

UNIVERSITY OF CENTRAL FLORIDA

Graduate Program Handbook – 2025/2026

MS Biotechnology Program

Reference this handbook to learn about the unique policies, requirements, procedures, resources, and norms for graduate students in the MS Biotechnology Program.

July 2025 • Burnett School of Biomedical Sciences



Welcome to the Burnett School of Biomedical Sciences, Master of Science in Biotechnology 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.

Griffith Parks, PhD

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<u>Program Coordinator Introduction & Welcome</u>

Welcome to the Burnett School of Biomedical Sciences Master of Science in Biotechnology Program. This program is designed to give you broad knowledge and training in the scientific and practical aspects of biotechnology. It involves innovative, hands-on, and multidisciplinary learning approaches to give you the necessary education and training in scientific aspects of biotechnology. The courses and research training required in this program are also designed to develop independent thinking, teamwork, and communication skills, which are highly desirable in the biotechnology industry.

As a new master's 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.

The Biomedical Sciences Master of Science in Biotechnology Program will prepare you for a career in academic research, higher education, or biotechnology. Course work will provide a basic grounding in relevant topics, while hands-on research experience will be the cornerstone of your masters training. Expectations are for you to go beyond the assigned classroom readings and use your curiosity to explore new research trends, building a knowledgebase 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.

In the first year of the program, you will choose an advisor and form a thesis committee that will guide your studies and prepare you to conduct your own research. Careful selection of a supportive advisor and appropriate thesis committee members cannot be overstated. The process of achieving a masters (Thesis) degree will demand dedication and effort that go far beyond your undergraduate experience. The expectations are high but also are the achievements and rewards.

The program director, program coordinators, faculty and 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 have already made the decision to enter a graduate degree program. This decision commits you to uphold 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 are here to help.

We wish you all the best of success during your graduate experience at UCF!



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The MS Biotechnology Thesis 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 coordinator.

Navigating Policy and Resources at the University of Central Florida

This handbook is one of many sources to consult as you become familiar with the policies, procedures, requirements, resources, and norms of graduate education at the University of Central Florida.



How to Use This Handbook

Together, the <u>Graduate Student Handbook</u> and your **MS Biotechnology 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 handbooks are wonderful resources, 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 standardsof academic and personal integrity.

Who to Contact for Questions

Many of your questions about how to meet expectations and thrive as a graduate student will be answered by the various sources of policies, procedures, requirements, resources, and norms listed in this document. Several key positions in this department listed in the handbook and on campus are ready to answer your remaining questions. The BSBS Graduate Program Associate Director, Dr. Saleh Naser will serve as your point of contact to answer specific program policy questions that may extend beyond the information posted in the handbook.

Graduate Program Staff

Our Graduate Program Office will assist graduate students with general program questions and will likely be your first stop for questions and answers related to anything in this handbook. The Program Office will also assist graduate students with course registration, organizing seminars, symposiums, thesis defenses, and tracking student achievements throughout their time in the program(s). Moreover, the Program Office is also a critical link of communication between the students and the program directors and coordinators, keeping all parties up to date on the latest protocols and information for the department. Graduate students may email questions to BSBSGradInformation@ucf.edu.

Program Director

Each graduate program has designated faculty member(s) to direct its educational vision and structure. Names and contact information of your Graduate Program Director and Program Coordinators can be found on your program's webpage at https://med.ucf.edu/biomed/graduate-programs/.

College of Graduate Studies Services

For general graduate inquiries and graduate student services from the College of Graduate Studies, please review the College of Graduate Studies website as an additional resource.

Onboarding

Burnett School of Biomedical Sciences Program Orientation

All new graduate students are required to attend our New Graduate Student Orientation, which is held one week before Fall classes begin. Graduate students will meet with program leaders who will give an overview of the program choreography, guidelines, and expectations for the BSBS 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.

Introduction/Overview Section

Degree

Master of Science in Biotechnology

College

College of Medicine

Department

Biomedical Sciences

Program Type

MS Biotechnology Program

Program Website

https://med.ucf.edu/biomed/graduate-programs/ms-biotechnology/

Year of Program Inception

2008

Program Overview Narrative

Introduction

Mission Statement and Overview

The MS Biotechnology graduate program at the University of Central Florida, College of Medicine provides the highest quality education and research opportunities for training the next generation of biomedical scientists.

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

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

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 MS Biotechnology 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 tomorrows 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.

MS Biotechnology Degree

MS Biotechnology students will graduate with a Master of Science in Biotechnology Degree.

MS Biotechnology Program 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 program 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 program director. **Ignorance of what constitutes misconduct is not an excuse.**

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

Required Training for Academic Honesty and Responsible Research Conduct

All new incoming graduate students must complete the College of Graduate Studies Pressures to Plagiarize Webcourse before the end of their first semester. Students are automatically enrolled in the course soon after they accept their acceptance to their UCF graduate program. Graduate students who do not complete Pressures to Plagiarize by their first semester will not be eligible to register for courses in their next semester. Visit graduate.ucf.edu/plagiarism for more information.

Academic Integrity workshops - All MS graduate students must complete 2 <u>Academic Integrity workshops</u> in the program.

• Students are strongly encouraged to take these workshops in order (Part 1 then Part 2), but they are not required to be completed in order.

CITI Training - Responsible Conduct of Research/CITI Training

All MS Biotechnology students must complete training designed to inculcate an awareness and understanding of the fundamental issues of academic integrity, and the

responsible conduct of research (RCR) in a manner that is consistent with federal regulations.

• All graduate students must complete the online Collaborative Institutional Training Initiative (CITI) "Responsible Conduct of Research" training module in the appropriate disciplinary area; and

CITI - Responsible Conduct of Research (RCR) Training

All students must complete the Collaborative Institutional Training Initiative (CITI) Program

- Creating Your CITI Account Go to <u>citiprogram.org</u>
- Follow the instructions on the CITI Main Menu to create a user account for yourself, giving special attention to these fields
- Select "University of Central Florida" as your institution
- For your name, enter the same First Name and Last Name that displays in your myUCF Student Center (my.ucf.edu)
- On the second registration page, provide the information requested by UCF, giving special attention to these fields
- Institutional email address Enter your Knights email address, which is your official UCF student email address
- UCF Employee Number Enter your UCF ID, example: a1234567)
- On the Select Curriculum page, scroll down to **Question 3**, **Responsible Conduct of Research (RCR)**, and select the course in the appropriate disciplinary area for you. Please note that your mentor may require you to complete several courses.
- On the next registration page, you may also affiliate yourself with another institution, if you wish. Otherwise, select No.
- You have now completed CITI registration.
- To access the course, go to the My Courses section of the CITI Main Menu and you should see the Responsible Conduct of Research course.
- To start the course, click the red Enter link in the Status column.
- Program Note: You are required to submit a copy of your RCR Completion Certificate to our Program Office at <u>BSBSGradForms@ucf.edu</u>.
 We will submit your certificate to the Graduate Office on your behalf to have this requirement updated on your degree audit.

Please do not send your certificate to the Graduate Workshop Office.

If you completed your CITI RCR training at another institution recently, you must have your CITI account affiliated with UCF before submitting your training completion certificate by contacting the UCF Office of Research at rcr-ucf@ucf.edu.

Visit https://graduate.ucf.edu/pathways-to-success/ or www.citiprogram.org to learn more.

Note: You must complete these requirements by the end of Spring (1st year).

UCF Golden Rule

The Golden Rule is the university's policy regarding non-academic discipline of students and limited academic grievance procedures for graduate (grade appeals in individual courses, not including thesis and dissertation courses) and undergraduate students. Information concerning

The Golden Rule can be found at www.goldenrule.sdes.ucf.edu/. Section 11, Student Academic Behavior, addresses appeals of graduate program actions or decisions.

Graduate Student Guide to Success

Plagiarism

Understanding plagiarism is essential to the academic integrity of both programs and the institution.

Plagiarism Training Module

The UCF Plagiarism Training Module is required for all new/incoming students. Students will be admitted to the course by the first week of classes and will be required to complete it before the end of their first semester. All new graduate students will receive a request to complete the College of Graduate Studies webcourse: "Pressures to Plagiarize. Graduate students must complete the entire module and earn a score of 80% or higher on the quiz to avoid a registration hold. If not completed by the stated deadline, a hold that prevents future registration will be placed on the student's myUCF account.

Plagiarism is the act of taking someone else's work and presenting it as your own. Any ideas, data, text, media or materials taken from another source (either written or verbal) must be fully acknowledged. a) A student must not adopt or reproduce ideas, opinions, theories, formulas, graphics, or pictures of another person without acknowledgment. b) A student must give credit to the originality of others whenever:

- 1. Directly quoting another person's actual words, whether oral or written;
- 2. Using another person's ideas, opinions, or theories;
- 3. Paraphrasing the words, ideas, opinions, or theories of others, whether oral or written;
- 4. Borrowing facts, statistics, or illustrative material; or
- 5. Offering materials assembled or collected by others in the form of projects or collections without acknowledgment.

When using the ideas, opinions, theories, formulas, graphics, or pictures of another, students must give credit to the original source at the location or place in the document where that source's material is found as well as provide bibliographic information at the end of the document. When students are verbally discussing the ideas, opinions, theories, formulas, graphics, or pictures of another, they must give credit to the original source at the time they speak about that source. In this manner, students must make clear (so there is no doubt) within their written or verbal materials, which parts are gained from other sources, and which are their own original ideas, theories, formulas, graphics, and pictures.

The Office of Student Conduct has a set of criteria that determines if students are in violation of plagiarism. This set of criteria may be set to a higher standard in graduate programs. Therefore, a student may not be found in violation of plagiarism by the Office of Student Conduct, but a professor or program requiring higher standards of attribution and citation may find a student in violation of plagiarism and administer program level sanctions. The standard in doctoral programs should be the highest as students earning these degrees are expected to be experts in their fields and producing independent work that contributes knowledge to their discipline. For Examples of Material that has been appropriately cited, please visit College of Graduate Studies website.

HIPAA Training Module

Required every year - Each year BSBS Graduate Students are required to complete the COM Annual HIPAA Training (Health Insurance Portability and Accountability Act) in maintaining the privacy and confidentiality of protected health information. This training will take approximately 30 minutes to complete and at the end of the module, you will be prompted to complete a quiz. A score of 80% or higher is required in order to successfully pass and complete the training.

MS Biotechnology Graduate Policy Statement on Enforcement of Programmatic Requirements

Students who fail to complete programmatic requirements (e.g., thesis proposal defense, annual thesis 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 thesis committee will be responsible for evaluating the student's progress. If a thesis 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 Program Associate Director and the Associate Dean of Graduate Studies.

MS Biotechnology 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.

Dismissal of the student may occur for the following:

- Any student who receives two consecutive "U" grades, will automatically be dismissed from the program.
- Any student found guilty of **research or academic misconduct** will be immediately dismissed from the program.
- If the student fails to maintain the standards of academic and professional integrity, meet
 or exceed the professional competencies of the discipline, or maintain the competence
 necessary for the welfare of faculty, fellow students, staff, patients, clients, or others
 encountered in internships, externships, or other classes required by the degree program.
- A student may be immediately terminated from a clinical assignment and/or <u>graduate</u> <u>program</u> when, in the professional judgment of a qualified clinician, faculty supervisor or instructor of record, client/patient welfare could be at risk.
- Student misconduct associated with research or misconduct in laboratory assignments may result in immediate termination from the assignment and/or the graduate program when the misconduct places clients, researchers, subjects or the university at risk.

MS Biotechnology 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 Coordinator 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 thesis 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 thesis committee member and not the mentor. If sought by the student, this meeting should also include the MS Biotechnology coordinator. The MS Biotechnology program director and all coordinators should also be informed of the meeting and have the right to attend to help resolve the issue(s). Visit the Academic Grievance section in the UCF Graduate Catalog General Graduate Policies.

MS Biotechnology Program Leaders

The MS Biotechnology Program Director, the Associate Director/Coordinator, the Faculty and Staff are all available to help you succeed in the program.

- Dr. Griffith Parks Associate Dean, Research, Director of the Burnett School of Biomedical Sciences Graduate Program (<u>Griffith.Parks@ucf.edu</u>)
- Dr. Saleh Naser Associate Director and Program Coordinator Main Campus (Saleh.Naser@ucf.edu)
- Program Office (<u>BSBSGradInfo@ucf.edu</u>)

Research Divisions

A school in the UCF College of Medicine, the Burnett School of Biomedical Sciences is committed to advancing our understanding of human disease and developing innovative methods of treatment. The Burnett School scientists are engaged in research on the world's most prevalent and serious health problems, including cancer, cardiovascular, molecular microbiology, neurodegenerative, and immunity & pathogenesis diseases.

Key research divisions include:

- Cancer Division
- Cardiovascular Division
- Immunity & Pathogenesis Division
- Neuroscience Division
- Molecular Microbiology Division

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.

Our collaborative approach harnesses expertise in cutting edge sciences to bring us closer to finding a cure for cancers that cause human mortality — like the metastatic forms of breast and prostate cancer — and the rapidly progressing types of pancreatic, lung, ovarian and head and neck cancers. https://med.ucf.edu/biomed/burnett-school-of-biomedical-sciences-research/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, andhypersensitivity)

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:

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

Our major topics of interest include HIV, tuberculosis, malaria, mechanisms of antimicrobial resistance, enteric diseases, toxins, and diagnostics. Student training and development are integral components of faculty research 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. Ultimately, we seek to bring translational research into the clinical environment to serve our community, working from bench to bedside. Faculty members have made significant contributions in the fields of myocardial infarction, atherosclerosis, lipid metabolism and lipoproteins, diabetes, inflammation in atherosclerosis, aging, mitochondrial roles in disease pathogenesis, energy metabolism, oxidative stress, stem cells, and genetic disease models in aging. We are employing cutting-edge technologies such as single-cell sequencing, genetically-engineered human cell and mouse models and 3D/4D bio-printing to investigate underlying causes of metabolic and cardiovascular diseases.

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/burnett-school-of-biomedical-sciences-research/divisions/cardiovascular/

Division of Neuroscience

The mission of the Neuroscience Division is to discover cellular and molecular mechanisms that govern normal development and function of the nervous system. This knowledge is then applied to expand understanding of how neurological disorders arise and may be treated. Current focus is on movement disorders such as Parkinson's, ALS, peripheral neuropathies that damage neurons and myelin, as well as Neurofibromatosis, a genetic disorder that promotes tumorigenesis in the nervous system. The division's researchers are conducting cutting-edge research on:

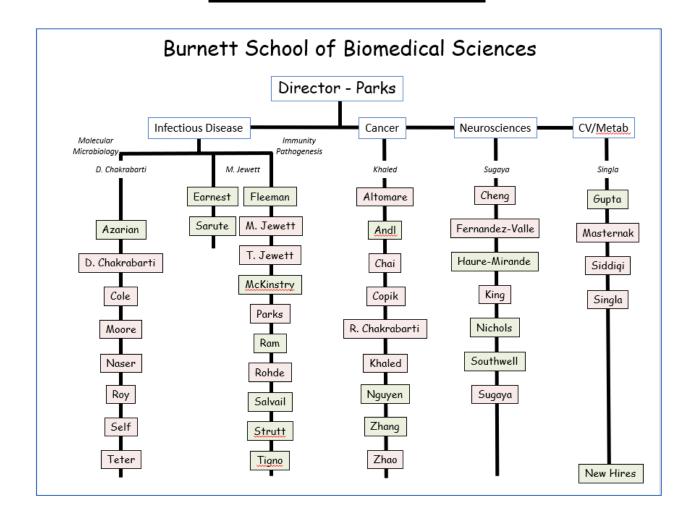
- Schwann cell biology and development of peripheral myelin
- Non-myelinating glia
- Axonal transport mechanisms
- Oxidative and nitrative stress in neurons and nervous system tumors
- Cell metabolism related to neuronal death and tumor formation
- Autonomic innervation of the heart in diabetes and aging
- Mitochondrial biogenesis and bioenergetics
- Neurofibromatosis Type 2 and Schwannomatosis
- ALS, Parkinson's, and Alzheimer's Diseases

- Stem cells therapies
- Nerve injury and regeneration

Faculty work in a collaborative environment together with partners within UCF and in the community to translate this knowledge into new therapies for neurological disorders. Faculty collaborate with UCF researchers in Mechanical Engineering and the Prosthetic Interface Initiative, Nanoscience Technology Center, College of Optics and Photonics, and Psychology. Working together with scientists and physicians from the Veterans Affairs Medical Center, Nemours Children's Hospital, Sanford Burnham Prebys Medical Discovery Institute, and Florida Hospital's Translational Research Institute enrich the clinical and translational research environment in the Neuroscience

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

RESEARCH DIVISION STRUCTURE



Student Learning Outcomes/Expectations

Student Expectations

Before day one of first year, all the students must sign the Burnett School of Biomedical Sciences Academic Integrity Program form and FERPA waiver form, followed by the required training that addresses academic integrity, research ethics, professional conduct and the consequences to students for academic misconduct.

- <u>First year students</u> must demonstrate satisfactory progress during a three week "handson" laboratory rotation experience and must select a mentor and obtain a position in a lab at the end of the rotation period.
- First Year students must select a thesis committee by the beginning of the Spring semester first year.
- If a first-year student has already joined a research laboratory and is not rotating, the student is required to achieve a "satisfactory" annual review evaluation.
- <u>First year and second year students</u> must develop problem-solving abilities and use critical
 thinking in the lab and classroom setting, must master knowledge in specific topic areas
 of biotechnology and division-based fields by achieving at least a passing performance on
 the core course topics including biochemical principles, metabolism, nucleic acid structure
 and function, and gene regulation as well as division-specific course topics.
- Students must demonstrate sustained overall progress in program academic excellence consistent with academic requirements to prevent probationary status.
- The students must demonstrate effective oral presentation skills in a classroom setting by performing at a "satisfactory" level in the seminar course MCB 6314 based on a peer evaluation of an oral presentation of current research publication, class attendance and classroom participation.
- The students must receive a "Pass" evaluation from their thesis committee on the written
 and oral presentation of the thesis proposal by the end of the summer semester, first
 year. A one-page document outlining the hypothesis and specific aims for their thesis
 project must be submitted to the program office.
- To graduate with the master's in biotechnology degree, the students must successfully
 defend their thesis work by writing it and orally presenting it to the audience including
 both the general public and the thesis advisory committee as judged by their performance
 on presenting their research work, fielding questions from the audience and displaying
 their thorough knowledge of the subject matter.

Student Learning Outcomes/Competencies

- <u>First and second year MS Biotechnology students</u> will acquire advanced knowledge in biotechnology in division-based fields.
- Students who maintain good academic standing in the program will demonstrate proficient oral and written skills and the capacity to develop an independent research program.
- Second year and Third year students who maintain satisfactory progress in the program
 will demonstrate the ability to execute an independent research project and will have
 obtained professional employment in research or industry or receive an offer to a PhD
 program, at the time of their thesis defense or shortly thereafter.

Program Professional Conduct/Ethics Statement

Expectations for Professional Conduct

Students are expected to adhere to the rules and regulations stipulated by the University of Central Florida and the MS Biotechnology Program handbook. Professionalism encompasses behaviors and qualities that are expected of graduate students both in the academic setting and laboratory setting. University of Central Florida MS Biotechnology 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.

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.

Changing Your E-mail, Address or Phone Number

To communicate in a more expedient manner, UCF uses email as the primary means of notifying students of important university business and information dealing with registration, deadlines, financial assistance, scholarships, tuition and fees, and so on. To avoid missing important communications from UCF, students must ensure that the university has an up-to-date "preferred" email address – as well as both a permanent and mailing (local) address. It is critical that students maintain and regularly check their "preferred" email account for official announcements and notifications. Communications mailed to an address on record will be deemed adequate notice. UCF does not accept responsibility if official communication fails to reach a student who has not notified the university of a change of email or mailing address. Please ensure that your email address, as well as your permanent and mailing (local) address and telephone number, are current with the university at all times. Students can update their contact information through myUCF.

Curriculum / Degree Requirements

Degree Requirements

The Master of Science in Biotechnology program in the College of Medicine will prepare students to function in the industrial biotechnology environment. This program is designed to give students broad knowledge and training in the scientific and practical aspects of biotechnology.

The Master of Science in Biotechnology program consists of a minimum of 30 - 31 semester credit hours of graduate courses offered by the Burnett School of Biomedical Sciences in the College of Medicine that includes 22-23 credit hours minimum of required courses, 3 credits of restricted electives, and 6 credit hours of thesis research. This program is designed to give students broad knowledge and training in the scientific and practical aspects of biotechnology.

What makes this program unique is the focus on practical training offered to graduate students through master's thesis research in molecular biotechnology to perform jobs in laboratory environment that require scientific talent.

Total credit hours required: 30 – 31 credit hours minimum beyond the bachelor's degree.

Required Courses

22 - 23 Total Credits

- Complete all of the following.
 - Core Complete the following.
 - Complete at least 1 of the following:
 - MCB5722C Methods in Biotechnology (4)
 - BSC6407C Laboratory Methods in Molecular Biology (3) For students who have already taken MCB 5722C.

Complete the following courses:

- BSC6432 Biomedical Sciences I (5)
- BSC6431 Practice of Biomedical Sciences (3)

Must complete two of the following courses (6 Credit Hours):

- <u>PCB6815</u> Molecular Aspects of Obesity, Diabetes and Metabolism (3)
- PCB5837 Cellular and Molecular Neuroscience (3)
- PCB6236 Cancer Biology (3)
- MCB 6273 Advanced Topics in Infectious Processes: Host-Pathogen Interactions (3)
- GMS 6860 Statistics for Biomedical Scientists (3)

Must complete one of the following courses:

- PCB5527 Genetic Engineering and Biotechnology (3)
- BSC5418 Tissue Engineering (3)
- MCB6417C Microbial Metabolism (3)
- PCB5025 Molecular and Cellular Pharmacology (3)

Graduate Seminars

Earn at least 2 credits from the following types of courses:

Students will participate in at least two graduate seminar courses that will prepare them for making professional presentations with an emphasis in biotechnology. The courses will involve the participation of speakers from the biotechnology industry with emphasis on an industrial perspective on biotechnology applications and product development.

MCB 6314 - Industrial Perspectives Seminar 1 Credit Hours OR MCB 6938 1 Credit Hour (1 semester only)

Elective Courses

3 Total Credits

Complete 1 of the following

- BSC5418 Tissue Engineering (3)
- BSC5436 Biomedical Informatics: Structure Analysis (3)
- BSC6407C Laboratory Methods in Molecular Biology (3)
- IDS5127 Foundation of Bio-Imaging Science (3)
- MCB5205 Infectious Processes (3)
- MCB5208 Cellular Microbiology: Host-Pathogen Interactions (3)
- MCB5209 Microbial Stress Response (3)
- MCB5225 Molecular Biology of Disease (3)
- MCB5415 Cellular Metabolism (3)
- MCB5505 Molecular Virology (3)
- MCB5722C Methods in Biotechnology (4)
- MCB6226 Molecular Diagnostics (3)
- MCB6417C Microbial Metabolism (3)
- PCB5527 Genetic Engineering and Biotechnology (3)
- PCB5025 Molecular and Cellular Pharmacology (3)
- PCB5236 Cancer Biology (3)
- PCB5238 Immunobiology (3)
- PCB5596 Biomedical Informatics: Sequence Analysis (3)
- PCB5709C Laboratory Virtual Simulations in Physiology (3)
- PCB5834C Advanced Human Physiology (4)
- PCB6528 Plant Molecular Biology (3)
- PCB6595 Regulation of Gene Expression (3)
- PCB5838 Cellular and Molecular Basis of Brain Functions (3)
- PCB5265 Stem Cell Biology (3)
- PCB5815 Molecular Aspects of Obesity, Diabetes and Metabolism (3)
- ZOO5745C Neuroanatomical Pathways and their Neurotransmitters (4)
- ZOO5745C Neuroanatomical Pathways and their Neurotransmitters (4)
- MCB 6908 Independent Study (3) Syllabus and Report required

• Others must be approved by the mentor and the program coordinator.

Thesis 6 Total Credits

• Earn at least 6 credits from the following types of courses:

MCB 6971 Students will take a minimum of six credits of thesis research (MCB 6971) to complete their research and submit their thesis specializing in biotechnology research.

- Students are expected to have an in-depth discussion with at least three faculty members before choosing a laboratory for thesis research.
- The student and the Thesis Adviser/Major Professor will jointly recommend an advisory committee comprised of at least three members. The committee composition must reflect expertise relevant to the student's thesis research and must be approved by the Graduate Committee.
- Students switching to change the composition of the Thesis Advisory Committee must also obtain approval from the Graduate Committee.

• Thesis Proposal

0 Total Credits

• Comprehensive Examination

0 Total Credits

Independent Learning

OTotal Credits

The required thesis allows the student to engage in independent learning.

Grand Total Credits: 30 - 31 min

MS BIOTECHNOLOGY PROGRAM OF STUDY (THESIS) Program of Study Plan FALL 2025

e: ID:		_ Admit Term:	_				
F Email:Expected Date of Graduation: Program of Study should be on file with the College of Graduate Studies by the end of the students' second major term of enrollment (based on full-time ollment).							
MS Biotech	nology Program requires a	minimum of 30-31 credit hours min					
<u>REQUIR</u>	ED COURSES:			Year / Gr	ade		
BSC	6432	Structure-Function- Relationships	5				
BSC	6431	Practice of Biomedical Science (3)	3				
Musts	select ONE of the following: MC	B 5722C (4 credits) or *MCB 6407C (3 credits)					
Prefix	Number	Course Title	Term/Year	Hours	Grade	Course Sub (Y,N)	Transfer Credit (Y,N)
мсв	5722C	Methods in Biotechnology		4			
мсв	6407C	Lab Methods in Molecular Biology		3			
Must com	PCB PCB PCB MCB	Division Courses listed below: Spring (6 cr 6815 - Molecular Aspects of Obesity, Diabe 5837 - Cellular and Molecular Neuroscience 6236 - Cancer Biology (3) 6273 - Advanced Topics in Infectious Proce 6860 - Statistics for Biomedical Scientist (3	tes and Metabolism (3) esses (3)	1 (3)			Transfer
Prefix	Number	Course Title	Term/Year	Hours	Grade	Course Sub (Y,N)	Credit (Y,N)
				1	1	1	
	PCB BSC PCB	e following courses: Fall (3) 5527 - Genetic Engineering and Biotechnol 5418 - Tissue Engineering (3) 5025 - Molecular and Cellular Pharmacolog 6417C - Microbial Metabolism					
Prefix	PCB BSC PCB	5527 - Genetic Engineering and Biotechnol 5418 - Tissue Engineering (3) 5025 - Molecular and Cellular Pharmacolog		Hours	Grade	Course Sub (Y,N)	Transfer Credit (Y,N)
Prefix	PCB BSC PCB MCB	5527 - Genetic Engineering and Biotechnol 5418 - Tissue Engineering (3) 5025 - Molecular and Cellular Pharmacolog 6417C - Microbial Metabolism	y (3)	Hours	Grade		Credit
Seminar: E	PCB BSC PCB MCB Number	5527 - Genetic Engineering and Biotechnol 5418 - Tissue Engineering (3) 5025 - Molecular and Cellular Pharmacolog 6417C - Microbial Metabolism	Y (3) Term/Year		Grade		
Seminar: E	PCB BSC PCB MCB Number	5527 - Genetic Engineering and Biotechnols 5418 - Tissue Engineering (3) 5025 - Molecular and Cellular Pharmacolog 6417C - Microbial Metabolism Course Title the following types of courses below: our (to be repeated) or one MCB 6938 - Sei	Y (3) Term/Year	3 6314 Seminar	Grade		Credit

Select an Elective from the list

Prefix	Number	Course Title	Term/Year	Hours	Grade	Course Sub (Y,N)	Transfer Credit (Y,N)

Thesis Course: MCB 6971 (6 cr min)

Prefix	Number	Course Title: Thesis	Hours	Term/Year	Grade	
МСВ	6971	Thesis	3			
мсв	6971	Thesis	3			

Total Credit Hours (31 credits min)	Total 6 Thou Level Credit Hours					
Graduate Committee Members: At least 3 approved members						
	(Committee Chair)					
	-					
	_					

- > Qualifying Exam: Comprehensive Examination (Summer 1st Year)
- > Required Training and Workshops Two <u>Academic Integrity Workshops</u> required.
- > CITI Training with Certificate:
- > All Program and College of Graduate Studies Thesis Defense Requirements must be met.

Description of Core Courses

• BSC 6432 Biomedical Sciences I (5 Credit Hours)

First semester of a multi-disciplinary course. Topics discussed include genome biology and gene expression, cell structure and function, and other key fundamental biological processes. This course is based on seminal works and the current scientific literature in the context of biomedical applications.

• MCB5722C - Methods in Biotechnology (4)

A laboratory course that will train graduate students in fluorescence and luminescence-based assays used in biopharmaceutical industry for target validation.

• BSC6407C - Laboratory Methods in Molecular Biology (3)

Description and practice of commonly used methods in molecular biology.

• BSC6431 - The Practice of Biomedical Sciences (3 Credit Hours)

Introduces both MS and PhD students to aspects of the practice of biomedical sciences that are relevant to careers in biomedical research such as manuscript writing, grant writing, peer review and ethics in research and publication.

• GMS 6860 Statistics for Biomedical Scientists (3 Credit Hours)

An introductory course tailored to the interests of biomedical scientists and the course will answer questions like how to calculate the odds of catching the flu? When does a Binomial model make sense? We will also learn how to correctly test scientific claims and make inferences. This knowledge is the foundation for sound scientific reasoning and data analysis.

• PCB5837 - Cellular and Molecular Neuroscience (3 Credit Hours)

Designed to provide graduate students the concepts required to understand the physiological basis of brain functions at the molecular, cellular and system levels.

• <u>PCB 6815</u> Molecular Aspects of Obesity, Diabetes and Metabolism (3 Credit Hours) Biochemical, molecular and physiological aspects of obesity, diabetes and metabolic diseases and how scientific findings can be translated towards prevention and treatment.

• **PCB 6236 Cancer Biology** (3 Credit Hours)

Current knowledge and research on molecular mechanism of tumor development, tumor progression, metastasis and therapy of cancer.

MCB 6273 Advanced Topics in Infectious Processes: Host-Pathogen Interactions (3
 Credit Hours) Examination of the molecular details of host-pathogen interactions. Key areas of cell biology will be considered in relation to microbial pathogenesis.

MCB 6314 & MCB 6938 Seminar

Biotechnology and Biomolecular research seminars

Sample Plan of Study/Completion Timeline

Suggested Timeline for Completion

Year 1:

Fall Semester:

• BSC 6432 Core Course: Structure and Function of Biomedical Sciences 5 cr

• Methods in Biotechnology (MCB 5722C) 4 cr or * Lab Methods BSC 6407C (3cr) for students who have already taken MCB 5722C.

Mentor Selection: 9 credit hours

Transfer Credit Review

Spring Semester:

Select 2 Division Core Courses from the list below (6 cr)

> PCB6815, PCB5837, PCB6236, MCB6273, GMS 6860

- **Seminar** Course (1 cr)
- Directed Research MCB 6918 (2 cr) Description of Assignments and Expectations (to be completed by the faculty mentor

Committee Selection- By the beginning of Spring: 9 credit hours

Summer Semester:

- Seminar Course (MCB 6314/6938) 1 cr Must be taken by all
- Elective (3 cr) (not taken must be completed in the following Fall semester) or
- Directed Research MCB 6918 or Independent Study MCB 6908 (5 cr)

Thesis Proposal/Comprehensive Examination: 6 credit hours

Year 2:

Fall Semester:

- Practice in Biomedical Sciences (BSC 6431) 3cr
- Required Select one of the following (3)
 - **PCB5527, BSC5418, MCB6417C, PCB5025**
- Thesis MCB 6971 (3 cr)

9 credit hours

Spring Semester:

Thesis Research MCB 6971 until graduation
 3 credit hours

Summer Semester:

Thesis Research MCB 6971 until graduation
 3 credit hours

*Students approved to select BSC 6407C must meet with the program during the 1st Fall semester to create a program plan.

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

COURSES BELOW MAY BE OFFERED DURING THE FALL SEMESTER

- **BSC 6432 Biomedical Sciences I** First semester of a multi-disciplinary course. Topics include metabolic reactions, DNA replication and transcription. Lectures incorporate current scientific findings in the context of biomedical applications.
- BSC 6431 Practice of Biomedical Sciences Introduces students to the practice of biomolecular science.
- PCB 5838-0001- Cellular and Molecular Basis of Brain Functions Designed to provide graduate students the concepts required to understand the physiological basis of brain functions at the molecular, cellular and system levels.
- **BSC 5418-0001- Tissue Engineering** Introduction to Tissue Engineering with a special emphasis on the current status of the field, on novel methods and on cell biomaterial interactions.
- MCB 5117C 0M01 Microbial Genomics The course will provide hands-on experience applying computational tools. In addition, we will cover the basics of genomics, evolutionary theory, phylogenetics, bacterial recombination, metagenomics, bacterial genome-wide association studies, and data visualization.
- MCB 5205-0001- Infectious Processes, Discussion of current theories of the infectious process and the response of host cells and tissue to infection.
- MCB 5722C-0012- Methods in Biotechnology A laboratory course that will train graduate students in fluorescence and luminescence-based assays used in biopharmaceutical industry for target validation.
- PCB 5025- 0001- Molecular and Cellular Pharmacology, The cellular and molecular events that lead to disease states and the molecular basis of agents that modulate these processes will be covered.
- PCB 5235-0M01- Molecular Immunology, Fundamental functions of the human immune system, focusing on cellular and molecular aspects of the innate and adaptive immune response.
- **PCB 5238-0W61- Immunobiology**, Advanced topics in immune system dysregulation with special emphasis on innate immunity.
- **PCB 5527 0001 -** Genetic Engineering and Biotechnology, Principles of Genetic Engineering/Biotechnology in Bacteria, Yeast, Viral, Mammalian, Non-mammalian systems, Plants, including human gene therapy, novel pharmaceuticals, recombinant proteins will be discussed in depth.
- PCB 5596-0001- Biomedical Informatics: Sequence Analysis, Introduction of useful bioinformatics tools and resources on sequence analysis.
- ZOO 6737-0M01- Clinically Oriented Human Anatomy, Advanced course focusing on integrated functional anatomy by means of problem-based learning and project-based learning.
- MCB 6938 MS Biomedical Sciences Seminar

COURSES BELOW MAY BE OFFERED DURING THE SPRING SEMESTER

- MCB 5208-0002 Cellular Microbiology: Host-Pathogen Interactions Examination of the molecular details of host-pathogen interactions. Key areas of cell biology will be considered in relation to microbial pathogenesis.
- BSC 5436 0001 Biomedical Informatics: Structure Analysis, Introduction of bioinformatics tools and resources on RNA and protein structure analysis.

- BSC 5665-0001 Clinical Embryology and Congenital Malformations Functional human embryology in a clinically oriented way to study the human development and congenital malformations as a result of genetic, environmental, and toxic conditions.
- MCB 5505 0061 Molecular Virology An in-depth overview of the fundamental aspects and current concerns in modern virology including HIV, tumor viruses Prion disease, virushost interaction, genome replication and pathogenesis.
- PCB 5265-0W61 Stem Cell Biology Introduction to embryonic and adult stem cells, procedures to isolate them, principles and applications of stem cells in animal and human diseases.
- PCB 5709C 0M01 Laboratory Virtual Simulations in Physiology Conduct experiments in physiology that enhance the ability to design, collect, analyze data and report results in a scientific manner
- PCB 5837-0001 Cellular and Molecular Neuroscience An advanced and thorough course providing understanding of the cellular components and molecular signaling pathways involved in the nervous system function.
- MCB 6226-0001 Molecular Diagnostics A course in basic laboratory skills used in molecular genetic or clinical diagnostic laboratories for detecting genetic diseases.
- MCB 6273 0M01 Advanced Topics in Infectious Processes Data presentations
 from the primary literature and from the student's original research will focus on the
 molecular mechanisms of host-pathogen interactions.
- PCB 6236-0001 Cancer Biology Current knowledge and research on molecular mechanism of tumor development, tumor progression, metastasis and therapy of cancer.
- PCB 6815-0V01 Molecular Aspects of Obesity, Diabetes & Metabolism Biochemical, molecular and physiological aspects of obesity, diabetes and metabolic diseases and how scientific findings can be translated towards prevention and treatment.
- **PCB 6595-0001** Regulation of Gene Expression Concepts of molecular biology focusing on major areas in transcriptional and translational processes.
- MCB 6938 MS Biomedical Sciences Seminar

COURSES BELOW MAY BE OFFERED DURING THE SUMMER SEMESTER

- PCB 5834C Advanced Human Physiology Designed to provide graduate students advanced knowledge of physiological processes at the cellular, molecular and system levels.
- BSC 5665 Clinical Embryology and Congenital Malformations Functional human embryology in a clinically oriented way to study the human development and congenital malformations as a result of genetic, environmental and toxic conditions.
- MCB 5415 Cellular Metabolism Basic concepts of the mechanisms that define the functioning and regulation of prokaryotic and eukaryotic cell metabolism.
- PCB 5709C Laboratory Virtual Simulations in Physiology Conduct experiments in physiology that enhance the ability to design, collect, analyze data and report results in a scientific manner.
- MCB 6314 Industrial Perspectives Seminar Learning concepts of basic research and drug development in the pharmaceutical industry and technical presentation.

NOTE: FALL, SPRING & SUMMER Schedule of Classes listed is subject to change.

Key Programmatic Deadlines

Selection of a Mentor:

3 Week Rotation

Submit your Rotation Selection form by the rotation deadline given at the beginning of Fall semester.

Students will select a mentor after second rotation.

Transfer Credits:

By the end of the Fall semester, 1st year

Selection of Thesis Advisory Committee:

By the beginning of Spring 1st Year

Program of Study Plan:

By the beginning of the Spring Semester, 1st Year

Committee Meeting Thesis Proposal Defense/Comprehensive Exam:

The thesis proposal defense and the comprehensive exam requirement should be completed by the official end of Summer C, 1st Year.

CITI & Academic Integrity Workshops:

By the end of Spring Semester 1st year

Program DocuSign IRB Form

Before the end of Spring Semester 1st year

Annual Thesis Meeting:

By the end of Summer Semester 2nd year.

Pre-Defense

The student will present their thesis work at a pre-defense meeting with the full thesis committee at least one semester prior to defending.

Defense

All MS Biotechnology pre-defense, defense, program and College of Graduate Studies thesis requirements must be met.

Selecting Your Thesis Advisor

Advising/Mentoring

Your advisor has two main roles: 1) To assist you in acquiring the highest possible level of knowledge and competence in the field, and 2) to chair the committee that will determine whether you have performed at an acceptable level in each of your degree milestones. Other roles of your advisor may include tracking your progress in completing your degree, assisting with course selection and planning your academic path, and helping you identify possible research mentors, committee members, and research opportunities.

Both the student and advisor are responsible for making their expectations clear to each other. Be sure to discuss this with your advisor.

Finding and Selecting an Advisor

Thesis Mentor Rotation Selection

During orientation, new incoming students will attend short presentations by faculty who will highlight their research program. Students should meet with faculty of interest for further discussion about research to help them select their lab rotations. Please review the process below:

- MS Biotechnology Lab Rotation Form
- **MS Biotechnology Rotation Evaluation Form**
- MS Biotechnology Mentor Selection Form
- First year students are required to complete <u>two rotations</u> before selecting a thesis mentor.
- Students are expected to have an in-depth discussion with at least three faculty members before choosing a laboratory for thesis research.
- Each rotation is <u>3 weeks long</u> and both rotations should be concluded by the stated deadline given by the program.
- Students must meet with the faculty at the end of each rotation to receive their lab rotation evaluation and should discuss the possibility of joining the lab after completing two rotations
- The program advise that students complete both rotations before selecting a lab.
- Once the lab selection is confirmed, the student must submit the Mentor Selection DocuSign form electronically to the Program Office.

Students are required to identify their thesis mentor as soon as possible after completing the second rotation.

If no suitable lab can be found at the end of the second rotation, the student *may* be dismissed from the program. Program approval is required for an additional rotation, if necessary.

- ➤ 1st Rotation September through Friday, September
- > 2nd Rotation September through Friday, October
- ➤ If necessary, 3rd Rotation September November Submit your rotation form to the program by (TBA Dates and Deadlines forthcoming).

Exemptions from laboratory rotations (Direct admit to the lab)

The program may grant exemptions from laboratory rotations 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 the program to join a specific research lab. If approved, the mentor will immediately assume full financial responsibility for the student unless the student has not fulfilled the GTA requirement. The program will then provide GTA support for one year.

Possible discussion and questions to Ask of Prospective Advisors

You should first spend some time identifying what is most important to you in your graduate training and ask questions accordingly. Below are some questions to consider asking your prospective advisor in this discussion, though it is not a complete list.

- 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.
- What are the expectations or requirements a student must spend each day/week in your group/lab?
- Find out the mentor's record of graduating students/time to graduate. You may inquire about the mentor and lab's publication record/quality of the publication journals.
- What projects would be available to me if I were to join your group and how long do you think it should take me to get my degree?
- What is your philosophy regarding the amount of guidance the advisor should provide to a student during preparation of the thesis proposal, literature seminars, thesis writing, etc.? Also, how available will the advisor be to answer questions you might have?
- What regularly scheduled activities (e.g., group meetings, joint group meetings, research clubs) does your group participate in that provide an opportunity to get outside input on my research project and to hear about the work of other students and postdocs?
- Do you encourage your students to attend seminars and journal clubs, including those that may be outside of their narrow field of interest/research?
- Are students in your group/lab given the opportunity to attend professional meetings where they can interact with colleagues/researchers from other institutions?
- It is important that you ask about funding availability for the lab
- Ask about the whereabouts of the mentor's past trainees including students and postdocs and the reasons why if any student failed to graduate from the lab.
- What is your general philosophy of graduate training and what goals do you have for your graduate students?
- Does the mentor support your career goal(s)?

Lab Visit/Lab Rotation

- Ask for permission to visit the lab and observe the culture of the lab while visiting or during rotation. Consider lab space, lab resources
- Survey students, postdocs in the perspective lab and others who have rotated through the lab about their experiences. Ask if students in the lab are encouraged to 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.

Written lab 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 should also be accessible to any other 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.

Overall 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.

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.

No faculty member is obligated to accept a student's request to serve as advisor, though invitations are often accepted unless the faculty member judges that a different advisor would serve your needs better.

Changing Your Advisor

As the advisor-student relationship is one of mutual agreement, it may be terminated by either party. Occasionally significant issues may arise between a student and their mentor that cannot be resolved amicably. Graduate students must first request a thesis committee meeting to attempt to resolve the issues, then secondly the Program Coordinator and/or the Program Director if needed to resolve the issue.

There are situations where it may be necessary for the student to choose a different advisor. The student must first have approval from the Program Coordinator and Director before reaching out to a prospective advisor to seek the change. If approved to look for a new mentor, the student is given three weeks since leaving current mentor and lab to find a new mentor. **Failing to identify a new mentor within the timeline may lead to dismissal from the program.**

Lab and Safety Training

All Graduate Students are required to complete the following Lab and Safety Training Courses below before Orientation week. ehs.ucf.edu/ Basic chemical safety, biological safety, and radiation safety awareness training is required for you to participate in laboratory research. The UCF Environmental Health and Safety Department offer these required safety training courses online and they are available at any time.

- EHS102 Biological Safety Orientation Online
- EHS 201 Laboratory Safety Orientation Online
- EHS202 Laboratory Safety Practical Online
- EHS421 Think About Your Sink Online
- EHS140 Bloodborne Pathogens Online
- EHS301 Radiation Safety Orientation Online: Is now EHS320, Radiation Safety Awareness*
- EHS 103 Biological Safety Practical Online

Graduate Students will have the opportunity to complete these EH&S training courses before the Program required Orientation Week of events. Please note: The student is responsible to complete these safety training courses by the official end of the first Fall semester in the program. No exceptions. Please contact the Office of Environmental Health & Safety at 407-823-6300 if you have any questions.

UCF EHS Lab Coat Dispensing Program

The Environmental Health and Safety Department (EHS) has partnered with CINTAS to implement a Lab Coat Dispensing program at the University of Central Florida. This initiative allows students, staff, and faculty engaged in laboratory work to conveniently check out lab coats using their UCF ID cards. There are two lab coat dispensers and three return machines located on the Main Campus, as well as one of each at the Lake Nona campus.

To participate, individuals must be assigned to a research lab and complete all necessary <u>EHS</u> <u>Laboratory Safety Training</u>. Lab coats may be checked out one at a time and can be re-checked after one hour of return. They should not be borrowed for longer than two weeks. A variety of seven lab coat sizes are available, including XS, S, M, L, XL, and 2XL.

To sign up for the program or if you have any questions contact our Biosafety Officer, Melina Kinsey at 407-823-1526 or through email Melina.Kinsey@ucf.edu.

Locations:

- Physical Sciences Building
- Physical Sciences Location Map
- Research 1 Building
- Research 1 Location Map
- Engineering 2
- Engineering 2 Location Map
- Burnett School of Biomedical Sciences at Lake Nona
- BSBS Location Map

Tutorial - https://ehs.ucf.edu/lab-coat-dispensing-program

Thesis Committee/Proposal/Comprehensive

Thesis Advisory Committee Selection

A research thesis is required for the degree of Master of Science in Biotechnology. The student and the Thesis Advisor/Major Professor will jointly recommend a thesis advisory committee composed of **at least three members** (including Thesis Mentor as Chair). The committee composition must reflect expertise relevant to the student's thesis research and must be approved by the Graduate Coordinator. Note: **You are required to select your committee by the beginning of the Spring semester**, **1**st **Year**.

- The student and the advisor should work together on the composition of the Advising Committee.
- Thesis Committee selection form must be submitted electronically to the Program Office for Program approval. The Program Office will submit your approved form to the College of Graduate Studies.
- It is required that the first Thesis Advisory Committee meeting be held no later than end of the first year in the program. In this meeting, the student is expected to show progress at expectation for course work and to present to the committee with a sound-thesis proposal.
- The Advisory Committee must meet once a year for the student's annual review meeting.

A.1: College of Graduate Studies Faculty Roles in Graduate Education

- Chair of a thesis or dissertation committee: In the vast majority of cases, the chair is the adviser of the scholarly activities of the student. A chair of a thesis or dissertation committee also oversees all of the administrative functions of the committee. A Graduate Faculty Scholar is not eligible to serve as a chair of a thesis or dissertation committee.
- Vice-chair of a thesis or dissertation committee: A vice-chair serves as a voice of experience in thesis and dissertation committees. A vice-chair must be appointed to committees in which the chair has no prior experience serving on thesis or dissertation committees. To be appointed as a vice-chair, the committee member must have prior experience serving on at least one thesis or dissertation committee that has successfully graduated a student.
- Co-chair of a thesis or dissertation committee: A co-chair is a member of a thesis or dissertation committee who shares with the chair in the scholarly advisory activities of the student. In cases in which a Graduate Faculty Scholar oversees the day-to-day scholarly activities of the student, the Graduate Faculty Scholar may be appointed as a co-chair of the thesis or dissertation committee.

BSBS Graduate Committee Process

Students are required to obtain and complete the MS Biotechnology Program "Internal" Committee Selection form and submit it electronically to the Program Office at BSBSGradForms@ucf.edu. Approved students will then be instructed to log into the College of Graduate Studies "Dynamic Forms" system to process their committee request for final approval.

Step 1

Graduate students are required to obtain and complete the MS Program <u>"Internal" DocuSign Committee Selection form</u> for approval. Place the names (only) of your committee members on this form for approval.

Step 2

The Program Office will then notify students that their committee selection is approved/denied.

Step 3

Approved students will then be instructed to log into the **College of Graduate Studies "Dynamic Forms" system** to process their committee request. *See instructions below:*

College of Graduate Studies Online Form Instructions for approved students: Before submitting your committee:

- Check that all members are listed on the <u>Graduate Faculty</u> website; if not, the program must nominate them.
- Complete the <u>UCF Institutional Review Board (IRB) and Human Research</u>
 <u>Protection Program (HRPP)</u> Webcourse, download the certificate, add your name, and save it. Attach this certificate when submitting your committee.
- Initiate the <u>Doctoral and Thesis Advisory Committee Form</u>; this will route to your committee members, your program, your college, then CGS for final processing.
 - Please make sure the email contact information (spelling) you enter is correct.
- Once this process is complete the UCF College of Graduate Studies will notify you, the mentor and the program an email confirmation that your committee has been approved and update your record.

Note: The process is the same for Committee revisions.

If you have any issues processing your form, please contact the College of Graduate Studies at gradrcrd@ucf.edu for assistance.

Thesis Proposal and Comprehensive Exam

The thesis proposal defense and the comprehensive exam requirement should be met and passed successfully no later than the end of the summer of the first year in the program.

Students will not be allowed to register for courses for the fall semester of their second year until this requirement is fulfilled. Note: All committee members must be present for the exam.

♣ BSBS MS Biotech Thesis Proposal & Exam Form

The thesis proposal requirement includes three sections:

A written ~5-page (single space, without the references) thesis proposal similar to NIH style proposal format. The thesis proposal should include your introduction/hypothesis specific aims, research strategy, research approach, methods, timeline & potential outcomes (including figures & tables). This is due to the committee at least one week before committee meeting. Check with your Mentor for example and guidance.

- A thesis proposal defense in front of the thesis committee (40 min. seminar).
- Comprehensive Exam Questions by the thesis committee (during the proposal defense) that test the student understanding of the basic concepts in the field and relevant applications. The student will be evaluated on performance in all three sections. Student must pass comprehensive exam to qualify for the Master of Science degree.

The Oral Thesis Proposal Defense is required:

The Thesis Proposal Defense should be met and passed successfully no later than the end of the summer of the first year in the program. Students will not be allowed to register for courses for the Fall semester of their second year until this requirement is fulfilled. The student will be evaluated on performance in all three sections.

The defense will be in the format of a 40-minute presentation of the thesis work, including:

- A 5-minute introduction
- A 10-minute free period for the general audience to ask questions
- A 1-hour closed-door examination by the Thesis Advisory Committee and the program faculty present.

Should the student fail, a second opportunity will be provided within 2 weeks of the first attempt. A second failure will result in dismissal from the program

Comprehensive Exam

Students must pass a comprehensive exam to qualify for the Master of Science degree.

Comprehensive exam questions by the thesis committee (during the proposal defense) that test the student understanding of the basic concepts in the field and relevant applications. The student will be evaluated on performance in all three sections. Student must pass comprehensive exam to qualify for the Master of Science degree.

Students must successfully pass an oral comprehensive examination to test the understanding of the basic concepts in the field and relevant applications. The Comprehensive Examination will be conducted during the thesis proposal defense. The exam will be administered by the thesis committee.

Should the student fail, a second opportunity will be provided within 2 weeks of the first attempt. A second failure will result in dismissal from the program.

Note: Graduate students are not eligible to register in thesis credit hours until the thesis proposal defense requirement is met.

Proposal and Comprehensive Exam Form

Students are required to submit a copy of the written Thesis Proposal and a copy of the Thesis Proposal/Comprehensive Exam Form electronically to BSBSGradForms@ucf.edu no later than 1 week after the exam.

Thesis and Defense

UCF College of Graduate Studies Thesis and Dissertation Webcourse

MS Biotechnology Students are required to review and complete all modules in the College of Graduate Studies Thesis and Dissertation Webcourse. This course will be an important resource for all graduate students completing a thesis or dissertation.

Note: The new 2025-2026 Webcourse will open the week of August 11th, 2025.

All MS Biotechnology thesis students must access the <u>Graduate Thesis and Dissertation</u> 2024-2025 Webcourse to learn about the following:

- ❖ UCF's Microsoft Word Template and other formatting resources
- The Format Review Assignment (required to meet format review deadline)
- Submitting the Format Review Assignment
- Instructions for defending and the Thesis and Dissertation Approval Form
- ❖ Information on digital accessibility, IRB, copyright, dissemination, and other policies
- Dissemination (Release) Option Policy
- When to Submit the Release Option
- Choosing Your Release Option
- Submitting the Release Option eForm
- Creating an ETD
- Thesis and Dissertation Approval Form
- Final thesis/dissertation submission
- UCF's institutional repository Instructions for the final submission process to the UCF's institutional repository, STARS

STARS: You must submit your final thesis/dissertation to the UCF <u>STARS</u> institutional repository. Your thesis or dissertation will be made publicly available through UCF's institutional repository, STARS. You must acknowledge that your thesis or dissertation will be publicly available on the Thesis and Dissertation (TD) Release Option form.

Visit the UCF <u>College of Graduate Studies (ucf.edu)</u> Thesis and Dissertation webpage for additional information.

Thesis

The thesis should be of significant scope and depth such that the work has made advances in the area of biotechnology and should lead to a publishable thesis. The MS thesis research must generate sufficient quantity and quality data to support the submission of a minimum of one manuscript.

Approval of the final thesis will require consent from the majority of the Program Faculty who choose to review the thesis, inclusive of the Thesis Advisory Committee. Faculty members with dissenting vote on the thesis must provide written justification. Scientific journal review criteria will be used as guidelines by the faculty to evaluate the final thesis for its appropriateness for publication in the target journal.

Students will be evaluated on the progress in thesis research by the thesis advisory committee for fall and spring. Two consecutive unsatisfactory evaluations will result in dismissal from the program.

Thesis Committee Pre-Defense Meeting Required

A pre-defense meeting with the full thesis committee is required for all MS Biotechnology students and must occur at least one semester prior to defending.

- **♣** BSBS MS Biotech Pre-Defense Meeting Form Part 1
- **BSBS MS Biotech Pre-Defense Meeting Form Part 2**

After consultation with the mentor/thesis committee chair and approval from the program, students can proceed to hold a pre-defense committee meeting.

- A meeting with the full thesis committee must occur at least **one semester prior** to the actual thesis defense date.
- Program Coordinator approval is needed before a student can hold a pre-defense meeting.
- MS Biotech Pre-defense DocuSign form (part 1) should be completed by student and mentor and submitted through DocuSign to the program office no later than one week before the pre-defense meeting. Program forms are located on the website.
- The form will be routed to the Program Coordinator for review and approval.
- Once approval is given, the student can begin scheduling the pre-defense meeting with the committee.
- MS Biotech Pre-defense DocuSign form (part 2) should be submitted by the student before the meeting to be completed by the mentor and committee at the end of the pre-defense meeting.

Once approved, the student can hold the pre-defense meeting.

During this "pre-defense" meeting, the student will present their thesis work. The committee will critically evaluate if the student has fulfilled all program requirements and is ready to proceed to defense.

The student is expected to present to the committee a comprehensive new body of work in a form of a pre-defense 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. After completion of this meeting, the student must submit a signed pre-defense meeting form

electronically to the Program Office that includes a statement that your advisor/committee agrees that all requirements are met to schedule your defense.

Thesis Defense

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

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

The thesis must be submitted to the committee and the program at least two weeks prior to the defense date.

- Pre-defense-requirements met Students are required to address all pre-defense meeting thesis concerns given to you from your committee members.
- Endorsement by the PI and committee is required.
- Approval from the committee and the program must be given before you can schedule your final thesis defense meeting.
- The Thesis defense will be held after feedback and comments from the Journal are available, and an approval from the thesis committee to defend the thesis.
- No review type articles can be used to fulfill the manuscript requirement.
- The thesis manuscript and the reviewers' comments must be submitted to the thesis committee for review and approval must be given at least two weeks prior to the thesis defense.

The MS thesis defense will consist of a seminar of the thesis outcome to the graduate program and the local scientific community, followed by questions from the audience.

- The seminar will be followed by a closed meeting with the thesis committee.
- Student's response to questions raised by present faculty, students and guests should be considered by the committee before voting.
- The majority of the thesis committee must vote positively for the student to pass.

Please follow the College of Graduate Studies abstract guidelines located in the Thesis and Dissertation Webcourse Modules. Please email BSBSGradForms@ucf.edu to request your template.

An Oral Thesis Defense is Required.

The thesis defense meeting will be in the format of:

- A 50-minute presentation of the thesis work, including a 5-minute introduction.
- A 10-minute free period for the general audience to ask questions.
- A 1-hour close-door examination by the Thesis Advisory Committee with all program faculty present.

Day of Your Defense and Approval Form

Please arrive early to prepare for your presentation and send your mentor a copy of your electronic MS Biotechnology Defense Program Approval Form, and your UCF College of Graduate Studies Thesis Defense Approval Form for signatures (at min) a week before your defense.

- (1) MS Biotechnology Graduate Students are required to obtain the MS Biotechnology Program Thesis Defense DocuSign Approval Form from the Program website for the defense.
 - **BSBS MS Biotechnology Thesis Defense Form**
- > (2) MS Biotechnology Graduate Students are also required to bring the College of Graduate Studies Dissertation Approval Form located on the CGS Webcourse.
- The review for original work must be completed prior to the committee signing the Thesis Approval Form.
- Please be aware that it may take a few days for you to obtain your signatures from your committee. Graduate Students are responsible for following up with the committee to obtain the status of the signatures if there is a delay. The student is required to notify the Program Office if there is a significant delay in collecting signatures.
- After your defense, you will have 1 week to ensure that your approval forms are electronically submitted to the Program Office by DocuSign or submitted to (<u>BSBSGradForms@ucf.edu</u>.)
 The Program Office will then obtain signatures from College of Medicine Dean, Program Director, and the Dean of the College of Graduate Studies.

Thesis Defense Announcement

The College of Graduate Studies requires all thesis/dissertation defense announcements to be distributed two weeks before your scheduled defense date. Your announcement will be distributed to the biomedical science program students, faculty, staff and the local scientific community.

Graduate students are required to complete, submit and email the thesis defense abstract along with the announcement to the Program Office at least 3 weeks prior to the defense. Approval from the committee and program must be given before distribution and posting. Include the following with your abstract:

- Thesis title
- Name of your Committee members
- Event Location (in person, virtual zoom, or hybrid)
- Abstract
- Publication Information List your publications in full citation format including authors, title, journal and year (as listed in any article).
- Please email BSBSGradForms@ucf.edu to request your template.

iThenticate Report Required

Review for Original Work

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 thesis chair is responsible for scheduling the submission of the thesis to iThenticate and reviewing the results from iThenticate with the student's advisory committee.
- The thesis chair is required to include a copy of the thesis iThenticate report when sending
 the written copy of the thesis to the committee members no later than 2 weeks prior to the
 final defense. Members of the thesis committee may ask for a paper copy of the thesis or
 an electronic copy (PDF) file.
- A copy of the ithenticate report must also be submitted to the program office <u>no later than 2 weeks prior</u> to the final defense to <u>BSBSGradForms@ucf.edu</u>.
- The ithenticate similarity score should not exceeds 20's%. If so, self-citation and references should be excluded.
- Before the student may be approved for final submission to the university, the thesis chair must indicate completion of the Review for Original Work through iThenticate by signing the Thesis Approval Form.

For further information about or assistance with iThenticate, please refer to the Office of Research & Commercialization's Responsible Conduct of Research.

MS Biotechnology Program Degree Audit Update:

Your graduate program degree GPS (audit) will be updated once the approval process is completed, and all program requirements have been met

Annual Review

Student Evaluations: Annual Review

You must meet with your Thesis Committee each year to complete your annual review of progress.

After the 1st Year, MS Biotechnology students will be evaluated on the progress in thesis research by the thesis advisory committee for Fall and Spring semesters.

The mentor and committee members will complete the student's Annual Evaluation Form after the student's presentation of research and the student will submit the form to the program office.

MS Biotechnology Annual Review Form

Students will be evaluated on the following:

- Quality Research work in Progress or Completed
- Quality of Journal and/or Conference Papers
- Potential to pursue Doctoral work
- Self-Motivation
- Overall knowledge needed for field of study
- Course work performance
- Dependability
- Overall assessment of performance (required)
- Academic Performance
- Research Potential
- Current Publications (submitted or published)
- Presentations / Other professional achievements of note

Unsatisfactory Laboratory Performance Review

Two consecutive unsatisfactory evaluations will result in reversion to non-degree status.

If the student received unsatisfactory grade in lab courses including thesis or unsatisfactory evaluation by the committee in the annual thesis review committee meeting, the program coordinator will give the student a written statement advising the student of a probation period during which specific improvements are expected. The time limit for improvement can't excel one semester. However, If the committee finds lack of satisfactory improvement following the probation, the student may be expelled from the MS Biotechnology Program.

Program Meeting Scheduling Policy

Proposal Defense / Annual Review/ Pre-Defense/ Defense/ etc.

- The student is responsible for scheduling the committee meeting date and time that will be amenable to all committee members.
- Once the committee meeting date is confirmed, the student is required to send the
 program an email on where the exam will be held (in person, virtual zoom, or hybrid)
 for approval BSBSGradInfo@ucf.edu.
- Once the approval is given, the student is responsible for contacting the program office to reserve the conference room for the "in person" meeting, no later than 3 weeks before the meeting. The program Office will assist with room reservations for the event.
 - Approved exam rooms for MS Thesis Defense: BBS 103 (Lake Nona) or HS II 345 (Main Campus)
 - Approved exam rooms for Committee Meetings and Annual Review: BBS conference or meeting rooms (Lake Nona)/ HS II 345 (Main Campus)/ BMS 136 (Main Campus)/ Research Annex Conf Room (Main Campus).
 - Please email Program Office for permission to use other facilities, especially if the meeting is held totally or partially by virtual connection.

For conference room reservations you may email:

BBS 103 (Lake Nona) – hscwelcomedesk@ucf.edu

HSII 345 (main campus) - HSIIReservations@ucf.edu

BMS 136A (main campus) -BMSReservations@ucf.edu

- If the meeting is to be held via zoom, it is the mentor responsibility to create a zoom link using UCF account. Please see the link to UCF Zoom Guide here.
- Thesis Defense Meeting If IT support is needed (In person, Zoom or Hybrid)
 The Program Office will submit a ticket to the UCF Health IT support Center requesting IT assistance for your thesis defense. Faculty mentors will be notified once the IT appointment is confirmed and will be instructed to contact the IT Support Center before the defense is held, if there are any questions.

All program forms must be signed and submitted by DocuSign or submitted to the Program Office electronically to BSBSGradforms@ucf.edu no later than 1 week after your meeting.

Graduate Research Policies

Research is such a vital part of the MS Biotechnology Graduate Program. The development of research skills and the practice of good research ethics begins when you accept the offer to join the program. Our Graduate Faculty serves a crucial role and are the primary source for teaching research skills and modeling research ethics.

Statement of Graduate Research

The Burnett School of Biomedical Sciences faculty are engaged in investigating research in cancer, cardiovascular, metabolic, molecular microbiology, neurodegenerative, and immunity & pathogenesis diseases. Our faculty research mentors are also committed to enhancing our graduate students' knowledge and graduate student experience.

Graduate students are expected to perform at a high level of professionalism, demonstrate collegiality while attending classes, fulfill GTA assignments, attend seminars and meetings, present data in meetings, be scientifically inquisitive, and contribute to the research to produce a publishable thesis to complete the program.

Research Ethics

The Office of Research offers a variety of teams and tools to assure research conducted at UCF adheres with regulatory guidelines and meets the highest standards of responsible conduct. To learn more go to https://www.research.ucf.edu/compliance.html

Research with animal subjects (IACUC)

The Animal Study Protocol or the IACUC protocol is a detailed description of the proposed use of animals prepared by the researcher for review and approval. Any activity that involves animal research, can only begin after an IACUC review. At UCF the IACUC is responsible for oversight and evaluation of the university animal care and use program, its procedures and facilities to ensure that they are consistent with the recommendations of the Guide, AWR, PHS Policy and IACUC Policies. Go to https://www.research.ucf.edu/IACUC/2021/Regulations.html

IRB - Institutional Review Board

The IRB is a committee established to protect the rights and welfare of human participants involved in research. All **Human Research** conducted by UCF faculty, staff, and students must be reviewed by the IRB and approved for compliance with regulatory and ethical requirements before it may be undertaken (unless the IRB determines that the activity is exempt from IRB review).

To ensure that thesis and dissertation research involving human subjects has been evaluated by the UCF Institutional Review Board (IRB) before data is collected, an IRB Checklist was placed on the GPS degree audit of <u>all</u> master's thesis and doctoral students for academic progress and degree certification purposes.

Graduate students are required to review the **UCF College of Graduate Studies IRB Requirements** in the Thesis and Dissertation Webcourse and review the IRB Office's "Human Research Determination" checklist on the IRB Policies and Procedures.

- https://www.research.ucf.edu/compliance/irb/investigators/index.html
- https://www.research.ucf.edu/compliance/irb.html

If you check yes for use of human subjects in your research on the IRB form, then you are required to submit your request through the Huron IRB system so you can obtain a formal determination letter to be included in your thesis.

Contact the IRB Office at <u>irb@ucf.edu</u> with any questions about whether your activity meets the definition of Human Research subject to IRB oversight, or to obtain a memorandum letter.

• Huron IRB – Proposal Frequently Asked Questions

BSBS Program IRB Form Required - MS Biotechnology graduate students are required to meet with the faculty mentor and submit the MS Biotechnology Program Graduate Research IRB Notification DocuSign form electronically to the program before the beginning of the Summer semester, first year.

Research Ethics

The Office of Research offers a variety of teams and tools to assure research conducted at UCF adheres with regulatory guidelines and meets the highest standards of responsible conduct. To learn more, go to https://www.research.ucf.edu/compliance.html

UCF's Patent and Invention Policy

University policy and federal law requires that intellectual property resulting from federally funded research must be disclosed to the Office of Technology Transfer (OTT). To learn more, go to https://tt.research.ucf.edu/our-policies/

Program Grading, Transfer Credits and Other Requirements

<u>Grades</u>

Grades of every student will be evaluated after each semester. A Grade point average of 3.0 is required.

See Policy Below:

- The program will allow a maximum of two "C" grades in the program.
- Any student who receives a grade below a C grade in any course will automatically be dismissed from the program.
- If a student's GPA falls below 3.0 but remains above 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.
- Thesis and Dissertation hours are graded Satisfactory/Unsatisfactory. Students can 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 **research or academic misconduct** will be immediately dismissed from the program.
- International students placed on probationary status will be sent to UCF Global for advisement regarding the immigration status implications of this action.
- The program allows only one W grade per course and no more than 3 W grades per Program Plan of Study.

Please review the full academic policies found in the <u>Academic Progress and Performance</u> section in the UCF Graduate Catalog.

Transfer Credit Policy

Courses taken at an accredited institution BEFORE a student is given graduate status at UCF may be transferred into the student's program of study.

- No more than 9 semester hours of graduate credit(s) (5000 level or more) may be transferred into the graduate program from UCF post-baccalaureate work or from other accredited institutions.
- Also, up to 9 credits of graduate coursework with a grade of 'B' or higher, completed as part of a baccalaureate degree from an accredited institution in the United States can be transferred.
- No Satisfactory/Unsatisfactory or Pass/Fail courses can transfer.
- Internal transfer courses (i.e., courses taken at UCF) will appear as a graded course on the transcript.
- Transfer of international credits may be permitted with the required Josef Silny and Associates, Inc. or World Education Services (WES) transcript evaluations (see Admissions Equivalency Information). For a graduate-level course to be considered for transfer, the course should have an equivalent course in the program at UCF. To help the graduate program director decide whether a course is equivalent to the course offered at UCF, the student should provide an official transcript listing the course name and number, and a syllabus for the course to be considered for transfer. If the official transcript or syllabus are not provided by the international institution in English, the student should provide a translation performed by a certified translator at the issuing institution, government agency, or by a translator certified by the American Translators Association (https://atanet.org/).
- Courses older than 7 years cannot be transferred.

Please email BSBSGradAppts@ucf.edu to meet with the program to review your courses.

All transfer credits to be used toward the master's degree should be finalized before the beginning of the Fall semester, 1st year.

Satisfactory Progress

Graduate students are required to meet with their committee members annually and the student is required to present to the committee achievements and plans for the next academic year. The committee must evaluate and grade the student progress and provide feedback to go forward.

Time Limitation for Degree Completion

The student has seven years from the date of admission to the master's program to complete the degree. Students may transfer in coursework according to the Transfer of Credit policy, however, courses older than seven years at the time of admission will not be transferred into the student's Program of Study. Students who anticipate being out for an extended period of three consecutive semesters or longer should apply for a Special Leave of Absence no later than the end of the add/drop period of the third semester of absence. Students who do not maintain continuous enrollment without a Special Leave of Absence (see Continuous Attendance and Special Leave of Absence in the General Graduate Policies) must file for readmission to the university, although seven years is measured from when the student was first admitted to the program.

Program Plan

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.

All students must review their program plan of study with their faculty mentor and submit the MS Biotechnology Program Plan Form to the Program Office by the beginning of the Spring semester, 1st Year.

The Program of Study plan must comply with the student's relevant catalog. This form should be prepared and signed by the adviser and student, then submitted electronically to the graduate program office for review and filing in the student's permanent file. The Program Office will submit this form to the College of Graduate Studies for you. Email BSBSGradAppts@ucf.edu if you need to schedule an appointment for advising.

Graduate Studies GPS Plan

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.

Regularly reviewing your GPS ensures you're aware of the courses, requirements, and milestones needed to graduate. Your degree is awarded once your GPS reflects all requirements have been met or "Satisfied." This is how to check your GPS.

- When you see "Not Satisfied" requirements, focus on the listed courses or information to identify what is still needed. The GPS is your starting point for tracking your progress and staying on top of your academic journey.
- Check your GPS often and stay on the path to success.

The GPS should be used with your Program of Study (POS). Reference your POS to make sure you're completing your program milestones in the order that you planned for and that they match the milestones listed in your GPS.

Graduate Program Registration

Graduate students will work with the Program Graduate Service Office to register for courses each semester. Graduate Students should review the program curriculum guide provided in this handbook before sending the registration request.

- **BSBS MS Biotechnology Registration Form**
- The Program Office will send out the approved list of graduate classes available before the beginning of each semester along with the procedures to register.
- Department consent is required for many of our graduate program courses. Graduate students must send their DocuSign Registration request form to the Program Office for registration assistance.
- Graduate students must meet with their faculty mentor first before submitting their DocuSign registration request form electronically to the Program Office.
- All holds must be removed before we can assist you with registration. Please send us your registration request form <u>after</u> your hold has been removed.
- MCB 6918 Directed Research or MCB 6971 Thesis Research The Registration of these courses must include the mentors "Description of Assignments and Expectation" and signature through DocuSign before submission.
- After you are registered, you are required to visit your myUCF account to review your research or thesis credits and also review the faculty advisor listed to ensure that your registration is correct. To view this information > Click on the course > "People" button in the menu on the left > view the instructor for the course.
- <u>Note:</u> It is the student's responsibility to check their myUCF to confirm their registration into the correct graduate level course. If there is a discrepancy, the student is required to email BSBSGradRegistration@ucf.edu before the registration deadline.

Directed Independent Study Courses

A maximum of three courses may be taken as independent study in the MS Biotechnology Program. (Program Approval is needed for Independent Study)

Independent Study (MCB 6908)

Independent study is only allowed in the absence of courses not offered or in order to meet the 6000-degree graduate course level requirement. Independent Study must have a formally defined core of knowledge to be learned by the student(s). The core of knowledge to be learned by the student(s) must be specified in written form and approved by the student(s), the instructor, and the program coordinator prior to enrollment in Independent Study.

First - Approved students must identify a faculty mentor from our graduate faculty list in your handbook that would be willing to create an independent study project course for you.

Next – Send the faculty the Independent Study registration form and syllabus draft to complete and submit signed forms to BSBSGradRegistration@ucf.edu for registration assistance.

- <u>Registration Form</u> Graduate students are required to submit the Independent Study Registration Agreement form.
- <u>Syllabus</u> Your course mentor/instructor will be required to create and submit an Independent Study Syllabus for your course (required by Graduate Studies).
 Note: The course syllabus must include the full description and detailed requirements for the course; course title, rational, learning outcomes, academic readings, writing, research activities, assignments, reports, required deadlines and meetings, grading scale policy (A-F), etc.
- Written Summary Graduate students will be required to submit a 3 5-page written summary/report for the Independent Study course to the Mentor/Faculty and the Program by the official end of the semester to receive a grade. Submit your report to BSBSGradForms@ucf.edu.

If you need to schedule an appointment to review your registration plan, please email BSBSGradAppts@ucf.edu.

Record Holds

A hold (negative service indicator) may be placed on a student's records, transcripts, grades, diplomas, or registration due to financial or other obligations to the University. Satisfaction and clearance of the hold is required before a release can be given. **Students may check for holds on the myUCF system at my.ucf.edu.** To obtain an immediate release for Student Accounts financial holds, you may make your credit card or e-check payment online from your student account. After making a successful payment, contact Student Account Services with the remit ID to confirm your payment and have your hold released.

Assistantships / Tuition Waivers & Additional Program Details

Graduate Assistantship Details

Students who have graduate teaching assignments are required to complete UCF GTA training before beginning their assistantships. International students who have graduate teaching associate or assistant positions will need to pass the Versant English Test administered by the UCF English Language Institute before beginning their assistantships. Graduate research assistants also have training requirements (for example, lab safety). Please see important information below and links to the Graduate Teaching and Graduate Assistant Guide.

MS Biotechnology Graduate Assistantship & Tuition Waivers

Students accepted in the program are eligible to receive financial support in the form of a Graduate Teaching Assistantship (GTA) or a Graduate Research Assistantship (GRA), and the accompanying of available tuition waiver for no more than a total of five semesters (i.e., Fall and Spring).

Stipends are currently \$16,000 to \$20,000 per year.

Students supported by GTA receive a standard annual stipend of \$16,000. If the student is supported on the mentor's grant by GRA, the stipend may be increased up to \$20,000 per year. The mentor must approve any increase above the standard annual stipend.

The latter requires approval from the mentor.

- These stipends support MS students for the full 12 months per year, and so students are expected to continue working in the laboratories when classes are not in session*.
- Absence for more than 2 weeks per year, exclusive of UCF-approved work holidays, will result in the loss of stipend for the period of absence.
- After the student has identified an advisor for thesis mentorship and that advisor assumes sponsorship of the student, then leave of absence from work must be approved by the advisor.

For research assistantship recipients, absence in the sponsoring laboratory for a period of more than three weeks may result in temporary or permanent withholding of the assistantship.

A student's eligibility to receive financial support will be reviewed at the end of each Fall and Spring semester.

Students receiving assistantships are expected to:

- Complete the Environmental Health & Safety workshops.
- Meet graduate school regulation regarding the Versant test, etc.
- Demonstrate dedication to research and teaching responsibilities.
- Maintain satisfactory academic performance Minimum 3.0 GPA.
- Complete Program Academic Integrity Requirements
- · Meet Program required deadlines

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 Covered
- Health Insurance covered
- Taxes are taken out on wages based on W4 information. Further advice can be directed
 to a tax professional or UCF Global if you are an international student.

Please visit the UCF College of Graduate Studies Website to learn more <u>UCF Graduate</u> <u>Assistantships</u>.

Tuition and Fee Payment

Tuition support pays matriculation and non-resident 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 scholarships or fellowships will receive a separate payment that will be deposited directly into your account.
- Graduate students should expect to pay about \$100 per credit hour in fees.

Note: Tuition Payments will be finalized after ADD/DROP of each semester you are in the program. Visit: 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. **Tuition covers the "Tuition" and "Out-of-State Fee" items in the Fee Schedule and not the local fees.** Visit <u>Student Account Services</u> to view current graduate tuition rates. Note: *Tuition waivers are subject to availability of funding.* To learn more about UCF Funding, visit https://graduate.ucf.edu/funding/.

Full-time Enrollment

A full-time degree-seeking graduate student must take at least 9 credit hours in the fall and spring semesters. A half-time load is defined as enrolled in at least 4.5 credit hours in fall and spring terms. During the summer term, full-time is 6 credit hours and half-time is 3 credit hours. Graduate students are part-time if they do not enroll as above except for two special cases:

• For master's students pursuing a thesis option and enrolled only in thesis coursework (XXX 6971), full-time enrollment is defined as 3 hours per semester (including summers, without skipping a semester) of thesis coursework (XXX 6971), after completion of all coursework and until graduation. Students who wish to enroll in part-time hours should consult their adviser.

UCF Fee Policy - Financial Matters

All fees must be paid by the Fee Payment Deadline. Graduate assistantship and fellowship students must be enrolled full time by the end of Add/Drop. The College of Graduate Studies reviews all assistantship and fellowship students for full-time enrollment requirements after Add/Drop closes and before the Payment Deadline and sends notices via e-mail to students who are not in compliance with university full-time enrollment requirements. In addition, the College of Graduate Studies continues to review assistantship and fellowship students throughout the semester to ensure they remain in compliance with university requirements to receive their financial support.

Students are responsible for completing any required assistantship hiring documents and fellowship award documents in order to assist the university in processing payments. They are also responsible for reviewing their university records (e.g., fee invoice, enrollment record, financial aid record) and reporting any discrepancies to their academic program office or the appropriate student services office.

If tuition remission (e.g., department or project payment, tuition waiver) is not recorded on a student's Fee Invoice by the Payment Deadline, the student must pay all tuition and fees. If partial tuition remission is provided, the student must pay the remainder of the tuition owed by the Payment Deadline. Assistantship students who have questions about their tuition remission may e-mail gradassistantship@ucf.edu and inquire about the status of their tuition remission. University fellowship students should contact gradfellowship@ucf.edu.

Be sure to check the official UCF Academic Calendar and the Tuition and Fees Schedule for the current academic year fees and deadlines.

Financial Aid Funding

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. To learn about UCF financial assistance opportunities, visit Funding. For student loans and other funding sources, you should also visit the Office of Student Financial Assistance site at finaid.ucf.edu.

Visit the <u>College of Graduate Studies Funding Website</u> for information about specific funding, awards, and fellowships opportunities.

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)

GTAs may be assigned as instructors of record for undergraduate courses, as assistants to the faculty in their teaching responsibilities or in other roles directly related to credit earning formal course instruction, or as tutors for students on specific course-related material or general skills. GTAs assisting members of the faculty may have responsibilities that include assisting in laboratory courses, grading, and preparation of course materials, or performing clerical tasks associated with course instruction.

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.

MS Biotechnology Graduate Program Leave Policy

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

BSBS Program Leave Request Form

Students must discuss the leave with their mentor and/or GTA supervisor, then complete the **BSBS 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 MS Biotechnology Program Leave form must be approved two weeks in advance of the requested date(s).

Program 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.

Each student must have an up-to-date emergency e-mail address and cell phone number by which to be reached in case of a crisis on campus. This emergency contact information will be used only for emergency purposes. Also, both permanent and local mailing addresses must be on record, so that any physical documents that must be mailed can be delivered. It is critical that students maintain and regularly check their Email account for official announcements and notifications. Communications sent to the Email address on record will be deemed adequate notice for all university communication, including issues related to academics, finances, registration, parking, and all other matters. The University does not accept responsibility if official communication fails to reach a student who has not registered for, or maintained and checked on a regular basis, their Email account. Please ensure that this information is current and that any changes in contact information are made online through the myUCF portal at https://my.ucf.edu/.

Absences

Students who anticipate that they may not be able to enroll continuously due to external circumstances should apply for <u>Special Leave of Absence</u>. Specifically, students who are taking courses should apply for a Special Leave of Absence when they cannot enroll in more than two consecutive semesters. Students who are in thesis/dissertation hours should apply for a Special Leave of Absence when they cannot enroll in every semester (including summer). To qualify for a Special Leave of Absence, the student must demonstrate good cause (e.g., illness, family issues, financial difficulties, personal circumstances, recent maternity/paternity, employment issues). The specific reason for the Leave of Absence request must be indicated by the student on the <u>Leave of Absence Form</u>. Due to current U.S. government regulations, international students must be enrolled every fall and spring semester.

Professional Seminars, Program Colloquium and Symposia

Program Seminars

Students are strongly encouraged to attend departmental seminars including the weekly Friday seminars, the research divisions meetings, and guest seminars.

College of Graduate Studies Presentation Fellowship

Students should take opportunities to present a poster or a topic of research at a conference. The Presentation Fellowship is a great opportunity for students who plan to present a research paper or comparable creative activity at a professional conference. This fellowship provides funding for

enrolled master's, specialist, and doctoral students to share their research at a professional meeting. Students must be the primary author and presenter. 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 Fellowship website at https://graduate.ucf.edu/thesis-and-dissertation/.

Graduate Research Forum/Symposium

The College of Graduate Studies hosts an annual Research Forum to provide a conference setting for our own students to showcase their work either with poster presentations or a face-to-face presentation. Graduate students are encouraged to participate in the <u>Graduate Research Forum</u>.

3MT

Int the Fall and Spring Semesters, the College of Graduate Studies hosts a Three Minute Thesis (3MT) Competition for graduate students. Doctoral students communicate their research in just three short minutes and with only one PowerPoint slide to non-expert judges while competing to win scholarship awards. Graduate students are encouraged to participate in this event. For questions about this event, please email gradworkshops@ucf.edu.

Posters and PowerPoint

The UCF College of Medicine's Educational Technology department offers **free printing of posters** and **PowerPoint** templates for COM faculty, staff and students that promote UCF and the college. Contact: comedtech@ucf.edu

Posters

The college has created several templates to be used for all poster presentations in accordance with new university-wide brand standards that reflect a modern, cohesive look for all materials that reflect the university. The purpose of these templates is to create professional posters that reflect the UCF brand and provide a consistent look. Additionally, the template should facilitate your efforts in creating posters.

- The templates provide a choice of either a black or yellow banner for your poster (links below) as well as the university-approved font Gotham.
- Since there is a fee associated with installing this font on your computer, please use another font and Ed Tech will change the font for you prior to printing.
- We don't want to restrict creativity, so feel free to design the body of your poster any way
 you feel appropriate, but we will enforce the following standards for the banner
- Must be either black or yellow background
- Must include the approved COM logo
- Title of poster must be either yellow or black

PowerPoint

These PowerPoint templates contain multiple slide designs and photo options you may use for your own presentations. We've included a 4:3 presentation format and a 16:9 format.

- These templates are set up with the font Helvetica.
- Arial may be used as a substitute font. If you have the font <u>Gotham</u> installed on your computer, please feel free to convert all text to that font.

(Note: If you are sharing your final PowerPoint with other users who do not have Gotham, the document fonts will not display correctly.) For more information please click here.

UCF College of Graduate Studies Catalog / Handbook/ Policies

The UCF Graduate Catalog contains a description of the various policies, graduate programs, degree requirements, course offerings, and related matters intended to be in effect at the University of Central Florida during each academic year. However, any matter described in the catalog is subject to change.

The UCF Graduate Handbook is intended to familiarize graduate students with the procedures, policies, and expectations of the University of Central Florida Graduate program. The Handbook is intended to familiarize graduate students with the procedures, policies, and expectations of the University of Central Florida Graduate programs from a general institutional perspective. Students should refer to their relevant Program Handbook for more specific graduate information. By reading, understanding, and adhering to the information provided in this document, students may be better equipped for success. This handbook is also designed to help you when you face challenges along your educational path.

It is the student's responsibility to review and become familiar with all graduate policies. To learn more, see links to the UCF Graduate Catalog and the UCF College of Graduate Studies Graduate Student Handbook below.

UCF Graduate Catalog

- Academic Progress
- Review of Academic Progress
- Program GPA
- Probationary Status and Dismissal
- Maximum Hours of Unsatisfactory Grades
- Incomplete Grades
- Transfer Credit
- Course Requirements
- 6000 and 7000 Graduate Level Courses

UCF Graduate Student Handbook

- Student Handbook Intro
- Financial Matters
- Role of the College of Graduate Studies
- Commitment to Diversity
- Admissions
- Registration
- Standards of Conduct and Responsibility
- Academic Environment
- Expectations of Graduate Faculty
- Expectations of Graduate Students
- Expectations of Graduate Departments and Programs
- Expectations of Graduate School
- Rights
- Academic Appeals
- Record Holds
- Withdrawals
- Florida Residency

GRADUATION

Quick Check: Are you Ready for <u>Graduation</u>

Review your Graduate Plan of Study (GPS). Access and review your GPS degree audit for any outstanding degree requirements or other items (holds, milestones, checklists) that you may need help updating or correcting. Enroll in your remaining requirements or reach out to us if you have any questions.

File Your Intent to Graduate

You must first be approved by the MS Program Coordinator before filing your online intent to graduate through your myUCF portal. *Approved Pre-Defense required*.

Graduate students who plan to graduate are required to meet with the Program Office <u>one</u> <u>semester prior</u> to graduation to review their degree audit and program specific requirements. Any outstanding requirements not met must be addressed immediately.

Email BSBSGradAppts@ucf.edu to schedule your appointment.

Please be aware that if the Intent to Graduate form is submitted after the term deadline, **students** will <u>no longer be eligible</u> to participate in the Commencement Ceremony for this semester and their name <u>will not appear</u> in the list of degree candidates within the associated Commencement Program.

To file your Intent to Graduate (ITG). First, check the <u>UCF Academic Calendar</u> for important dates and deadlines. The deadline to submit your Intent to Graduate occurs during the semester preceding the semester you intend to graduate. Next, file your Intent to Graduate form online through myUCF > Student Self Service >> Other Academic Menu >> Intent to Graduate

Once you submit your Intent to Graduate, your initial status will be updated as "Applied" then moved to "Pending" after the Program and College of Graduate Studies review.

Your status will change to "Awarded" and you will be certified to graduate by the Program Office and the College of Graduate Studies once all program and University requirements are met.

Check your UCF email and verify personal information. Your UCF email is the official method of communication for the university. All UCF offices will communicate vital information related to the Intent to Graduate process through your UCF email. For accurate and efficient diploma awarding, verify that your personal information (phone number, email address, mailing address) and academic information in myUCF is current and update it if needed.

Commencement /Tickets/ Cap and Gown:

Graduate students are responsible for visiting the UCF Commencement Website to learn about important graduation information, deadlines, requirements and resources. Explore the UCF Commencement website. Visit the <u>commencement</u> website for cap and gown information, ticket information, a schedule of events, and additional resources to prepare for your big day.

Diploma:

You will receive your diploma at Commencement, or it will be mailed approximately 6 to 10 weeks after the commencement ceremony to the address indicated on your Intent to Graduate form. Students who have changed their address should contact the College of Graduate Studies at graddegr@ucf.edu. Questions can be directed to the College of Graduate Studies at 407-823-2766. Diplomas cannot be released if you have a nonacademic hold. It is your responsibility to resolve holds as quickly as possible.

UCF Transcripts

Your transcripts, showing the degree has been awarded, will be mailed approximately 6 to 10 weeks after the commencement ceremony to the address indicated on your Intent to Graduate form. Students who have changed their address should contact the College of Graduate Studies at graddegr@ucf.edu. Questions can be directed to the College of Graduate Studies at 407-823-2766. Diplomas cannot be released if you have a nonacademic hold. It is your responsibility to resolve holds as quickly as possible.

The Registrar's Office has an online site where you can order your final, official transcripts and you can request to have it held for delivery until it shows the degree has been earned. In advance of your final transcripts being available, if you need an official letter showing that you have met all of the degree requirements, you can request this from the UCF Graduate College. Please email or call (407/823-2766 ext. 0) for additional information.

<u>Student Account Services</u> and the <u>Registrar's Office</u> will notify students of any outstanding financial obligations prior to the Commencement ceremony. All financial obligations must be met in order to receive a diploma and official transcripts. Transcripts that reflect the degree earned will be available approximately 4-6 weeks after the ceremony and requests may be made through the Registrar's Office.

Withdraw your Intent Form

Please contact the Program Office if you need to withdraw your graduation application on file.

Job Search and Career Pathways

Our graduate students that have completed the programs are prepared to enter a career in fields related to biotechnology or continue their graduate/professional education at universities all over the country.

MS Graduates

Our graduate students that have completed the programs are prepared to enter a career in fields related to biomedical sciences or continue their graduate/professional education at universities all over the country.

<u>Positions: Graduate school, Professional Health/Medical School, Scientists, Research Tech, Academics</u>

- St. George University School of Medicine, Grenada, West Indies
- Department of Homeland Security
- Edgewell Personal Care
- United States Department of Agriculture (USDA)
- Roche Molecular Systems
- Noble International Incorporated

- University of Massachusetts Medical School
- University of Central Florida PhD Biomedical Sciences Program
- University of Central Florida MD Program
- Yale University MD Program
- University of North Carolina Chapel Hill-PhD Program
- Cornell University PhD Program
- University of Miami MD Program
- University of Florida MD Program
- University of Florida PhD Program
- Nova Southeastern University MD Program
- Brandeis University PhD Program
- University of Colorado Anschutz Medical Campus Lab Technician
- Adjunct Professor Valencia College
- Johnson & Johnson
- University of Miami's Miller School of Medicine
- Boehringer Ingelheim Regenerative Medicine Intern
- University of Central Florida Laboratory Technician

UCF STUDENT CAREER SERVICES

UCF Career Services Office has numerous resources and services to offer as you search for the right major or prepare for your job search. It's never too early or too late to work on your professional development plan. Please visit Career Services | University of Central Florida to review the following services below.

ACCESS HANDSHAKE	EXPLORE CAREERS	GRADUATE SCHOOL	JOB SEARCH
RESUMES/COVER LETTERS	INTERVIEW PREP	UPCOMING EVENTS	EMPLOYMENT OUTCOMES
REQUEST AN OUTREACH PRESENTATION		COLLEGE WORK EX	(PERIENCE PROGRAM

Phone: 407-823-2361

Email

career@ucf.edu

Address

Kenneth G. Dixon Career Development Center, Building 140

4123 Pictor Lane Orlando, FL 32816

International Students

UCF Global at the University of Central Florida functions as the primary international hub for students, faculty, and staff. UCF Global also provides expert advising services in the areas of a student's academic and immigration matters

UCF Global Website: http://global.ucf.edu/
UCF College of Sciences
12716 Pegasus Drive, Suite 300
Orlando, FL 32816

Phone: (407)823-2337 | Fax: (407)823-2526 | Email Contact: UCFGlobal@ucf.edu

The Versant English Test

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. 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). Test Dates and Registration - https://global.ucf.edu/english-test/

Please visit <u>UCF Global Intensive English Program</u> for information about the Intensive English Program and helpful information and tips about student life at the University of Central Florida.

Considerations for International Students

All international students on F or J visas must maintain full-time, degree-seeking status regardless of financial support received from the university. F and J visa holders should contact UCF Global to ensure that their enrollment conforms to the full-time definition of their visa status. International students should not change their course schedule or drop classes without advisement from UCF Global. To learn more please review How to Maintain F1 and J1 status.

Reduce Course Load

While international students must maintain full-time enrollment for the duration of their program, immigration regulations allow exceptions to the full-time enrollment requirement. Prior to dropping below the full-time enrollment requirement, students must receive approval from UCF Global by submitting a Reduced Course Load (RCL) form that explains the nature of the reduced hours. Visit UCF Global to obtain a copy of the (RCL) form.

<u>Assistantships</u> - Students receiving fellowships or assistantships should consult with the Graduate College's Financial Assistance Office before considering dropping a course if they will become part-time as a consequence. Students should contact the following: gradfellowship@ucf.edu or <a href="mailto:gradfellowship@uc

ENROLLMENT GUIDELINES

As an international student in F-1 of J-1 status, enrolling full-time is one of the key requirements of maintaining lawful status. Enrolling full-time is also referred to as maintaining a "full course load" or "full course of study." Immigration regulations restrict the number of online courses international students may count toward meeting their minimum enrollment requirement. Refer to the charts on the website for the full-time enrollment requirements of each program. Please visit the UCF Global website (modalities of classes) to learn more.

Additional Student Resources

Student Care Services

<u>Student Care Services</u> is committed to supporting students through life's challenges, ensuring they have the resources and guidance needed to thrive personally and academically. We assist students facing personal hardships, academic concerns, well-being challenges, or unexpected crises. Whether navigating a difficult situation or seeking proactive support, our team is here to help.

How We Help - We provide:

- **Personalized Support** One-on-one guidance to help students manage challenges and find solutions.
- Crisis Intervention Immediate support for students experiencing emergencies or distress.
- Advocacy & Referrals Connection to campus and community resources for financial, legal, mental health, and basic needs assistance.
- **Absence Notifications** Coordination with faculty when students experience significant life disruptions.
- **Well-Being Initiatives** Programs and workshops designed to foster resilience, balance, and success.

No matter the challenge, you are not alone. We are here to listen, support, and empower you. Do not hesitate to contact Student Care Services with any questions or concerns at (407)823-5607 Monday-Friday 8am-5pm or at caremanager@ucf.edu.

Counseling and Psychological Services (CAPS)

Counseling and Psychological Services (CAPS) offers a wide range of free mental health services to undergraduate and graduate students.

Services include:

- Single, solution-focused sessions
- Short-term individual and relationship counseling
- Group therapy
- Crisis services
- Assisting faculty and staff with student referrals

Some of the ways we can help include managing:

- Stress and Anxiety
- Panic attacks
- Depression
- Relationship problems with friends or romantic partners
- Academic difficulties
- Adjustment to college or homesickness

Here is how students can access CAPS:

- Scheduling online or by phone 407-UCF-2811
- Same day drop-in service or schedule appointments at convenience
- In-person or Tele-mental health services (or hybrid)
- After-Hours Crisis Line (24/7 access to a therapist)

Walk-ins are welcome! You can find us here.

Institutional Policies

Nondiscrimination & Accommodations Compliance

The University of Central Florida considers its students, faculty, and staff to be a strength and critical to its educational mission. UCF expects every member of the university community to contribute to a respectful culture for all in its classrooms, work environments, and at campus events. Title IX prohibits sex discrimination, including sexual misconduct, sexual violence, sexual harassment, and retaliation. If you or someone you know has been harassed or assaulted, you can find resources available to support the victim, including confidential resources and information concerning reporting options at https://letsbeclear.ucf.edu and https://cares.sdes.ucf.edu/.

If there are aspects of the design, instruction, and/or experiences within this course that result in barriers or accurate assessment of achievement, please notify the instructor as soon as possible and/or contact Student Accessibility Services.

For more information on Title IX, accessibility, or UCF's complaint processes contact: Title IX – ONAC https://onac.ucf.edu/ & onac@ucf.edu

The IX - ONAO https://onao.doi.edd/ & onao(gaer.edd)

Disability Accommodation – Student Accessibility Services https://sas.sswb.ucf.edu/ & sas.gwb.ucf.edu/ & sas

Student Complaints and Appeals – https://www.sdes.ucf.edu/student-complaints-and-appeals/ UCF Compliance and Ethics Office – http://compliance.ucf.edu/ & complianceandethics@ucf.edu

Ombuds Office - http://www.ombuds.ucf.edu

The University Ombuds Office provides all members of the university community (students, staff, faculty, and others) an informal, independent, confidential, neutral office that offers assistance and impartial advice regarding concerns related to the University. The University Ombuds Officer will listen to concerns and will facilitate resolution of problems.

Accommodation

Student Accessibility Services (SAS)

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. Graduate students with disabilities must contact the professor at the beginning/or prior to the semester to discuss the accommodation needed. Students who need accommodation must be registered with the Student Accessibility Services office. For more information, please visit Student Accessibility Services website at https://sas.sswb.ucf.edu/ and use the links in the navigation bar to learn more about the SAS resources and processes. Contact: sas@ucf.edu or (407) 823-2371

Communication

Each year the Program Director and Coordinators hold an annual meeting in an open forum with all graduate students. The College of Medicine Dean also attends the meeting to share the strategic plans for the college and the department and to speak with graduate students. Other guest speakers are also invited to speak to students about other topics important to students.

Program updates, successes, challenges, and assessments are shared during the meeting and a question-and-answer session is held to give students an opportunity to share their suggestions, concerns, and any feedback they may have. This meeting provides an open line of communication between the students and Program Leadership. New ideas and suggestions are welcomed to help improve graduate student overall experience.

Student Responsibility for University Communication

UCF uses email as the official means of notifying students of important university business and academic information concerning registration, deadlines, financial assistance, scholarships, student accounts (including tuition and fees), academic progress and problems, and many other critical items for satisfactory completion of a UCF degree program. The university sends all business-related and academic messages to a student's email address to ensure that there is one repository for that information. Every student must register for and maintain an email account at and check it regularly to avoid missing important and critical information from the university. Any difficulty with establishing an account or with accessing an established account must be resolved through the UCF Computer Services Service Desk so that a student receives all important messages.

Additionally, each student must have an up-to-date emergency e-mail address and cell phone number by which to be reached in case of a crisis on campus. This emergency contact information will be used only for emergency purposes. Also, both permanent and local mailing addresses must be on record, so that any physical documents that must be mailed can be delivered. It is critical that students maintain and regularly check their Email account for official announcements and notifications. Communications sent to the Email address on record will be deemed adequate notice for all university communication, including issues related to academics, finances, registration, parking, and all other matters. The University does not accept responsibility if official communication fails to reach a student who has not registered for, or maintained and checked on a regular basis, their Email account. Please ensure that this information is current and that any changes in contact information are made online through the myUCF portal at https://my.ucf.edu/.

Harassment

Discrimination on the basis of race, sex, national origin, religion, age, disability, marital status, parental status, veterans' status, sexual orientation, or genetic information is prohibited.

Sexual harassment, a form of sex discrimination, is defined as unwelcome sexual advances, requests for sexual favors, or verbal or physical conduct of a sexual nature including any of these three situations.

- 1. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or enrollment.
- 2. Submission to or rejection of such conduct by an individual is used as the basis for employment or enrollment decisions affecting such individual.
- 3. Such conduct has the purpose or effect of substantially interfering with an individual's work performance or enrollment, or creating an intimidating, hostile, or offensive working or academic environment.

Sexual harassment is strictly prohibited. Occurrences will be dealt with in accordance with the guidelines above and university rules. Employees, students, or applicants for employment or

admission may obtain further information on this policy, including grievance procedures, from the ONAC Coordinator. The Director of the Office of Nondiscrimination & Accommodations Compliance is the campus Equity Coordinator responsible for concerns in all areas of discrimination. The office is located on the main campus, in Barbara Ying CMMS Building 81, Suite 101. The phone number is (407) 823-1336. **Policies and guidelines are available online at https://onac.ucf.edu/.**

Student Security Guidelines

To maintain a secure and reliable network, UCF strives to inform all UCF employees and students of the policies which govern the use of UCF computing services and networks. The Information Security Office is available to help provide guidance and resources to improve your information security. If you have questions, please contact infosec@ucf.edu. Visit Information Security Brochure for Students to learn more. If you have questions about your data privacy and security obligations, please contact privacy@ucf.edu for assistance. To learn more about the importance of protecting restricted and related data at UCF visit: University Compliance, Ethics, and Risk.

How to Get Involved

As a graduate student at UCF, you have a multitude of opportunities to become involved on campus and in your academic discipline. This involvement often enhances your academic, professional, and personal growth through developing advanced leadership, communication, and collaboration skills. It also provides opportunities for professional networking.

In Our Discipline

In our discipline graduate students have the opportunity to attend seminars, present at program and university symposiums, colloquiums and other events, and can take an active role in our Burnett School of Biomedical Sciences Graduate Student Association.

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 Master's and PhD programs.

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.

Check us out on our Facebook page!

- Like our Facebook Page: https://www.facebook.com/bsgsaucf/?ref=br-rs
- Join our Facebook Group: https://www.facebook.com/groups/bsgsaucf/
- Follow us on Instagram: https://www.instagram.com/bsbsgsa/
- Contact us at: bsbsqsa@qmail.com

UCF Graduate Student Association (GSA)

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 involved, please or get visit facebook.com/groups/UCFgsa/ or contact Information:gsa@ucf.edu

For the complete list of Registered Student Organizations (RSO) at UCF please visit the knights connect website at: https://knightconnect.campuslabs.com/engage/organizations. For information about student organizations please visit: http://osi.ucf.edu/student-orgs.

The Office of Student Involvement (OSI)

The Office of Student Involvement supports student success and enhances the campus environment by focusing on our core principles – *Connect, Involve, Impact* -through quality programs, services, student leadership opportunities, and intentional environments. Visit the Student Involvement website to view the list of over 670+ Registered Student Organizations across all UCF Campuses.

Graduate Student Center

The UCF <u>Graduate Student Center</u> provides a space for graduate students to gather for professional development, workshops, rehearsal of presentations, defenses of their thesis or dissertation research, guest lectures and colloquia series, study, and collaborate. Located on the second floor in suite 213 of Trevor Colbourn Hall Building, the Graduate Student Center is just minutes from the Student Union, Bookstore, Library, and Millican Hall services. The Graduate Student Center contains four main areas: multipurpose study and collaboration area, presentation room, conference room, and study and data analysis rooms. To check availability call or email <u>gradcenter@ucf.edu</u>.

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^{*}Eligible to serve on thesis/dissertation committees as external member

^{**}Denotes BSBS program teaching faculty

Facilities

Faculty and staff are located in five areas: The <u>Biomedical Science</u> Building and <u>Health Sciences II</u> Building on Main Campus, the <u>Biomedical Research</u> Annex in Research Park, the <u>Burnett Biomedical Sciences</u> Building adjacent to the College of Medicine, and the Lake Nona <u>Cancer Center</u> at the Lake Nona Medical City Campus.

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Biomedical Sciences Building, Main Campus



Health Sciences II Building, Main Campus



Burnett Biomedical Sciences Building, Health Science Campus



Biomedical ResearchAnnex, Research Park



UCF Lake Nona 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. Shuttles do not operate on non-class days

For the safety of passengers on board, shuttles will only stop at designated stops and there are no intermediate stops along the way. A valid UCF ID is required to access all UCF shuttles with the exception of the Pegasus Express intra campus shuttle. Students can also access shuttles with a photo of their UCF ID or picture of class schedule shown on their mobile devices (or have the ability to log into My UCF portal using their mobile devices).

For the latest schedule updates please visit the Parking Services website at http://parking.ucf.edu/shuttles/health-sciences-schedule/

Parking and Transportation

https://parking.ucf.edu/

All students must register their vehicle online. The registered owner of the permit is responsible for all infractions and penalties attributed to the permit, even if expired. All vehicles on campus must park nose-in and plate out. No back-in or pull-through parking is allowed. Failure to park nose-in may result in a citation.

There are 15 regular off-campus, fixed shuttle routes between the UCF campus and the following 22 off-campus apartment complexes and Central Florida Research Park. Parking & Transportation Services also provides an on-campus shuttle system called Pegasus.

The UCF Shuttles operate every class day excluding weekends. Please visit https://parking.ucf.edu/shuttles/ to learn more.

- Purchase a permit
- Parking FAQs

Main Campus Parking Garage status can be found here: <u>Homepage - UCF Parking</u> Services

Forms/Useful Links/Resources

MS Biotechnology Program Forms

Program forms are available on our website.

- MS Biotechnology Committee Form
- MS Biotechnology Thesis Proposal/Comprehensive Exam Form
- MS Biotechnology Program Plan Form
- MS Biotechnology Annual Review Meeting Form
- MS Biotechnology Thesis Pre-Defense Form
- MS Biotechnology Program Thesis Defense Form
- MS Biotechnology CITI
 You are required to send us a copy of your CITI certificates after you complete
 the course to confirm this program requirement.

Useful Links/Resources

Explore Further

- Knights Email
 - NID Help
 - Academic Calendar
 - Campus Map
 - Shuttles Parking Services
 - Parking Services
 - Student Union Food and Vendors
 - Dining Services
 - Restaurants and Eateries
- Knights Pantry
- Housing and Residence Life
- Housing, off campus
- Student Health Services
- Counseling Center
- Financial Assistance
- Bookstore
- Library
- UCF Library Services for Grad Students
- Recreation Center
- Writing Center
- Graduate Catalog
- College of Graduate Studies
- Thesis and Dissertation (ETD)
- Golden Rule Student Handbook
- Graduate Student Association
- Graduate Student Center
- Events and Activities
- Pathways to Success
- Traveling Scholar Form
- Career Services
- BSBS Program Website

Program Contact Information

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 your questions!

We are available to assist you by phone, email or by Zoom appointment.

Program Email Contact

- <u>BSBSGradInfo@ucf.edu</u> Send general program inquiries to this account.
- BSBSGradForms@ucf.edu Submit all programs forms electronically to this account.
- BSBSGradRegistration@ucf.edu Submit all registration inquiries electronically to this account.
- BSBSGradAppts@ucf.edu Send your request to schedule an appointment to this account.

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 MS Biotechnology Thesis 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 coordinator.