other committee members have the option to attend the meeting virtually.

University Dissertation Requirements

The College of Graduate Studies <u>Thesis and Dissertation page</u> contains information on the university's requirements for dissertation formatting, format review, defenses, final submission, and more. A step-by-step completion guide is also available on <u>Thesis and Dissertation Services</u> site.

All university deadlines are listed in the <u>Academic Calendar</u>. Your program or college may have other earlier deadlines; please check with your program and college staff for additional deadlines.

The following requirements must be met by dissertation students in their final term:

- Submit a properly formatted file for initial format review by the format review deadline
- Submit the Thesis and Dissertation Release Option form well before the defense
- Defend by the defense deadline
- Receive format approval (if not granted upon initial review)
- Submit signed approval form by final submission deadline
- Submit final dissertation document by final submission deadline

Students must format their dissertation according to the standards outlined in Thesis and Dissertation Webcourse. Formatting questions or issues can be submitted to the Format Help page in the Thesis and Dissertation Services site. Format reviews and final submission must be completed in the Thesis and Dissertation Services site. The College of Graduate Studies offers several thesis and dissertation workshops each term. Students are highly encouraged to attend these workshops early in the dissertation process to fully understand the above policies and procedures. The College of Graduate Studies thesis and dissertation office is best reached by email at editor@ucf.edu.

Policy Regarding Research Materials and Dissertation Approval

Materials used to conduct research in the University of Central Florida laboratories and the intellectual property generated from such research belongs to the University of Central Florida. The major advisor is the person responsible for keeping these materials for the University. Removal of such materials from the university premises is prohibited. The dissertation will be approved as satisfactory for the PhD degree only upon certification by the dissertation advisor that the student has returned to his/her advisor the research notebooks containing proper account of the data and procedures, all research materials (reagents, mutants clones, antibodies, etc.) generated or used during the conduct of research, and primary data such as films, electronic account in the form of discs, etc. The decision on when the dissertation is to be released (immediately, held six or twelve months, etc.) to the public will be made by the major advisor along with the student to prevent any premature disclosure of data or methods that are considered to be protected as intellectual property by the University. UCF Graduate Thesis and Dissertation (EDT): https://graduate.ucf.edu/thesis-and-dissertation/

Review of Dissertations for Original Work through iThenticate

Have your committee chair complete the Review for Original Work (through iThenticate.com). The university requires all students submitting a thesis or dissertation as part of their graduate degree requirements to first submit their electronic documents through iThenticate for advisement purposes and for review of originality.

The dissertation chair is responsible for scheduling this submission to iThenticate and for reviewing the results from iThenticate with the student's advisory committee. The dissertation committee uses the results appropriately to assist the student in the preparation of their thesis or dissertation.

The review for original work must be completed prior to the committee signing the Thesis Approval Form or Dissertation Approval Form. *Upload your final approved dissertation to the Thesis and Dissertation Services site.

Graduation Application – File Your Intent

You must first be approved to graduate by your committee and the Program Office before filing an intent to graduate for the semester you are approved. Log onto https://my.ucf.edu/ and follow this navigation: Student Self Service> Student Center> other academics (drop down menu) > Intent to Graduate> Apply.

Schedule Graduation Appointment with the BSBS Program Office

All graduate students are required to meet with the Program Office one semester prior to graduation to review their program specific requirements and degree audit. Please email BSBSGradAppts@ucf.edu to schedule an appointment.

Room Scheduling / IT Scheduling

It is the responsibility of the student to schedule a date and time for their meetings, which are amenable to all committee members. Once the student has confirmed possible committee meeting date and time with their committee, the student must send an email request to the Program Office to reserve the conference rooms and IT Department reservations for HPA II 345 (main campus) or BMS 136A (main campus), and BBS 103 (Lake Nona). Please indicate which campus the meeting will be held "live." The Program Office will then notify all parties of the

confirmed meeting date/time. While the student and mentor are expected to host the meeting in person in either campus, other committee members have the option to attend the meeting virtually. All dissertation defenses must be simulcast.

Announcement Distribution

You are required to email your Abstract to the Program Office at least 2 weeks prior to your defense for announcement distribution and posting. Include the following with your abstract: Dissertation title, name of your Committee members and your publication Information. Please follow the College of Graduate Studies new abstract guidelines.

Dissertation Approval Form

Important: The student will need to prepare your defense Approval Form. The Approval Form is available in the Thesis and Dissertation Services site at http://ww2.graduate.ucf.edu/ETD Student Services/.

<u>Dissertation Release Option form at myUCF > Student Center > Graduate Students > Choose Graduate Student forms.</u> The Defense Approval Form will not be accepted by the College of Graduate Studies if the release option is not present. Upon completion of the TD Release Option form, the title, defense date, and release option will be processed by the Graduate Office and updated in the Approval Form.

Students should also ensure that their committee information is indicated correctly on the Approval Form before printing. Please contact Program Office if the committee information is not listed correctly. You can review the Defense Approval Form page in the Thesis and Dissertation Services site then print the form for your defense. You are required to obtain your Defense Approval form at least two week before your defense.

Please Note: Processing can take a day or two, so please complete the TD Release Option form well before you defend. The Defense Approval Form will not be accepted by the College of Graduate Studies if the release option is not present. Graduate Students must contact Nathalia Bauer (editor@ucf.edu) for assistance with this process.

Day of Defense

Please arrive early to prepare for your presentation. Bring a copy of your Approval Form to your defense for Committee members/Program Coordinator signatures.

After your defense, bring your approval form to the Program Office. The Program Office will obtain signatures from College of Medicine Dean, Program Director and the Dean of the College of Graduate Studies.

Your GPS (audit) will be updated once all signatures have been obtained.

MD/PhD Biomedical Sciences Policy Statement on Academic Integrity

Integrity is a critical foundation of science and scientific training. As such, any incident of cheating, plagiarism, or other forms of academic misconduct at any time by any student in the programs, may result in dismissal from the program. All graduate programs organized in the Burnett School of Biomedical Sciences hold students to the highest standards of academic conduct and scientific conduct.

There are many forms of misconduct, both in academics and in science. In research, these primarily include the falsification or fabrication of data during one's research project, or the plagiarism of text, figures or data from someone else's work (such as a published or online paper). These examples of misconduct, as well as other examples will be discussed in the Practice in Biomedical Science course or other courses.

In academics, the unauthorized use of electronic devices during exams, or any other means to gain an advantage during an examination will be considered academic misconduct. Copying work from another student who is currently taking the same course or previously took the same course will also be considered academic misconduct. Both the student who supplied such material and the student who attempts to use such material are both in violation of the standards.

Many other examples of misconduct exist and common sense should dictate to the student what is and is not permissible. If you question whether an action could be considered misconduct (academic or scientific) – ask the program coordinator or BSBS director. **Ignorance of what constitutes misconduct is not an excuse.**

All first year graduate students are required to sign the Burnett School of Biomedical Sciences Academic Integrity Program Form before the 1st day of Fall classes. This form addresses academic integrity and the consequences to students for academic misconduct.

BSBS Graduate Disciplinary Policy

The graduate program reserves the right to carry out full disciplinary action against student misconduct. Any documented case of scientific or academic misconduct is the basis for immediate dismissal from the program. The incident(s) will be reported to the student's advisor, the graduate committee, and the UCF Office of Student Conduct. After reviewing the case, the Director of the Biomedical Sciences Graduate program will have the authority to recommend dismissal of the student from the graduate program.

BSBS Graduate Policy Statement on Enforcement of Programmatic Requirements

Students who fail to complete programmatic requirements (e.g., dissertation proposal defense, candidacy exam, annual dissertation committee review) by the specified deadlines* may be placed on academic probation. If this occurs, the student will be given specific written notice of the terms of the probation and will have one semester to correct the deficiency. In most cases, the student's dissertation committee will be responsible for evaluating the student's progress. If a dissertation committee has not been formed, then evaluation will be performed by the Program Coordinator in conjunction with the sponsoring PI.

The evaluation body will meet with the student and spell out the terms of the probation, and then will meet with that student again within one semester to determine if the terms of the probation have been satisfactorily met. If the deficiency is corrected, then the probation will be lifted. If the student fails to correct the deficiencies within the specified time period (1 semester), then the student will not be permitted to register for classes or receive financial support from the program and may be subjected to dismissal from the program.

All official communications regarding probation must include the Biomedical Sciences PhD Program Associate Director and the Associate Dean of Graduate Studies.

BSBS Graduate Grievance Procedures

If significant issues arise between a student and their mentor that cannot be resolved amicably, the student should first consult with the Program Coordinators and secondly with the Program Director to resolve the issues. If these first steps do not resolve the conflict, the student has the right to request a dissertation committee meeting to attempt to resolve such issues.

This request for a meeting of the full committee cannot be overruled by the chair (mentor) and the meeting should be chaired by a dissertation committee member and not the mentor. If sought by the student this meeting should also include at least one PhD coordinator. The PhD program director, associate director and all coordinators should also be informed of the meeting and have the right to attend to help resolve the issue(s).

Expectations for Professional Conduct

Students are expected to adhere to the rules and regulations as stipulated by the University of Central Florida and the MD/PhD Program handbook. Professionalism encompasses behaviors and qualities that are expected of graduate both in the academic setting and laboratory setting. University of Central Florida MD/PhD degrees begin at the time of program application; therefore, professional conduct is assessed from that point forward.

Attendance, timeliness, and attire are all reflections of professionalism. In the assessment of professionalism, instructors and program administrators will consider each student's conduct; the quality of interactions; tone of oral and written communication; language; meaningful engagement in all aspects of the program; and substantive contribution to class discussions. Students who are in violation of these behaviors will be counseled and reminded of UCF expectations. In such events, the faculty or program administrators may conclude that the student is not able or willing to demonstrate an acceptable standard of professionalism. Repeated disregard or violation of these behaviors will lead to dismissal from the program. Some of the criteria by which a student's professional demeanor is measured are below.

- <u>Civility:</u> Students are expected to behave in a respectful and courteous manner to instructors, fellow students, guest speakers, college and university administrators, and UCF Staff. Examples of respectful behavior include but are not limited to modulated tone of voice; professional language that avoids inappropriate, vulgar, or foul expressions; maintaining control of emotions and avoiding threatening or bullying behaviors; respect for others' personal space; respect for BSBS property and UCF property; refraining from distracting and disruptive behaviors while on UCF campus, laboratories, hallways and in classrooms; and a generally civil demeanor.
- <u>Attendance:</u> It is required for students to attend each lecture and comply with the instructor's attendance policy as stated in the course syllabus.
- <u>Timeliness:</u> Students are expected to regularly arrive in class on time and to comply with each instructor's tardiness policy as stated in the course syllabus.
- <u>Use of Technology:</u> The use of computers, cell phones, or electronic devices during class that are unrelated to course activities or not permitted by instructors (i.e., web searches, IMs, etc.) is considered unprofessional.
- <u>Use of Electronic Media:</u> As per Florida Law (§ 934.03) it is illegal to audio or video record any interaction with another individual without their explicit consent. This includes lectures, meetings with instructors, meetings with fellow students, or any situation involving UCF staff or other personnel.
- Appropriate Attire: If working in a laboratory, students are required to wear the necessary personal protective
 equipment (PPE), included but not limited to laboratory coats, closed-toed shoes, gloves, safety glasses etc.
 Additionally, in accordance with UCF's Environmental Health & Safety Laboratory Safety Manual, PPE should
 be removed before leaving the work area. This includes removing safety glasses, gloves, lab coats, etc.
- <u>Guest Speakers / Presentations:</u> The Program often invites guest speakers to give presentations at seminars, and in the classroom. Students in the program must demonstrate professional conduct, respect, and appreciation for these professionals' donation of their time to enrich students' educational experiences. Students are expected to arrive to class on time and be attentive as a sign of appreciation for their time.

Other Program Requirements

Professional Seminars, Program Colloquium and Symposia

Students are strongly encouraged to attend departmental seminars including the weekly BSBS Friday seminar, the research divisions meetings, and guest seminars. Presenting and attending at the annual BSBS colloquium and symposia is required.

PhD students will give a program-wide seminar presentation of their own research during either their third or fourth year. This will typically be done during the Graduate Research Symposium held in the Spring Semester each year. Critical feedback will be given in written form on presentation skills and overall quality of data and presentation. Presentations at other settings including research divisions cannot substitute for this requirement.

Students should take opportunities to present a poster or a topic of research at a conference. To obtain financial support to present at a conference (other than through your program) or to engage in comparable creative activity at a professional meeting, visit the Graduate Travel Fellowship section at graduate.ucf.edu/.

For information about the Council of Southern Graduate Schools (CSGS) thesis and dissertation awards, see their website: csgs.org/ > Awards.

Attendance Requirement

Students are expected to attend all classes, lectures, seminars and complete all research and laboratory assignments by the deadlines specified. Supervisors must be notified if you are going to be absent from the research lab or the teaching lab.

Program of Study

A Program of Study is a listing of course work agreed to by the student and the degree program specifying course degree requirements. A specific Program of Study, which may vary from student to student, must be formulated jointly by the student and the appropriate committee or adviser in the program area and approved by the college.

A Program of Study form can be obtained from the graduate program office. This form should be prepared and signed by the adviser and student, then given to the graduate program office for review and filing in the student's permanent file. The Program of Study must comply with the student's relevant catalog.

Program of Study for students seeking a doctoral degree should be on file with the College of Graduate Studies by the end of the third major term of enrollment (based on full-time enrollment) and must be on file prior to the change to candidacy status. For doctoral students, the Program of Study (for a 72-hour program) consists of:

- 27 hours of formal course work, that excludes independent study and research hours
- 15 hours of dissertation (IDS 7980)
- 30 remaining hours that are up to the discretion of the program and the adviser and student and may include independent study, research hours, clinical experiences, or other formal course work.

6000 Level Courses in a Program of Study

Doctoral students must have a minimum of 36 credit hours (including courses taken in a master's program) of 6000-level and 7000-level courses, which are designed, respectively, for graduate students and doctoral students only. For students with waived hours from an earned master's, this amount is at least one-half of the program hours remaining after the waived hours are applied.

Grades

Grades of every student will be evaluated after each semester. A Grade point average of 3.0 is required. Grades below a "B" grade or "U" grade are not acceptable.

See Policy Below:

- Any PhD student who receives a grade below "B" in a required core course may be dismissed from the program.
- The program will allow a maximum of two "C" grades in elective courses provided that the overall graduate GPA does not fall below 3.0.
- A course in which a student has received an unsatisfactory grade may be repeated, however, both grades
 will be used in computing the GPA. There is no forgiveness policy for any course taken while in graduate
 status
- Any student who receives a grade below "C" in any course will automatically be dismissed from the program.
- If a student's GPA falls below a 3.0 but remains above a 2.0, the student will automatically be placed on academic probation by the College of Graduate Studies. Students will receive a notice of probation at the beginning of the probation period, and the notice of probation will be imprinted on the student's academic transcript. Students will have up to 9 credit hours (one-semester) of course work (graded A-F) to attain a graduate status GPA of 3.0 or higher, at which point they will be removed from probationary status. If the student has not attained a graduate status GPA of 3.0 by the end of the probationary nine credit hours, he/she will be dismissed from the university.
- Thesis and Dissertation hours are graded Satisfactory/Unsatisfactory. Students will receive a grade of "U" for unsatisfactory laboratory work/performance, and no credit. Under such circumstances the program may elect to place the student on academic probation or dismiss the student if the unsatisfactory progress continues.
- Any student who receives two consecutive "U" grades, will automatically be dismissed from the program.
- Any student who receives a GPA below 2.0, will automatically be dismissed from the program by the College
 of Graduate Studies.
- Any student found guilty of scientific or academic misconduct will be immediately dismissed from the program.
- International students placed on probationary status will be sent to the UCF Global for advisement regarding the immigration status implications of this action.

Review of Academic Performance

The primary responsibility for monitoring academic performance standards rests with the degree or certificate program. However, the academic college and the UCF College of Graduate Studies will monitor a student's progress and may dismiss any student if performance standards or academic progress as specified by the program, college or university are not maintained. Satisfactory academic performance in a program includes maintaining at least a 3.0 graduate status GPA (defined below) in all graduate work taken since admission into the program. Satisfactory performance also involves maintaining the standards of academic progress and professional integrity expected in a particular discipline or program. Failure to maintain these standards may result in dismissal of the student from the program.

Graduate Status - GPA

A graduate status GPA will be calculated based on the graduate courses taken at UCF since admission into each degree or certificate program. The graduate status GPA is used to monitor the student's progress in the program. The university requires that students must maintain a graduate status GPA of at least 3.0 or higher in order to

maintain regular graduate student status, receive financial assistance, and qualify for graduation. This GPA requirement cannot be waived. In addition, a graduate status GPA will be calculated for non-degree students based on graduate courses taken at UCF while in non-degree status.

Please note that the graduate status GPA does not carry forward from one program to another or from non-degree status into a degree or certificate program.

Graduate Studies GPS

The Graduate Studies GPS is an advisement tool you can use to plan your academic career, check your progress and assist you in registering in upcoming semesters. To access your report, navigate to the student portal at my.ucf.edu enter your PID, then go down to Main Menu>Self Service>Student Center. At the drop down box, select "Graduate Plan of Study", then hit the right-facing arrow to process your report.

Transfer Credit Policy

Regardless of transferred credit hours into the program, all students must take a minimum of two elective courses totaling at least 6 credit hours and achieve a minimum of "B" level grade in each. Only courses with a grade of "B-" or higher are allowed to be transferred into the student's program of study (not petitionable). Transfer of credit courses will be approved by the Program Coordinator.

UCF MS Biotechnology or MS Biomedical Sciences Transfer Credits

Students in MS Biotechnology or MS Biomedical Sciences programs are required to complete their Master's degree requirements before joining the PhD Biomedical Sciences Program.

Graduate Program Registration

Graduate students will work with the Program Graduate Service Office to register for courses each semester. Students must email BSBSGradAppts@ucf.edu to schedule an appointment or email BSBSGradRegistration@ucf.edu for registration assistance.

Graduate Program Leave Policy

For all graduate students are supported by GTA or GRA and therefore are UCF employees.

It is mandatory that all graduate students in BSBS who are supported by GTA or GRA must receive prior program approval for any leave of absence. Only UCF official holidays, as published in each year, are recognized as paid holidays.

Student must discuss the leave with their mentor and/or GTA supervisor, then complete the graduate leave of absence form, and receive program approval before going on leave. Failure to comply with the program leave of absence policy may lead to termination of employment/tuition waiver and/or dismissal from the program. **The form must be approved two weeks in advance of requested date(s).**

Independent Learning

The dissertation serves as the independent learning experience.

Changing Your E-mail, Address or Phone Number

It is important to remember that all official university communication will be sent to your e-mail address or physical address on file. Students are responsible for updating their e-mail, physical address, and phone number. This can be done online through myUCF or by submitting a written request to the Student Services office.

Financial Support

Graduate Assistantship & Tuition Waivers

Students admitted into the PhD Program will receive a competitive annual stipend, individual student health insurance and tuition assistance. This award is contingent upon full-time enrollment in required course work taken as part of your degree program, satisfactory performance of assigned duties, and continued excellent academic progress towards your degree.

- Tuition covered
- PhD Stipend: \$25,000
- Health Insurance covered
- MD/PhD Scholarship provides an additional \$5000 towards stipend (i.e., \$25,000 base stipend + \$5000 MD/PhD scholarship = \$30,000/yr stipend while in the PhD program). An additional \$5000/yr from the MD/PhD scholarship will be provided to the sponsoring laboratory to offset research costs for the MD/PhD student project.

New graduate students will receive information on scholarships, fellowship and stipend payments during the Graduate Assistantship & Financial Award meeting scheduled during Orientation Week. **Exceptionally qualified students may be eligible for university enhancement awards.**

Tuition and Fee Payment

Tuition support pays matriculation and nonresident fees (charges for course hours) and does not include local fees such as health fees, athletic fees, etc. All funded students must complete their hiring paperwork to receive their biweekly paycheck. Stipend payments will occur every other Friday in the form of direct deposit. Students receiving scholarship/fellowships will receive a separate payment that will be deposited directly into your account. You should expect to pay about \$100 per credit hour in fees.

Please Note: Tuition Payments will be finalized after ADD/DROP of each semester you are in the program.

http://www.studentaccounts.ucf.edu/TuitionFees.cfm.

Tuition Coverage

Full - The tuition coverage portion of this offer will pay for 100% of the tuition charges during the terms of your assistantship. This will cover full-time enrollment in required course work taken as part of your degree program. Please note that tuition covers the "Tuition" and "Out-of-State Fee" items in the Fee Schedule and not the local fees. http://www.studentaccounts.ucf.edu/TuitionFees.cfm

Office of Student Financial Assistance

The mission of the Office of Student Financial Assistance is to provide UCF students and the University Community comprehensive quality service by offering options for financial assistance and efficient delivery of aid. Financial aid counseling is available by appointment. Due to confidentiality, counseling by phone and email is limited. For detailed information, visit their website at https://finaid.ucf.edu/.

Student Account Services

The mission of the Student Account Services office is to serve the students who attend our university by billing fees, campus housing, and other university charges accurately and efficiently, and collecting and crediting tuition revenue. We are here to provide students with quality service and information by maintaining accurate financial records and communicating policies and information to students concerning their accounts. For more information, please visit: https://studentaccounts.ucf.edu/

Graduate Teaching Requirement (GTA)

Graduate students must serve as teaching assistants (GTAs) for a minimum of two semesters during the first two years of the program and before the candidacy exam. The graduate committee may exempt from GTA anybody who has done relevant teaching, for at least two semesters, in a graduate program.

GTAs for MD/PhD students will be assigned for M1 medical courses. MD/PhD GTAs will be responsible for assisting the directors for the HB-1 and HB-3 modules in the M1 curriculum. This typically will involve assistance in guiding TBLs and similar small-group sessions. The GTA duties also include tutoring/mentoring Integrated Medical Science (IMS) MS students enrolled in these modules (in lieu of SASS)

GTA Expectations:

- Professionalism with time, attire and interaction with students and staff.
- GTAs are evaluated after each semester (GTA is a privilege); poor performance will result in loss of future assistantship.
- GTAs can be terminated during or at the end of the semester if warranted.
- Communication is very important.
- Teaching labs rely on your assistance.
- Where appropriate, proper PPE (Personal Protective Equipment) must be worn in labs.
- Proper training on equipment is necessary before use.

Full-time Enrollment

Prior to passing the candidacy exam, full-time degree-seeking MD/PhD students must take at least 9 credit hours in the fall and spring semesters. During the summer term, full-time is 6 credit hours.

For doctoral students who have passed the candidacy exam and are enrolled only for doctoral dissertation (IDS 7980) hours, full-time is 3 hours per semester until graduation. Such students must continue to enroll in at least three dissertation hours each semester (including summers, without skipping a semester) until they successfully complete the dissertation and graduate. Students who wish to enroll in part-time hours should consult their adviser.

There are no other exceptions and this is very important for international students who may not meet compliance standards of Homeland Security if they drop a class and become part-time as a consequence. International students should see the International Services Center if they are contemplating dropping a class.

Students receiving fellowships or assistantships should consult with the Graduate College's Financial Assistance Office at gradfellowship@ucf.edu or gradfellowship@ucf.edu before considering dropping a course if they will become part-time as a consequence.

Versant English Test Requirement for GTA

The Versant English Test is used to measure the communicative competence of non-native English-speaking graduate students under consideration for teaching assistant positions at the University.

The English language Institute will be offering the Versant English Test in place of the SPEAK Test. Students who are non-native speakers of English and do not have a degree from a U.S. institution must pass the English Speaking test before they will be permitted to teach as Graduate Teaching Associates (position code 9183) or Graduate

Teaching Assistants (position code 9184). The SPEAK test is not required for students who will be appointed as a Graduate Teaching Grader (position code 9187). The English Speaking test is administered by the English language Institute and takes about 20 minutes.

Graduate Student Associations

Biomedical Sciences Graduate Student Association

BSGSA is a registered student organization at the University of Central Florida that serves as the official advocate and representative for graduate students in the Biomedical Sciences program. We provide a relaxing environment where graduate students can have fun while discussing relevant issues that directly affect our program.

BSGSA also helps welcome incoming students and organizes meetings aimed to help students overcome the major milestones of the Masters and PhD programs. Recently, we have been working closely with the Graduate Student Association and GSA Advisory Board to affect policy changes relating to graduate students as a whole. **Parent Organization:** Office of Student Involvement

The goals of BSGSA include

- 1. To provide a forum for discussion of issues relevant to graduate students within the Burnett School of Biomedical Science and others in the university community
- 2. To organize, promote and conduct activities beneficial to Biomedical Sciences graduate students and enhance their graduate education at the University of Central Florida.

Contact: <u>BSBSGSA@gmail.com</u>

UCF Graduate Student Organization

The Graduate Student Association (GSA) is UCF's graduate organization committed to enrich graduate students' personal, educational and professional experience. The Purpose of GSA is to support a culture that continually seeks out and identifies needs common throughout the graduate community, increase visibility of graduate student excellence, expertise, and professionalism through collaboration with other university partners, and demonstrate initiative, vision, and leadership in the development and execution of programming and professional development opportunities. To learn more or get involved, please visit facebook.com/groups/UCFgsa/. Contact Information:gsa@ucf.edu

Professional Development

Teaching and Learning

The Faculty Center for Teaching and Learning (FCTL) promotes excellence in all levels of teaching at the University of Central Florida. They offer several programs for the professional development of Graduate Teaching Assistants at UCF.

Preparing Tomorrow's Faculty Program

This certificate program (12-weeks for domestic students, 16-weeks for international students) consists of group and individualized instruction by Faculty Center staff and experienced UCF professors. Textbooks and materials are provided, and a stipend is offered to current UCF students who complete the certificate. International students are provided the same training as well as information regarding language immersion and tricks and cultural awareness as a way of knowing what to expect from American students.

For more information: fctl.ucf.edu/ > Events > GTA Programs or call 407-823-3544.

Pathways to Success Workshops

Coordinated by the College of Graduate Studies, the Pathways to Success program offers free development opportunities for graduate students including workshops in academic integrity, graduate grantsmanship, graduate teaching, personal development, professional development, and research. For more information and how to register, please visit graduate.ucf.edu/pathways-to-success/.

Graduate Research Forum

The Graduate Research Forum will feature poster displays representing UCF's diverse colleges and disciplines. It is an opportunity for students to showcase their research and creative projects and to receive valuable feedback from faculty judges. Awards for best poster presentation in each category will be given and all participants will receive recognition.

The College of Graduate Studies and the Graduate Student Association invite all UCF students, community, and employers to attend the Graduate Research Forum. For more information, contact researchweek@ucf.edu.

Graduate Excellence Awards

Each year, the College of Graduate Studies offers graduate students who strive for academic and professional excellence the opportunity to be recognized for their work. The award categories include the following:

Award for Excellence by a Graduate Teaching Assistant – This award is for students who provide teaching support and assistance under the direction of a lead teacher. This award focuses on the extent and quality of the assistance provided by the student to the lead instructor and the students in the class. (Not intended for students who are instructor of record)

Award for Excellence in Graduate Student Teaching – This award is for students who serve as instructors of record and have independent classroom responsibilities. The focus of this award is on the quality of the student's teaching and the academic contributions of those activities.

For the nomination process and eligibility criteria, see the College of Graduate Studies website graduate.ucf.edu/awards-and-recognition/.

International Advising

International Affairs and Global Strategies (IAGS) serves as a source of information, advocacy, and support to prospective, new and current international students and scholars at the University of Central Florida. IAGS provides students and scholars with immigration advising and assistance in adjusting to new academic and cultural environments.

UCF Global

Website - http://global.ucf.edu/
Address: 4356 Scorpius St,
Building GB 139
Orlando, FL 32816-0130

Phone: (407)823-2337 | Fax: (407)823-2526

Forms

All required forms must be submitted to the program office before your degree will be certified (No Exceptions)

- Burnett School of Biomedical Sciences Program Forms
- College of Graduate Studies Forms and References

A complete listing of general forms and references for graduate students, with direct links, may be found here.

Graduate Petition Form

When unusual situations arise, petitions for exceptions to policy may be requested by the student. Depending on the type of appeal, the student should contact his/her program adviser to begin the petition process.

Traveling Scholar Form

If a student would like to take advantage of special resources available on another campus but not available on the home campus; for example, special course offerings, research opportunities, unique laboratories and library collections, this form must be completed and approved.

Useful Links

- Program Website
- College of Graduate Studies
- Academic Calendar
- Bookstore
- Campus Map
- Counseling Center
- Financial Assistance
- Golden Rule Student Handbook
- Graduate Catalog
- Graduate Student Association
- Graduate Student Center
- Housing and Residence Life
- Housing, off campus
- Knights Email
- <u>Library</u>
- NID Help
- Pathways to Success
- Recreation and Wellness Center
- Shuttles Parking Services
- Student Health Services
- Thesis and Dissertation (ETD)
- UCF Global
- University Writing Center

Fall 2020 Academic Calendar

The Registrar's Office manages the official Academic Calendar, which contains the dates and times for all registration periods, application deadlines, holidays, special events, and more. You can filter the calendar, save it, or subscribe to it!

https://calendar.ucf.edu/2020/fall

Knights E-mail Requirement for Dissertation

<u>All official university student communication must be made through Knights E-mail</u>. This requirement includes all thesis and dissertation communications, as well as documents submitted for format review. <u>Documents not submitted from a Knights E-mail account will be returned to the student without being reviewed</u>.

Graduate Program Faculty

FACULTY AFFILIATIONS

- DR. KENNETH ALEXANDER, NEMOURS CHILDREN'S HOSPITAL
- DR. SALVADOR ALMAGRO-MORENO, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. DEBORAH ALTOMARE, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. CLAUDIA ANDL, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. JACK BALLANTYNE, DEPARTMENT OF CHEMISTRY
- DR. SHAZIA BEG, INTERNAL MEDICINE
- DR. ELLA BOSSY-WETZEL, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. ELIZABETH BRISBOIS, DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING
- DR. JONATHAN CARANTO, DEPARTMENT OF CHEMISTRY
- DR. ANALIA CASTIGLIONI, MEDICAL EDUCATION
- DR. XINQING "KARL" CHAI, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. DEBOPAM CHAKRABARTI, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. RATNA CHAKRABARTI, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. BO CHEN, DEPARTMENT OF PHYSICS
- DR. LIMEI CHEN, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. ZIXI "JACK" CHENG, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. KARIN CHUMBIMUNI-TORRES, DEPARTMENT OF CHEMISTRY
- DR. MELANIE COATHUP, INTERNAL MEDICINE
- DR. ALEXANDER COLE, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. AMY COLE, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. ALICJA COPIK, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. KAITLYN CRAWFORD, DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING
- DR. VICTOR DAVIDSON, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. WILLIAM DECAMPLI, ORLANDO HEALTH
- DR. NYLA DIL. MEDICAL EDUCATION
- DR. DENNIS DREHNER, NEMOURS CHILDREN'S HOSPITAL
- DR. STEVEN EBERT, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. CRISTINA FERNANDEZ-VALLE, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. STEPHEN FLORCZYK, DEPARTMENT OF ENGINEERING
- DR. ANNA FORSMAN, DEPARTMENT OF BIOLOGY
- DR. JANE GIBSON, MEDICAL EDUCATION
- DR. TIMOTHY GILBERTSON, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. XIUFANG GUO, DEPARTMENT OF NANOSCIENCE
- DR. MANISH GUPTA, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. JAMES HICKMAN, NANOSCIENCE TECHNOLOGY CENTER

- DR. ROBERT HINES, INTERNAL MEDICINE
- DR. Qun "Treen" Huo, Nanoscience Technology Center
- DR. MOLLIE JEWETT, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. TRAVIS JEWETT, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. ELLEN KANG, NANOSCIENCE
- DR. THOMAS KEAN, INTERNAL MEDICINE
- DR. ANNETTE KHALED, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. BRIAN KIM, DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING
- DR. STEPHEN KING, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. DMITRY KOLPASHCHIKOV, DEPARTMENT OF CHEMISTRY
- DR. STEPHEN LAMBERT, MEDICAL EDUCATION
- DR. WOO HYOUNG LEE, DEPARTMENT OF ENGINEERING & COMPUTER SCIENCE
- DR. XIAOMAN "SHAWN" LI, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. HANSEN MANSY, DEPARTMENT OF MECHANICAL & AEROSPACE ENGINEERING
- DR. MICHAL MASTERNAK, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. KAI MCKINSTRY, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. SEAN MOORE, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. SALEH NASER, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. HUNG NGUYEN, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. GRIFFITH PARKS, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- Dr. Muthu Periasamy, College of Medicine
- DR. OTTO PHANSTIEL, COLLEGE OF MEDICINE
- DR. KAMAL POURMOGHADAM, THE HEART CENTER AT ARNOLD PALMER
- DR. KYLE ROHDE, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. EDWARD ROSS, INTERNAL MEDICINE
- DR. HERVE ROY, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. SUHA SALEH, COLLEGE OF HEALTH AND PUBLIC AFFAIRS
- DR. SWADESHMUKUL SANTRA, NANOSCIENCE TECHNOLOGY CENTER
- DR. WILLIAM SELF, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. SHADAB SIDDIQI, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. DINENDER SINGLA, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. JOSEPH SORG, GRADUATE FACULTY SCHOLAR
- DR. JULIA SOULAKOVA, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. AMBER SOUTHWELL, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. ROBERT STEWARD, DEPARTMENT OF ENGINEERING
- DR. TARA STRUTT, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. KIMINOBU SUGAYA, BURNETT SCHOOL OF BIOMEDICAL SCIENCES

- DR. LINDSAY TALIAFERRO, INTERNAL MEDICINE
- Dr. Suren Tatulian, Physics
- DR. KENNETH TETER, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. JUSTINE TIGNO-ARANJUEZ, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. LAURENCE VON KALM, DEPARTMENT OF BIOLOGY
- DR. WILLIAM WARREN, SANOFI PASTEUR VAXDESIGN
- DR. BRADLEY WILLENBERG, INTERNAL MEDICINE
- DR. SHIBU YOOSEPH, DEPARTMENT OF COMPUTER SCIENCE
- DR. JIANN-SHIU YUAN, DEPARTMENT OF ELECTRICAL & COMPUTER ENGINEERING
- DR. YU YUAN, DEPARTMENT OF CHEMISTRY
- DR. ANTONIS ZERVOS, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. SHAOJIE ZHANG, DEPARTMENT OF COMPUTER SCIENCE
- DR. WENCAI ZHANG, BURNETT SCHOOL OF BIOMEDICAL SCIENCES
- DR. JIHE "JACKIE" ZHAO, BURNETT SCHOOL OF BIOMEDICAL SCIENCES

<u>Criteria for faculty membership in the Ph.D. program:</u>

- 1. Have laboratory space appropriate for their research and for training.
- 2. Have an active current publication record.
- 3. Have current grant support or are in the process of applying for funds (Junior Faculty).
- 4. Have a tenure-earning position.
- 5. Research should be in the field of Biomedical or Biomolecular Science.

Membership in the Ph.D. program will be reviewed every five years.

Criteria for associate faculty membership in the Ph.D. program:

- 1. Hold a faculty position at UCF
- 2. Interested in Training in Biomedical Sciences
- 3. Contribute in the enrichment of the Ph.D. program

Associate membership in the Ph.D. program will be reviewed every five years.

Qualified individuals who are not UCF faculty may wish to be considered for courtesy faculty* appointment in one of the relevant units in UCF.

No more than two courtesy faculty members may serve on a given student's Ph.D. dissertation committee.

Courtesy faculty may not serve as chairs but may serve as co-chairs together with a UCF *Rules governing Courtesy Faculty participation in the Biomedical Sciences Ph.D. Program:

An external faculty (non-UCF) may participate in the UCF Biomedical Sciences Ph.D. Program through a courtesy faculty appointment if they meet the following criteria: (1) Meet all standards required of UCF Ph.D. Program Faculty, (2) Supply a CV to be reviewed by BMS Ph.D. Program faculty, (3) Give a seminar on their work to UCF

BMS Ph.D. faculty, and (4) Must receive a majority of votes from current UCF BMS Ph.D. faculty in favor of offering a courtesy faculty appointment in the BMS Ph.D. Program.

All faculty receiving courtesy appointments in our Ph.D. Program will be expected to fully participate in the program, including teaching, committee service, supplying cumulative exam questions, etc.

If a non-UCF courtesy faculty member agrees to serve as the Dissertation Advisor for a Ph.D. student and the student agrees, then the courtesy faculty mentor or his/her institution will become financially responsible for that student for the duration of their Ph.D. studies. This includes both stipend and tuition waivers for the student. Stipends must be equivalent to but not exceed current UCF stipends for our program (presently = \$25,000 per year).

Facilities

Faculty and staff in the School are located in four areas: The Biomedical Science and Health & Public Affairs II Building on Main Campus; the Biomedical Research Annex in Research Park; and the Burnett Biomedical Sciences facility, adjacent to the College of Medicine at the Lake Nona Medical City Campus.



Biomedical Sciences Building, Main Campus



Burnett Biomedical Sciences Building, Health Sciences Campus



Health & Public Affairs II Building, Main Campus



Biomedical Research Annex, Research Park



UCF Lake Nona Cancer Center, Health Sciences Campus

Health Sciences Campus Shuttle

UCF Shuttles travel between UCF's main campus and the Health Sciences Campus at Lake Nona Monday through Friday. For the latest schedule updates please visit the Parking Services website at http://parking.ucf.edu/shuttles/health-sciences-schedule/

Contact Info

Burnett School of Biomedical Sciences Graduate Office

The Biomedical Sciences Graduate Services Office is an integral part of ensuring our graduate students' success. We assist with admissions, orientation, course registration, and are heavily involved in making sure our graduate students complete their required milestones throughout their graduate student career.

We are here and ready to answer all of your questions!

We are available to assist you by phone, email or in person (by appointment).

For more information, please email BSBSGradAdmissions@ucf.edu

Lisa Vaughn, Senior Admissions Specialist

Lisa.Vaughn@ucf.edu

THE UCF CREED

Integrity, scholarship, community, creativity and excellence are the core values that guide our conduct, performance, and decisions. These values comprise the guiding principles that direct the actions of the university, and its students.

Integrity

I will practice and defend academic and personal honesty.

Scholarship

I will cherish and honor learning as a fundamental purpose of my membership in the UCF community.

Community

I will promote an open and supportive campus environment by respecting the rights and contributions of every individual.

Creativity

I will use my talents to enrich the human experience.

Excellence

I will strive toward the highest standards of performance in any endeavor I undertake



The Biomedical Sciences MD-PhD program reserves the right to make any changes or amendments to the Program/Handbook information, rules, or policies within the students' period of study upon majority approval of the program faculty, director and coordinators.