The Graduate School *of the* Stowers Institute™ for Medical Research

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Catalog & Handbook

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MISSION STATEMENT

The mission of The Graduate School of the Stowers Institute for Medical Research is to prepare a superb cadre of predoctoral researchers from around the world for the pursuit of innovative and creative investigations in the biological sciences.

VISION STATEMENT

The Graduate School of the Stowers Institute for Medical Research will prepare a select group of scientists whose truly transformative and integrative approaches to research will revolutionize 21st century biology.

PROGRAM VALUES

The program focuses on extending the ability of students through hands-on laboratory experience that stresses highly critical thinking in combination with in-depth training in the latest methodologies.

PROGRAM PHILOSOPHY

GSSIMR is designed to provide exceptionally talented students with mentorship and hands-on experience to refine their abilities to carry out independent biological research. The program emphasizes research as the primary component and seeks applicants with strong records of research as undergraduates and postgraduates. In addition, it is important that the students come to GSSIMR with a high level of general knowledge and are willing to pursue the growth of that general knowledge on their own time.

CORE COMPETENCIES STATEMENT

The Core Competencies are a set of standards in which students must demonstrate proficiency prior to program completion. These standards incorporate the mission, vision, program values, and program philosophy into actions that can be assessed and evaluated to ensure GSSIMR graduates are prepared for their next steps in pursuit of innovative and creative investigations in the biological sciences**.**

CORE COMPETENCIES

Students will demonstrate competency in each of these areas upon completion of their degree program.

1. Research Leadership

Students will manage a scientific project by identifying significant biological problems, formulating hypotheses, considering a variety of experimental approaches, interpreting data from experiments using knowledge gleaned from literature, and discussing their ideas and results with other scientists.

2. Critical Thinking

Students will demonstrate a strong capacity for critical thinking by reading, analyzing, and critiquing scientific articles and by critically assessing scientific talks. Using this knowledge, students will identify gaps in knowledge and develop questions and experiments to address those gaps.

3. Scientific Knowledge

Students will acquire strong scientific knowledge in their area of research and will use evidence from primary literature and laboratory expertise to demonstrate their knowledge of concepts, methods and models, including how they were derived and used. Students will exhibit a broad basis of knowledge about other areas of research.

4. Experimental Skills

Students will independently research appropriate scientific methods suitable for a biological question, devise applicable experiments with controls, execute the experiments in an organized and precise fashion, interpret the experimental results, perform appropriate statistical tests, and trouble-shoot experiments as necessary.

5. Scientific Communication

Students will communicate their research by writing and presenting. They will write hypothesis-driven research proposals and descriptions of scientific discoveries, such as a scientific manuscript and/or a thesis of their own original research contributions and develop and refine their own writing through editing. Students will create and present scientific talks that include an introduction, results and conclusions, effective graphics and slide content, and will respond to scientific questions.

6. *Professional & Ethical Behavior*

Students will conduct themselves professionally and ethically as scientists. They will record and manage data with scientific integrity, comply with safety standards in the laboratory, communicate about situations when they observe unethical or unsafe behaviors by others, and be a collegial and reliable lab member and colleague.

HISTORY OF GSSIMR

GSSIMR was created by the scientists of the Stowers Institute for Medical Research (SIMR), with leadership from Scott Hawley who was later named the first Dean of the program. Together the Dean and faculty developed a graduate school that complemented the SIMR mission, "To make a significant contribution to humanity through medical research by expanding our understanding of the secrets of life, and by improving life's quality through innovative approaches to the causes, treatment, and prevention of diseases."

SIMR was established in 1994 through the extraordinary generosity of cancer survivors James "Jim" E. Stowers Jr., the founder of American Century Investments, and his wife Virginia G. Stowers, who dedicated their personal fortune to improving human health through basic research.

SIMR opened its doors to the first scientific research teams in November 2000 after completion of its state-of-the-art research facility in Kansas City, Missouri. Currently, SIMR is home to nearly 500 researchers and support personnel (including 100 postdoctoral research associates and 60 students), 17 independent research programs, and more than a dozen technology development and core facilities. Notable discoveries from SIMR's laboratories appear regularly in the leading peer-reviewed journals in biomedicine. Stowers scientists have established SIMR's international reputation for highest quality basic research aimed at finding answers to some of the most important questions of human biology, health, and disease.

GSSIMR admitted its first class of 9 students in 2012. The program continues to grow and there are currently 58 students in the program and 40 Ph.D. graduates. Students are in 14 labs of the 17 independent research programs.

GSSIMR is accredited by the Higher Learning Commission (hlcommission.org), an institutional accreditor recognized by the U.S. Department of Education. Initial full accreditation was awarded November 4, 2021.

GSSIMR is a 501(c)(3) nonprofit corporation, incorporated in Missouri with a primary mission of providing graduate education relating to medical or scientific research, with an emphasis on innovative research techniques. The Stowers Institute for Medical Research ("SIMR"), a Medical Research Organization as defined in the Internal Revenue Code, is the sole corporate member of GSSIMR. GSSIMR and SIMR are members of the Stowers Group of Companies which is a unique group of interrelated nonprofit and for-profit organizations, each of which pursues different goals in furtherance of a common mission to make a significant contribution to humanity through medical research.

ADMINISTRATION

The daily operation of the graduate program is directed by the Dean, the Vice Dean, the Associate Dean for Administration & Registrar, the Assistant Dean for Administration and Assessment, the Assistant Dean for Academic Affairs, and the Assistant Dean for Student and Postdoctoral Affairs. The team is supported by the Administrative Coordinator. The Dean reports directly to the President.

FACULTY

The faculty of GSSIMR provides each student with guidance and encouragement to support their success in a research program and assists with the next step in the developing scientist's career. The faculty includes principal investigators, heads of departments, and technology center directors from SIMR. They have each earned a Ph.D. degree or other terminal degree in their field and are internationally recognized scientists. Each faculty member is considered a leader in their field, and many have developed the methodologies that allow much of the current effort in their respective field of study. All faculty members have published in peer-reviewed scientific journals, and most are the recipients of one or more prestigious honors or awards. The faculty members have extensive experience in teaching at the graduate level.

The **Faculty Governing Council** (FGC) is composed of all professors and research professors as voting members as determined by the Dean and approved by the Graduate School Board of Directors. The purpose of the GSSIMR Faculty Governing Council is to provide a forum in which the GSSIMR faculty community comes together to achieve its common mission and outcomes. Through the FGC, the faculty assumes primary responsibility for the determination and implementation of its academic programs and curriculum, for the teaching activities of GSSIMR, for the development of academic policies, and for input and recommendations on planning. They effectively discharge their responsibilities as well as initiate and contribute to the open communication and governance of GSSIMR. Further, the faculty receives and responds to information and communications which affect GSSIMR and faculty responsibilities. The faculty actively participates in decision-making for the program and in maintaining a superb graduate school. The FGC has four committees that assist in the work of the faculty. They are detailed below.

The **Academic Progression and Assessment Committee** is comprised of at least three faculty as voting members, one student as a voting member, and the Associate Dean for Administration & Registrar and the Assistant Dean for Administration and Assessment as ex officio non-voting members. The Dean appoints the chair and members to this committee. The purpose of the Academic Progression and Assessment Committee is to establish and maintain an assessment program, lead the effort to assess achievement of the learning outcomes, as well as to evaluate criteria for progression and graduation, review academic conduct policy and procedures, and hear appeals.

The **Admissions Committee** is comprised of at least four faculty as voting members, two students as voting members, the Assistant Dean for Academic Affairs as an ad hoc member, and the Assistant Dean for Administration and Assessment as an ex officio non-voting member. The Dean appoints the chair and members to this committee. The purpose of the Admissions Committee is to determine the criteria for admissions, which applicants will be interviewed, conduct the interviews, and select the applicants they consider to be most suitable for admission.

The **Curriculum Committee** is comprised of at least three faculty as voting members, no more than two students as voting members, the Assistant Dean for Academic Affairs as an ad hoc member, and the Assistant Dean for Administration and Assessment as an ex officio non-voting member. The Dean appoints the chair and members to this committee. The purpose of the Curriculum Committee is to review and evaluate the curriculum in general, to consider vital content as well as deficiencies in the curriculum, and to discuss its major goals and directions. The committee shall provide a forum for faculty and administrators to discuss and make decisions regarding the content, design, delivery, and evaluation of the curriculum. The committee is open to feedback from students and solicits this feedback when appropriate.

The **Rotation Committee** is comprised of at least three faculty as voting members and the Assistant Dean for Administration and Assessment as an ex-officio non-voting member. The Dean appoints the chair and members to this committee. The purpose of the Rotation Committee is to assess and evaluate the progress of all GSSIMR first-year students during their second-term laboratory rotations in a fair and equitable manner and to assess their presentation skills. This evaluation is part of the continuous assessment of the students' progress.

OBJECTIVES OF THE PROGRAM

The program stresses critical thinking and the rapid development of experimental prowess. The program also focuses on in-depth understanding of the latest methodologies and approaches. All successful students share a demonstrated ability to perform biological research, as evidenced by previous research experience. Students are expected to develop and execute a research project that addresses a significant biological question, which will result in a Ph.D. in Biology. Students on average should complete the program in 5 to 6 years. Students perform their thesis research in laboratories working at the cutting edge of modern biological inquiry under the direct supervision of outstanding investigators at the Stowers Institute for Medical Research (SIMR). The program culminates with the expectation that each student is able to identify interesting biological problems, devise interdisciplinary approaches to those problems, and execute investigations using the best tools available.

DIVERSITY AND INCLUSION

The Graduate School of the Stowers Institute for Medical Research is committed to creating a welcoming and inclusive learning environment for all. We continually strive to create a culture where students and program participant scholars have equal access and equal opportunity regardless of race, ethnicity, nationality, gender or LGBTQ+ identity.

Inside and outside our walls, GSSIMR stands opposed to all forms of discrimination and racial injustice. We acknowledge that the roots of systemic racism throughout society are deep and tangled, and that bias and discrimination still exist within a scientific research community where not all scholars have equal access or recognition. While opposing blatant injustice in the world around us, we remain steadfastly committed to equality within our own program and to the long-term goal of dismantling all forms of discrimination in science.

ACCREDITATION AND CERTIFICATION

GSSIMR is accredited by the Higher Learning Commission (hlcommission.org) an institutional accreditor recognized by the U.S. Department of Education. Initial full accreditation was awarded November 4, 2021.

GSSIMR is certified by the State of Missouri to operate as an institution of higher education in the State of Missouri. Authority comes from the Missouri Department of Higher Education. GSSIMR reapplies for certification to operate each year.

ADMISSIONS

GSSIMR recruits students who have already demonstrated a high degree of research proficiency. All applicants are required to have obtained a bachelor's degree (B.S. or B.A.) or equivalent from an accredited institution as a prerequisite for admission. Although the majority of entering students will have a solid background in modern molecular biology and biochemistry, the program also encourages applications from candidates who have a demonstrated interest in disciplines such as mathematics, physics, chemistry, or computer science. In all cases, a record of previous scientific research is the primary criterion for admission as demonstrated through the summary of research submitted with the application, mentors' recommendation letters, and publications, if any. Grade point average (GPA) and test scores (e.g., GRE and TOEFL) are not required for admission to GSSIMR. All application materials must be submitted in English. No application fee is required.

International applicants must complete at least the equivalent of a U.S. four-year degree, including all state and external/internal examinations required for the degree/diploma. Usually this is a minimum of four years of study, beyond grade 12, at the university level, culminating with the award of a first or second degree. Although a degree in another country may have a name similar to a U.S. degree, this does not necessarily indicate the degree can be accepted as equivalent. For example, three-year general degrees (from Canada, India/Pakistan, France, Lebanon, etc.) are not accepted for admission to GSSIMR. International applicants admitted to the program work with the Graduate School to review and determine visa status on an individual case-by-case basis.

All official academic records must show the dates of enrollment; the subjects or courses taken, together with the units of credit or time allotted to each subject; and, if rank is determined, rank in the total class or group. The records must also include a complete description of the institution's grading scale or other standard of evaluation. Maximum and minimum marks and the steps between them must be indicated.

Unless academic records and diplomas are *routinely* issued in English by the institution, the official records *in their original language* must be submitted with an authorized, complete, and exact English translation. Applicants' academic credentials, if earned outside of the U.S., are reviewed for the purpose of assessing institutional accreditation, as well as the U.S. equivalency of the degree and grades.

Applicants are considered and accepted without regard to race, creed, color, religion, gender, sexual orientation, national origin, age, disability, military status, or any other status protected by law.

GSSIMR has two mechanisms for admission to the Ph.D. program. The standard admission process begins in September when the application service is open. Applications for the standard admission process must be received by December 1 (or the subsequent Monday, if December 1 falls on a weekend) for admission in August of the following year. The direct admission process begins on April 15 for admission in August of the same year.

Standard Admission Process

The application process is through a centralized application service for biomedical sciences programs, BioMedCAS. The application process includes a completed application form and the following items for each applicant:

1. Biographical information, educational background, and CV
2. Detailed summary of undergraduate or post-bachelor's degree research project(s)
3. List of publication(s) on which the applicant is an author with a description of their contribution to the paper(s)
4. Description of an interesting unanswered question in the field of study of a SIMR principal investigator. The response must include next step experiments or possible approaches that might best be used to address that problem.
5. Personal candidate statement
6. Description of any additional relevant research experience
7. Three reference letters
8. Official transcript(s) from all post-high school institutions

After further review by the Admissions Committee and a virtual interview/presentation, the applicants under consideration are invited to visit GSSIMR and SIMR to participate in a thorough interview process. Travel and accommodations for all interviewees is arranged and paid for by GSSIMR.

Each interview consists of the applicant doing the following:

1. Making a brief scientific presentation to the Admissions Committee and faculty members who choose to attend (virtually prior to the on-site visit)
2. Meeting individually with faculty members
3. Touring the facilities
4. Meeting with students and alumni

Following the interviews in February, the Admissions Committee chooses candidates to whom to extend offers. The deadline for decisions from the candidates is April 15.

Direct Admission Process

GSSIMR faculty can host qualified applicants to join GSSIMR as students for direct admission to their lab without laboratory rotations. Direct admission students initiate their academic program at the beginning of either Summer or Fall term, complete the module course sequence, and then join the host lab without participating in rotations. All other GSSIMR academic requirements, policies, and protocols apply to direct admission students. Applicants through the direct admission system must have at least 2 months experience in the host lab prior to applying to the program. This is equivalent to a rotation experience.

Direct admission applicants submit a complete application package to the Dean for Academic Affairs via the host PI by the established deadline for review by the Admissions Committee. This includes a completed application with biographical information and the following elements:

1. Cover letter endorsing the applicant written by the host PI
2. Applicant's CV
3. Two letters of reference from outside the host lab
4. Official transcript(s) from all post-high school institutions

5. Personal Statement
6. Research Project Summary
7. Research Goals Statement

Applicants who apply to the standard admission process can be eligible for the direct admission process with the support of a host PI following the standard admission cycle if an interview or an offer was not extended to the applicant.

The Admissions Committee direct admission review process begins after the receipt of final standard admission acceptances on April 15. Each interview includes the following:

1. A brief scientific presentation to the Admissions Committee and faculty members who choose to attend
2. Meeting individually with faculty members
3. Meeting individually with GSSIMR administration

The maximum total number of positions available for direct admission will be determined by the GSSIMR Dean and communicated to the Admissions Committee, with a maximum total of three per year. Admissions Committee members wishing to host a direct admit student are recused from the entire review process. Individual labs may host one new direct admit student per year and a total of no more than two direct admit students at any given time.

ACADEMIC PROGRAM

The program at GSSIMR stresses critical thinking and the rapid development of experimental prowess, instead of traditional didactic coursework.

In August, the program starts with a series of intensive all-day modular courses with topics ranging from Genetics to Gene Expression to Developmental Biology. Attendance is required for each of the modules, which include significant lab work, as well as lectures and critical reading and discussion of relevant papers.

In the spring of their first year, standard admission students engage in three consecutive two-month rotations in labs of their choice. Undistracted by traditional coursework, expectations are extremely high for students to focus almost exclusively on a short-term research project. Direct admission students do not participate in laboratory rotations and are directly admitted to a particular lab for thesis research. After completion of the modular courses, students participate in a course that is devoted to the development of the necessary proficiency in scientific communication.

Standard admission students enter their thesis research labs in June of their first year and direct admission students enter in January of their first year. All students undergo a qualifying assessment to demonstrate their knowledge, performance, and research progress within the first two years of their thesis research. Most critically, doctoral candidates are expected to develop and execute a research project that addresses a significant biological question to complete their degrees.

The function of the module courses is to introduce the students to the core disciplines and expose them to the scientific capabilities of SIMR. Further, through the rotation courses and the thesis labs, the students are provided the opportunity to have high-quality, hands-on experiences in the research of SIMR. Having exposure to the scientific capabilities and participating in the hands-on experiences positions the students for success both in the program and beyond.

The program strives for the completion of a research project in five years. Upon completion of their research projects, students are expected to be able to identify interesting biological problems; devise and create interdisciplinary approaches to those problems; and execute investigations using the best tools available. Students are expected to demonstrate proficiency in the Core Competencies by the end of their program. The minimum requirements for successful completion of the Ph.D. program at GSSIMR are the passing of all modules, successful completion of a minimum of 126 credit units (although a student completing five years of study and research will have a total of 196 hours), a passing grade on the Qualifying Assessment, a written thesis on original research, and the defense of the written thesis. No credit is given for hours earned at another institution. No 700-level course may be taken for credit more than once.

REQUIREMENTS FOR A PH.D. IN BIOLOGY DEGREE

Module Courses Requirement

Module courses are designed to introduce students to a wide range of conceptual and practical topics relevant to research at SIMR and the wider scientific community. With the exception of *Scientific Communication,* each module meets all day each day for ten days. *Scientific* C*ommunication* is a two-credit unit course that meets for several hours after the module courses are completed.

Students are required to attend all modules offered in the fall of their first year in accordance with the Attendance Policy (found under "Policies" in this Catalog/Handbook). It may be acceptable to miss a small portion of a module (up to one day). However, if extraordinary circumstances, such as a prolonged illness or family emergency, result in a student missing a significant portion of a module, the same or equivalent module may be taken the following year. In all circumstances of absenteeism, regardless of length, the Dean and Assistant Dean for Academic Affairs must be notified immediately. Approval of a short absence must be obtained in advance, if at all possible, from the Dean and course instructors. Approval of make-up modules must be obtained from the Dean.

Module courses are subject to some modifications from year to year by the Curriculum Committee. Below are a list and description of the modules offered in the fall of 2025.

BIO 702	*Genomic and Computational Approaches to Understanding Gene Expression*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 706	*Neuroscience*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 708	*Cell Biology*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 710	*Genetics*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 712	*Gene Expression: Transcription to Translation*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 714	*Prokaryotic Biology*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 715	*Cell Dynamics in Development and Evolution*	2 weeks (7 hours per day, 5 days per week)	2 credit units

Genomic and Computational Approaches to Understanding Gene Expression BIO 702

Regulation of eukaryotic transcription is a complex process involving interactions between transcription factors, RNA polymerase, chromatin structure and chromatin remodeling enzymes. With the rise of genomics and computational approaches, these components of transcription can be mapped at the genome-wide level *in vivo* and can be used to describe any biological system at the transcriptional level. Different data types from the same system can then be used to further dissect the mechanisms of gene regulation. In this module, students learn to develop biological hypotheses that are testable by genomic methods, understand available experimental techniques and concepts for analysis, and critically evaluate the obtained results. A problem-driven approach is used to analyze

particular sets of high throughput data, discuss and implement appropriate analysis tools, and learn how to display and interpret the results. In order to enable all students to more fully participate in the process, instruction of basic knowledge in UNIX, R, and statistics is an essential component of the course. Journal clubs with mandatory participation help the students to understand how genomic methods have successfully been used to reveal transcriptional mechanisms and biological insights in a variety of systems. The module provides both a conceptual framework and practical skills for using genomic methods in future research.

Neuroscience ***BIO 706***

The brain is the most complex organ. It detects and evaluates environmental and internal stimuli to produce appropriate responses. From scratching nose to Beethoven's symphony, all spring from the organization of building blocks of the nervous system. In neuroscience, it is necessary to ask fundamental questions about how the nervous systems develop, organize, and function. The goal of this module is to survey important concepts developed in this vast field over the last 100 years and provide a framework to think about major unsolved problems in neuroscience. The course is designed to provide the students with a perspective on the numerous fascinating and complex functions of the nervous system to stimulate an interest in their future research. To achieve this goal, conceptual issues will be discussed as well as some basic technical issues to facilitate reading and understanding of the literature.

The format of the course has two integral parts: a two-hour instructor-led session in the morning followed by a student-led discussion session in the afternoon. In the morning session, odor-guided behaviors are used as a thread to introduce and discuss key questions and concepts, such as how animal senses the external world, how that information is conveyed to other areas of the brain, how various experiences are integrated, how animal produces a coherent response and how experiences in the moment creates a memory for the future. These key questions and concepts will not be restricted to just odor-guided behaviors but will also include other senses and systems.

The afternoon session will be in a journal club format focusing on a few landmark papers on specific topics. It is expected that the students will identify the major conceptual question being addressed in the paper, the specific hypothesis, whether the data supports the conclusions and future directions. To make the course interactive and to pique students' interest, students will identify a topic/question that they wish to understand. Response from the students will be considered in preparation of the course material.

Cell Biology ***BIO 708***

Students will learn about cell biology by first discussing key cellular components, followed by cellular activities executed at the RNA and protein level. These topics are then integrated into the discussion of how cells communicate with their environment and each other by studying key signaling pathways. The laboratory portion of the module will expose students to a wide array of microscopic methods used by cell biologists and will complement the didactic portion of the course. The module features introductory lectures followed by in-depth reading and analysis of some of the classical as well as up-and-coming work on these topics.

Genetics ***BIO 710***

The goal of this module is to introduce students to sophisticated concepts in chromosome biology and genetics. The module provides students with a basic understanding of genetic principals and how genetics can be used to yield biological insights. Concepts include genome stability and mutation, heritability, meiosis, mitosis, linkage and recombination, epistasis, complementation, and modes of inheritance. The module includes interactive lectures, assigned readings, and hands-on laboratory components. The lectures and readings cover both classic and modern experimental approaches. The laboratory components introduce sophisticated imaging techniques, including superresolution microscopy, used to study chromosome biology and allele transmission in model organisms such as *Drosophila melanogaster*, *Saccharomyces cerevisiae*, and *Schizosaccharomyces pombe*.

Gene Expression: Transcription to Translation ***BIO 712***

The focus of this module course is on fundamental principles of gene expression. The course covers the basics of messenger RNA (mRNA) transcription, stability, and translation in eukaryotic organisms. This module includes lectures, assigned readings, oral presentations, and experimental design. The module course covers chromatin remodeling and stages that can affect how much mRNA molecules are produced in a cell. Students will discuss the transcription machinery and its role in gene regulation. The course also covers post-transcriptional regulation, covering molecular mechanisms that affect mRNA stability, as well as gene regulation at the level of translation. Gene regulatory network and RNA structures and biotypes including mRNA, tRNA, rRNA, and non-coding RNAs are discussed. This module includes lectures related to approaches taken to dissect molecular mechanism. Students discuss gene regulation with respect to time and space as well as mRNA processing including splicing and poly-adenylation. In addition, this module includes experimental (“wet”) as well as computation (“dry”) experiments that allow the students to learn about molecular techniques, equipment and models organisms, or systems that can be used to address biological questions. Scientific literature discussion across the module allows students to learn more about a specific gene expression topic and practice oral communication through presentations and discussions about data visualization. Students generate, collect, and analyze their own data as well as analyze published gene expression data. By the end of the module, students present their data, conclusions, and future directions in scientific presentations.

Prokaryotic Biology ***BIO 714***

In this module students will learn the basics of bacterial genetics, transcription and translation in prokaryotes, explore the mechanisms of horizontal gene transfer in bacteria and its impact on their evolution. Students will learn how multicellular bacterial communities engage in sophisticated behaviors previously thought to be exclusive to eukaryotes, from cell-cell communication to tissue patterning to cell differentiation. They will learn about key cellular components and the cell biology of prokaryotes including the composition of the bacterial cell wall and membranes, and how DNA is organized. The module features lectures by GSSIMR faculty, talks by visiting external faculty, journal clubs on the latest topics and hands on laboratory work. Through this, students can expect to receive an in-depth understanding of the diversity of bacterial life, the different environments they can live in, their behavior’s and how they shape the world around us. The laboratory component will expose the students to microbiological and molecular biological techniques. The students will also learn to isolate bacteria from

environmental samples, culture the cells, how to identify the isolated bacterial species and study their colony behavior through microscopy.

Cell Dynamics in Development and Evolution ***BIO 715***

The Cell Dynamics in Development and Evolution module will introduce students to a broad selection of topics in the molecular, genetic, and evolutionary forces that shape embryonic and post-embryonic development in multicellular animals. Key topics will include axial pattern formation, cell type specification, and cell migration in both vertebrates and invertebrate models. To complement a diverse series of lectures, students will also engage in journal club discussions of contemporary literature and participate in immersive laboratory exercises that will introduce them to key biological questions in a range of model organisms.

Laboratory Rotations Requirement

During the spring semester of the first year, standard admission students complete three consecutive two-month rotations in labs of their choice. Each rotation immerses students in the research program of a single laboratory where they address a specific research question under the direction of an advisor and senior laboratory staff. Students are expected to fully commit to the rotation lab and to successfully complete a short-term research project requiring substantial experimental effort. As a result of these three rotations, students are in a position to enter a thesis laboratory of their choosing, with consent of the principal investigator. While the primary focus during laboratory rotations is on research work, students are also expected to attend lab meetings, seminars, and journal clubs. Direct admission students do not participate in laboratory rotations and are directly admitted to a particular lab for thesis research.

Students are expected to conduct research in the lab and participate in lab activities at least 36 hours per week. Each rotation is an 800-level course for 6 credit units, for a total of 18 credit units for the term.

BIO 801-840	*Laboratory Rotation I*	8 weeks	6 credit units
BIO 801-840	*Laboratory Rotation II*	8 weeks	6 credit units
BIO 801-840	*Laboratory Rotation III*	8 weeks	6 credit units

See the Laboratory Entry Policy and the Laboratory Rotations Placement Protocol in the GSSIMR Policy and Protocol Library on Helix or the website for the complete process.

Additional Course Requirement

Students will complete an additional course early in their program. The course is designed to give students experience reading and critiquing papers, and to teach them to present their ideas and opinions in written and oral form in a constructive, organized, and rigorous manner.

Scientific Communication ***BIO 713***

Students will improve their skills relating to written and oral presentations of scientific research. The students will write hypothesis-driven research proposals and descriptions of scientific discoveries based on course discussions, primary literature, and laboratory experiences. Students will create and present scientific talks relating to lab topics. These talks will include an introduction, results and conclusions, effective graphics, and slide content, and will respond to

scientific questions. The students will learn to present their ideas and opinions in a constructive, organized, and rigorous manner. Students will discuss Wednesday seminar speaker presentations to understand the components of effective scientific presentations.

BIO 713.1	*Scientific Communication (Part I)*	12 weeks	1 credit unit
BIO 713.2	*Scientific Communication (Part II)*	12 weeks	1 credit unit

Thesis Research Requirement

Standard admission students begin their thesis research immediately following the completion of the laboratory rotations requirement at the end of their first year. Direct admission students begin their thesis research in the spring semester of their first year. All students are expected to develop and execute a research project that addresses a significant biological question to satisfy the requirements of a Ph.D. degree. Following successful completion of the Qualifying Assessment, students devote the remainder of their time in the program to laboratory research. They are also expected to participate in lab meetings, seminars, and journal clubs.

Supervisory Committees are formed after the student enters the thesis lab. Each Supervisory Committee is comprised of a minimum of four faculty members, one of whom is the thesis research advisor. The remaining members (at least one of whom is an Investigator or Associate Investigator at SIMR) are appointed by the thesis advisor and student and approved by the Dean. One of the committee members may be faculty from outside SIMR. The Supervisory Committee directly supervises a student's progress toward the thesis and administers the Qualifying Assessment. The student needs to notify the Associate Dean for Administration & Registrar of the committee members within three months of being in the thesis lab. The Graduate School office covers the costs for the travel, meals, and accommodation for the Supervisory Committee member who is from outside SIMR.

Thesis laboratory research continues until the student has defended a thesis through an open seminar and is examined by the Supervisory Committee.

The thesis laboratory is a 900-level course for 15 credit units for a fall term, 18 credit units for a spring term, and 6 credit units for a summer term, for a total of 39 credit units per year (fall, spring, and summer terms).

Qualifying Assessment Requirement

Overview

Within the first two years of their thesis research, students undergo a Qualifying Assessment, which consists of a written thesis proposal and an oral presentation. The primary aim of the Qualifying Assessment is to provide the student with an invaluable opportunity to receive intensive and constructive feedback in order to strengthen their thesis proposal. Students will be evaluated with the Scientific Writing and Scientific Presentation Scoring Templates.

The written proposal should be conceived with assistance of a research advisor, but should represent the student's own plan. The written proposal contains the specific aims of the research, detailed background, preliminary data, and planned experimental approaches for the thesis project being pursued or a closely related project. An additional part of the proposal is a brief

summary (two to three pages, double spaced) of the objectives for the meeting, similar to what is prepared for any Supervisory Committee meeting. The written proposal will be evaluated by the Supervisory Committee using the Scientific Writing Scoring Template.

The oral component of the Qualifying Assessment includes the discussion of the project with the Supervisory Committee. The thesis advisor should be present for the discussion of the project but may not be present when the Supervisory Committee votes on a grade of Pass or Fail. The oral component will be evaluated by the Supervisory Committee using the Scientific Presentation Scoring Template.

Preparing for the Qualifying Assessment

Students are expected to fully prepare for the Qualifying Assessment, and failure to adequately do so will require a second assessment within six months of the first attempt. Failure to adequately prepare for a second assessment is grounds for dismissal from the program as determined by the Academic Progression and Assessment Committee.

To schedule the Qualifying Assessment, the student works with GSSIMR's Administrative Coordinator to find a date and time when all Supervisory Committee members are able to attend. Three hours should be allowed for the Qualifying Assessment, and the Administrative Coordinator will arrange a conference room and appropriate catering for the meeting. GSSIMR will arrange travel for the outside committee member and coordinate preparations with the lab's administrative assistant. Outside committee members may be present via virtual formats for the Qualifying Assessment.

The student sends the written proposal and brief summary to the Supervisory Committee and the Associate Dean for Administration at least two weeks prior to the Qualifying Assessment so the committee has time to read all of it. If the Supervisory Committee needs more than two weeks to read the proposal and summary, they need to let the student know well in advance.

The written portion is 5-10 pages long, single space. It is written like an NIH proposal with Introduction, Specific Aims, Background and Significance, Preliminary Data, and Planned Experimental Approaches to address each Aim. Examples to review can be found at: http://www.niaid.nih.gov/researchfunding/grant/pages/appsamples.aspx. The written portion should contain clearly labeled figures and be carefully checked for spelling and grammatical errors. Some amount of time and effort needs to be applied to make an optimal proposal. It should be written by the student, but can be revised with the aid of the research advisor and other members of the lab. An additional part of the proposal is a brief summary (two to three pages, double spaced) of the objectives for the meeting, similar to what is prepared for any Supervisory Committee meeting.

The Qualifying Assessment

The Qualifying Assessment is scheduled for three hours. The oral presentation component of the Qualifying Assessment is 20-30 minutes long and followed by extensive discussion. The presentation is less general than a Friday Science Club talk, but less specific than a lab meeting. It should be revised and practiced with the research advisor and other lab members.

The student takes to the meeting a blank copy of the Qualifying Assessment Report document. At the beginning of the meeting, one committee member (not the advisor) is appointed as chair of the meeting to complete the Qualifying Assessment Report. After the oral presentation, all committee members sign one copy of the Qualifying Assessment Report, and the chair sends that

in interoffice mail to the Associate Dean for Administration. Within a week of the Qualifying Assessment, the chair completes a blank form, emails it to the Associate Dean for Administration and copies all committee members, and attaches a copy of the written proposal.

Ph.D. Candidate Status:

Candidacy is defined as that period in a student's studies when they are deemed ready to undertake independent and original research resulting in a completed thesis. Students who have achieved candidacy status are deemed to have acquired the necessary advanced knowledge of the subject by completing the course requirements, developed the needed technical skills for work in the subject, and demonstrated the ability to do the research necessary to begin work on a thesis. A student must do the following before achieving candidate status:

1. Complete all module courses and laboratory rotation courses.
2. Complete the written thesis proposal that is approved by the Supervisory Committee.
3. Successfully complete the Qualifying Assessment.

Thesis Defense Requirement

Overview

The completion of a body of research that addresses a significant biological problem and is likely to result in at least one publication in a peer-reviewed journal is required for the successful completion of the Ph.D. research program. The Supervisory Committee will ultimately assess whether this criterion is met during the Thesis Defense. In general, the publication forms the main body of a thesis. A detailed literature review precedes the thesis and a discussion of the possible next steps in the research follows the thesis. A detailed reference section is added at the end of the thesis with citations throughout the document.

To defend the thesis, a student presents an open seminar and subsequently is examined by the Supervisory Committee. Satisfactory defense of the thesis and fulfillment of all requirements of GSSIMR results in the granting of the Ph.D. degree in Biology.

Preparing for the Thesis Defense

Prior to scheduling a Thesis Defense, the student meets with members of their Supervisory Committee (at least the GSSIMR faculty members) with the intent of proposing the final timeline towards the Thesis Defense. This meeting is scheduled as a regular Supervisory Committee meeting with additional information about the student's intent written in the summary provided to the committee. If the Supervisory Committee agrees to the proposed content of and a timeline for the Thesis Defense, the student schedules it as instructed below.

To schedule the Thesis Defense, the student works with GSSIMR's Administrative Coordinator to find a date and time when all Supervisory Committee members are able to attend. Four hours should be allowed for the Thesis Defense: one hour for the open seminar followed by three hours for examination by the Supervisory Committee. GSSIMR's Administrative Coordinator will arrange appropriate conference room(s) and catering for the meeting. GSSIMR will arrange travel for the outside committee member and coordinate preparations with the lab's administrative assistant. Outside committee members may be present via virtual formats for the Thesis Defense.

The student sends the thesis to the Supervisory Committee and the Associate Dean for Administration at least two weeks prior to the Thesis Defense so the committee has adequate

time to read and review the document. If the Supervisory Committee needs more than two weeks to read the proposal and summary, they need to let the student know well in advance.

Co-Curricular Requirements

GSSIMR has identified specific co-curricular programs that are learning activities essential to the curriculum. The programs identified as co-curricular align with and augment the curricular goals stated in the Core Competencies. These co-curricular programs serve to enhance the academic program, are assessed with learning objectives based on the Core Competencies and are not credit bearing.

Scientific Conferences and Courses

Students attend scientific conferences and courses domestically and around the world. Conferences and courses provide a wider platform to discuss and disseminate scientific findings and emerging techniques. In addition to bolstering the current research of students, conferences and courses provide a networking opportunity as students meet leaders in their field from the US and around the world. GSSIMR provides funding for one conference or course per year to every student. In addition, attendance to conferences and courses are funded by individual laboratory budgets and conference awards. No credit is awarded for attending or presenting at conferences or courses.

Laboratory Safety and Biosafety Level 2 Trainings (12 hours)

These laboratory safety training sessions occur early in the program and consist of lectures and a tour. SIMR, while maintaining regulatory compliance with several federal, state and local agencies, has the responsibility to provide a safe and healthy working environment for all individuals associated with SIMR and to minimize the environmental impact of performing basic medical research. These courses are designed to give students the tools necessary to conduct science in a safe manner at SIMR by discussing the regulatory requirements of OSHA, EPA, MDNR, NRC, and other regulatory agencies and applying them to real research scenarios. No credit units are offered for these trainings.

Responsible Conduct of Research Course (9 weeks; 2 hours per day, 1 day per week)

The course is required for all students. The course lasts for nine weeks and meets weekly. Each course meeting is led by a panel of faculty and uses selected case studies to encourage practicing scientists to think about the principles of responsible conduct in research; to appreciate the devastating effect of scientific misconduct on public trust, institutional reputation, and individual careers; and to understand why at GSSIMR and SIMR there is zero tolerance for material deviation from commonly accepted standards for proposing, conducting, and reporting research. No credit is awarded for attending the course.

Science Club

Students are expected to attend a weekly Science Club where GSSIMR's students and SIMR's junior scientists present their research. Students are required to present at least one time (and preferably more) during their tenure in the lab. No credit units are offered for attending Science Club.

SIMR Lecture Series

Students are expected to attend the SIMR Lecture Series. The Lecture Series brings renowned scientists from around the world to SIMR to give talks about a variety of scientific topics. The thesis advisor may require a student to attend other seminars throughout the year. No credit units are offered for attending seminars.

Extra-Curricular Opportunities

GSSIMR Course Teaching Assistant

Students enrolled in the GSSIMR program can serve as a teaching assistant in GSSIMR module courses. Teaching assistants must participate in planning activities, assessment activities, and teaching components. However, teaching is not a requirement of the program, and no credit units are available for teaching.

Crossroads Programs

The Crossroads program at SIMR fosters a sense of community among graduate students and postdoctoral researchers. Crossroads activities are organized by a volunteer committee and include a variety of career-related and professional development workshops covering skills such as funding and grantsmanship, oral presentation skills, and effective manuscript writing. The annual Crossroads Research Conference is one of the major scientific and social events that Crossroads organizes. Crossroads Research Conference provides graduate students and postdoctoral researchers with the opportunity to present their research to their peers with oral and poster presentations and to socialize on an Institute-wide level. Crossroads also organizes career development workshops that provide career resources for graduate students and postdoctoral researchers to help them reach the next stage of their careers.

Data Clubs

Students organize weekly or biweekly meetings where they present their data or a recent journal publication to their fellow students. Other researchers in the SIMR community whose work is relevant to the presenter can be invited to join. The meetings are informal and are designed to help support the GSSIMR students' scientific progress and their community. No credit is awarded for organizing, presenting, or attending the meetings.

Supergroup Participation

Groups of SIMR laboratories that have similar interests or are in similar fields often form a "Supergroup." The formation of these groups is spearheaded by the heads of the laboratories (the Principal Investigators) or other senior scientists. Students can attend the meetings of the supergroups, which generally occur bi-monthly, and present their research and data. This is an opportunity for the students to gain further experience presenting to colleagues, listening to and responding to questions and feedback, and communicating with audiences. No credit is awarded for presenting or attending the meetings.

Open Mic Science Club

Students organize, attend, and participate in a seminar series that occurs over the summer months. Students and SIMR researchers present their work to their colleagues and get feedback from those in attendance. Like the Friday Science Club, which is suspended during the summers, Open Mic Science Club is an opportunity for students to present to the wider SIMR community. No credit is awarded for organizing, presenting, or attending the meetings.

PH.D. SAMPLE PLAN OF STUDY

Fall – Year 1

Course Number	Course Title	Credit Hours
BIO 702	Genomic and Computational Approaches to Understanding Gene Expression	2
BIO 706	Neuroscience	2
BIO 708	Cell Biology	2
BIO 710	Genetics	2
BIO 712	Gene Expression: Transcription to Translation	2
BIO 714	Prokaryotic Biology	2
BIO 715	Cell Dynamics in Development and Evolution	2
	TOTAL HOURS FALL	**14**

Spring - Year 1 – Standard Admission

Course Number	Course Title	Credit Hours
BIO 8XX	Rotation Lab- PI Name 1	6
BIO 8XX	Rotation Lab- PI Name 2	6
BIO 8XX	Rotation Lab- PI Name 3	6
BIO 713.1	Scientific Communication (Part I)	1
BIO 781	Research Integrity Course	0
	TOTAL HOURS SPRING	**19**

Spring - Year 1 – Direct Admission

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	18
BIO 713.1	Scientific Communication (Part I)	1
Form Supervisory Committee (Direct Admission)		

Summer - Year 1

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	6

Fall - Year 2

Course Number	Course Title	Credit Hours
BIO 9XX.2	Thesis Lab- PI Name	15
BIO 713.2	Scientific Communication (Part II)	1
Form Supervisory Committee (Standard Admission)		

Spring - Year 2

Course Number	Course Title	Credit Hours
BIO 9XX.3	Thesis Lab- PI Name	18

Summer - Year 2

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	6
Have a minimum of one meeting with Supervisory Committee by the end of Year 2.		

Fall - Year 3

Course Number	Course Title	Credit Hours
BIO 9XX.2	Thesis Lab- PI Name	15

Spring - Year 3

Course Number	Course Title	Credit Hours
BIO 9XX.3	Thesis Lab- PI Name	18

Summer - Year 3

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	6
Complete Qualifying Assessment by the end of Year 3.		

Fall - Year 4

Course Number	Course Title	Credit Hours
BIO 9XX.2	Thesis Lab- PI Name	15

Spring - Year 4

Course Number	Course Title	Credit Hours
BIO 9XX.3	Thesis Lab- PI Name	18

Summer - Year 4

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	6
Have a minimum of one meeting with Supervisory Committee in Year 4. *By the end of Year 4, have a minimum of two Supervisory Committee meetings, in addition to the Qualifying Assessment. A total of 6 meetings in Years 2, 3 and 4 is suggested.*		

Fall - Year 5

Course Number	Course Title	Credit Hours
BIO 9XX.2	Thesis Lab- PI Name	15

Spring - Year 5

Course Number	Course Title	Credit Hours
BIO 9XX.3	Thesis Lab- PI Name	18

Summer - Year 5

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	6
Thesis Defense		

TOTAL HOURS COMPLETED: 196

EVALUATION IN THE PH.D. PROGRAM

Students are expected to develop and execute a research project that addresses a significant biological question, which will result in a Ph.D. in Biology. Students on average should complete the program in 5 to 6 years. The minimum requirements for successful completion of the Ph.D. program at GSSIMR are the passing of all modules, successful completion of 126 credit units (although a student completing five years of study and research will have a total of 196 hours), a written thesis on original research, and the defense of the written thesis. No credit is given for hours earned at another institution. No 700-level course may be taken for credit more than once.

Grading Policy

GSSIMR uses the following grading scale:

P: Passing
Equivalent to a grade of 70% or above.

F: Failing
Equivalent to a grade of less than 70%.

I: Incomplete

CP: Conditional Pass (Module Courses)

WP: Withdraw Pass

WF: Withdraw Fail

For a module course, an instructor may assign the grade of CP (conditional pass) when the student averaged a 2 or higher on the scoring of learning objectives and met or exceeded all course criteria, but missed some course content or did not turn in assignments. On the module course report, faculty must explain what needs to be completed in order for the grade to be changed to Pass; this could include repeating the course the next time it is offered.

An instructor may assign the grade of I (incomplete) to students who have been unable to complete the work of the course because of illness or serious reasons beyond their control. An incomplete grade is appropriate only when enough work in the course has been completed for students to finish the remaining work without re-enrolling in the course or attending additional classes. The work must be completed within one calendar year, or the incomplete grade will automatically lapse to an F. Students should not re-enroll in a class for which they earned an incomplete. Students may not earn a degree or graduate with an incomplete on their transcript.

An instructor may assign the grade of WP (withdraw pass) to students who are withdrawing from the course and have successfully completed enough work in the course for the instructor to determine a passing grade as of the withdraw date.

An instructor may assign the grade of WF (withdraw fail) to students who are withdrawing from the course and are failing as of the withdraw date.

Two failing grades in the graduate program is grounds for dismissal. Prior to receiving a failing grade, the student will be notified by the instructor and/or Assistant Dean for Academic Affairs that they are in jeopardy of not passing. During this conference the student will be counseled as to what they need to do in order to successfully complete the course. The instructor and/or

Assistant Dean for Academic Affairs will schedule a follow-up meeting in order to evaluate progress. Every reasonable effort will be made to assist the student in their success.

Attendance

To meet the goals of the program, students are expected to comply with GSSIMR's policies, fully participate in all phases of the research program, and maintain an acceptable time and attendance record. A student who is unable to meet the time and attendance standard must notify the Assistant Dean for Academic Affairs in advance of the tardiness or absence. With prior approval from the advisor and the Assistant Dean for Academic Affairs, a student may take personal days, the number of which will be determined by the student's need. Excessive absences or late arrivals may be grounds for dismissal from the program. As defined by the general attendance policy, "In general, absences will be considered excessive when the absentee rate is 3% or greater. For calculating the absentee or late arrival rate, absences will not count if they are authorized." Authorized absences for students include, but are not limited to, FMLA absences, vacation leave, jury duty leave, or approved unpaid leave.

Module Attendance for Students:

Students are required to attend all portions of all modules. The required times will be distributed in the schedules that accompany each syllabus. These will include:

1) Lectures: in-class, Wednesday seminars, and Friday Science Clubs
2) Journal clubs
3) Laboratory sessions: scheduled time as well as any extra time that may be necessary to complete the work. If finished early, predocs may be dismissed by the laboratory instructors.

Any absence needs to be cleared by the lead faculty of that module prior to the absence either through email or in person. Reasons must be stated, and approval may be denied. Exceptions to this policy are made for emergencies where it may not be possible to contact faculty ahead of time. In those cases, students are encouraged to contact the faculty and/or the Assistant Dean for Academic Affairs as they are able. Unexcused absences for non-emergency reasons will be referred to the Assistant Dean for Academic Affairs for subsequent action. In the event of class cancellation due to any reason including weather, students will be notified via email.

See the Attendance Policy in the GSSIMR Policy and Protocol Manual for the complete policy.

Module Course Evaluation

Each module's faculty evaluates a student's performance by using the module course report form, and when appropriate the scientific work scoring template, and assigns a Pass/Fail grade.

Laboratory Rotation Evaluation (Standard Admission)

Prior to each rotation, the student communicates with the rotation advisor/advisor's lab and subsequently writes a paragraph that outlines the project, goals, and expectations to accomplish during their rotation. Following the approval by the rotation advisor (PI), the student submits the approved paragraph to the Assistant Dean for Academic Affairs for the committee. At the end of each rotation, the student and advisor complete the Rotation Lab Report. The student writes a paragraph to summarize the project, including what they learned and accomplished during the rotation, then forwards the report to the advisor. The advisor writes a paragraph to explain how

well the student executed the project, completes the rotation lab report, and assigns a Pass/Fail grade. The advisor submits the report to the Associate Dean for Administration & Registrar. Toward the end of each rotation, the student makes a presentation to the lab. At the end of the rotations, each student makes a brief presentation to the Rotation Committee on what they performed and accomplished in the lab they selected for their thesis research. This presentation is a shortened version of the student's presentation to their rotating lab. The Rotation Committee evaluates the presentations using the rotation lab presentation report form and assigns grades for the presentations and provides those to the Dean.

Thesis Research Evaluation

Term Reports

Three times a year (at the end of each term), the Associate Dean for Administration & Registrar provides a Term Report template through ServiceNow to the student and thesis advisor to complete. The student provides a paragraph to explain their project(s) and progress made on their project(s) within the term, and indicates instances and completion of program milestones. The thesis advisor provides a paragraph in response to the student's project summary, evaluates the student's performance, confirms instances and completion of program milestones, and assigns a Pass/Fail grade. The thesis advisor submits the completed form through ServiceNow to the Associate Dean for Administration & Registrar.

Supervisory Committee Reports

The objective of the Supervisory Committee meetings is to evaluate the student's progress, provide recommendations and feedback on their project(s), and assist with their professional development. Students are required to meet with their Supervisory Committee once a year (and generally meet with them twice a year) to give an oral presentation of their progress.

Scheduling of the meetings is done by the student and thesis research advisor, at times of year that are agreed upon in advance by the committee members. The suggested meeting time is two hours. The student informs the Associate Dean for Administration of the meeting at the time it is scheduled, and the Graduate School office assists with meeting arrangements.

One week (seven days) prior to the Supervisory Committee meeting, the student completes the Student Supervisory Committee Meeting Form and sends it to the committee members and Associate Dean for Administration. This form includes the summary of the previous Supervisory Committee meeting, objectives for the upcoming meeting, and summary of progress since the previous meeting (two to three pages, double spaced). The objectives can include topics such as a request for advice on a particular aspect of a project, review of soon-to-be published material, or discussion about readiness to defend a thesis.

Within a week after the Supervisory Committee meeting, the student completes a summary report of the meeting. The student should include the feedback provided by the committee members at the end of the meeting including next steps. The student then sends the report to the committee chair to finalize. Within three days of receiving the report from the student, the chair completes the Supervisory Committee Meeting Report and emails the completed report including the completed Supervisory Committee Evaluation to the Associate Dean for Administration and copies all committee members.

Academic Progression Matrix

Once a year, after the end of the summer term, the Academic Progression Matrix is used by the thesis advisor(s) and the student to assess the student's learning based on the GSSIMR Core Competencies. The student reviews each item on the matrix and rates themselves in one of five levels. Once completed by the student, the thesis advisor completes their assessment of the student. The student and the thesis adviser meet to review and compare their assessments. They make note of the differences, areas of strengths, areas of needed growth, and ways to advance to the next level. Upon graduation, the student should reach the category of proficient in the matrix for the majority of the items in each category.

Qualifying Assessment

Within the first two years of their thesis research (by the end of the spring term of their third year in the program), students undergo a Qualifying Assessment, which consists of a written thesis proposal and an oral presentation. The primary aim of the Qualifying Assessment is to provide the student with an invaluable opportunity to receive constructive feedback in order to strengthen their proposal. The Supervisory Committee for each student reviews the written proposal and hears the oral component of the Qualifying Assessment. The Supervisory Committee conducts a discussion with the student regarding the project. The Supervisory Committee votes on a grade of Pass or Fail.

Thesis Defense

Following the thesis open seminar and the thesis examination, the Supervisory Committee discusses whether the thesis and the defense meet the criteria of "the completion of a body of research that addresses a significant biological problem." They discuss and record on the Thesis Defense Report comments, suggestions, and a grade (see below). This feedback and the grade are discussed with the student immediately following a Supervisory Committee consensus. One of three grades is assigned: pass, conditional pass, or fail.

- A passing grade indicates that the student has met all thesis requirements to receive a Ph.D.
- A conditional pass grade indicates specific adjustments that need to be made to the thesis document. These adjustments may be relatively minor (such as proper reference formatting) to rewriting poorly written sections of the thesis. Changes need to be made by the student and sent to the Associate Dean for Administration & Registrar within 7 days of the defense. Once these specific changes are made, the thesis document, or sections in question, are redistributed to the Supervisory Committee by the Associate Dean for Administration & Registrar. All Supervisory Committee members respond to the Associate Dean for Administration & Registrar within 14 days of receiving the revisions. A written approval indicates that the student has addressed their comments and thus meets all thesis requirements to receive a Ph.D. If more revisions are necessary, this process will continue in 3-day intervals between the committee member who requests more changes, the student, and the Associate Dean for Administration & Registrar until the committee member(s) is satisfied.
- A failing grade indicates that the student has not met the stated criteria for a completed thesis. In issuing this grade, the Supervisory Committee must specify the areas that are lacking. This may include, but is not limited to, insufficient data to produce a "body of research that addresses a significant biological problem" to a poorly prepared seminar to unsatisfactory defense of the thesis. The Thesis Defense Report indicates the specific

areas that need improvement, and the committee informs the student at the end of their defense. Following this outcome, the chair of the Supervisory Committee will meet with the Dean to discuss the reasons for the failing grade. This meeting occurs within 7 days of the failed thesis defense. If the chair of the Supervisory Committee is not available, any Supervisory Committee member other than the thesis advisor may meet with the Dean. If the Dean is not available, the Assistant Dean for Academic Affairs may act in their place. Subsequently, the student and the thesis advisor meet with the Dean to discuss the failing grade. The second Thesis Defense must be scheduled within 6-8 months after the first Thesis Defense. If more time is needed, this may be grounds for dismissal from the program.

PH.D. PROGRAM COMPLETION REQUIREMENTS

The minimum requirements for successful completion of the Ph.D. program at GSSIMR are the passing of all modules, successful completion of a minimum of 126 credit units (although a student completing five years of study and research will have a total of 196 hours), a passing grade on the Qualifying Assessment, a written thesis on original research, and the defense of the written thesis.

MASTER OF SCIENCE IN BIOLOGY DEGREE PROGRAM

GSSIMR recruits, admits, and enrolls students exclusively for the Ph.D. program. GSSIMR does not recruit, admit, or enroll students whose primary objective is a master's degree. However, in certain cases, GSSIMR will confer a Master of Science (M.S.) in Biology to students who, for various reasons and circumstances, elect not to complete the Ph.D. degree. Circumstances under which a student could revise their enrollment include, but are not limited to, changes in marital status; changes in parental status; caretaking of a parent, sibling, spouse or child; health issues; and other life changing events.

As with the Ph.D. program, the M.S. program stresses critical thinking and the rapid development of experimental prowess. The program also focuses on in-depth understanding of the latest methodologies and approaches.

Requirements for M.S. Degree

The requirements for the master's degree include a passing grade for each of the module courses, successful completion of the lab rotation requirements, passing grade in the critical analysis of scientific literature course, and at least one year of thesis research as defined for the Ph.D. program (73 credits). In addition, the student must successfully complete the Qualifying Assessment, submit a written thesis describing research work completed to date, complete the defense of the thesis, and secure a majority vote of the Supervisory Committee; and the thesis advisor must provide a written evaluation.

Students must receive written permission from the Supervisory Committee, in consultation with the Dean, prior to pursing a master's degree.

Module Courses Requirement for M.S. Degree

The following module courses are required for the M.S. degree. A complete list of courses with descriptions can be found in other sections of this Catalog/Handbook. Module courses are subject to some modifications from year to year by the Curriculum Committee. Below is a list of the modules offered in the fall of 2024.

BIO 702	*Genomic and Computational Approaches to Understanding Gene Expression*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 706	*Neuroscience*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 708	*Cell Biology*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 710	*Genetics*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 712	*Gene Expression: Transcription to Translation*	2 weeks (7 hours per day, 5 days per week)	2 credit units
BIO 714	*Prokaryotic Biology*	2 weeks (7 hours per day, 5 days per week)	2 credit units

BIO 715	*Cell Dynamics in Development and Evolution*	2 weeks (7 hours per day, 5 days per week)	2 credit units

Laboratory Rotations Requirement for M.S. Degree (Standard Admission)
Standard admission students complete three consecutive two-month rotations in labs of their choice. Each rotation immerses students in the research program of a single laboratory where they address a specific research question under the direction of an advisor and senior laboratory staff. Students are expected to fully commit to the rotation lab and to successfully complete a short-term research project requiring substantial experimental effort. As a result of these three rotations, students are in a position to enter a thesis laboratory of their choosing, with consent of the principal investigator. While the primary focus during laboratory rotations is on research work, students are also expected to attend lab meetings, seminars, and journal clubs. Direct admission students do not participate in laboratory rotations and are directly admitted to a particular lab for thesis research.

Students are expected to conduct research in the lab and participate in lab activities at least 36 hours per week. Each rotation is an 800-level course for 6 credit units, for a total of 18 credit units for the term.

BIO 801-840	*Laboratory Rotation I*	8 weeks	6 credit units
BIO 801-840	*Laboratory Rotation II*	8 weeks	6 credit units
BIO 801-840	*Laboratory Rotation III*	8 weeks	6 credit units

See the Laboratory Entry Policy and the Laboratory Rotations Placement Protocol in the GSSIMR Policy and Protocol Library on Helix or the website for the complete process.

Additional Course Requirement for M.S. Degree
Students will complete an additional course early in their program. The course is designed to give students experience reading and critiquing papers, and to teach them to present their ideas and opinions in written and oral form in a constructive, organized, and rigorous manner.

BIO 713.1	*Scientific Communication (Part I)*	12 weeks	1 credit unit
BIO 713.2	*Scientific Communication (Part II)*	12 weeks	1 credit unit

Thesis Research Requirement for M.S. Degree
Standard admission students begin their thesis research in the summer of their first year. Direct admission students begin their thesis research in the spring semester of their first year. They are expected to develop and execute a research project that addresses a significant biological question. Following successful completion of the Qualifying Assessment, students devote the remainder of their time in the program to laboratory research. They are also expected to participate in lab meetings, seminars, and journal clubs.

Supervisory Committees are formed after the student enters the thesis lab. Each Supervisory Committee is comprised of a minimum of four faculty members, one of whom is the thesis research advisor. The remaining members (at least one of whom is an Investigator or Associate

Investigator at SIMR) are appointed by the thesis advisor and student and approved by the Dean. One of the committee members may be faculty from outside SIMR. The Supervisory Committee directly supervises a student's progress toward the thesis and administers the Qualifying Assessment. The student needs to notify the Associate Dean for Administration & Registrar of the committee members within three months of being in the thesis lab. The Graduate School office covers the costs for the travel, meals, and accommodation for the Supervisory Committee member who is from outside SIMR.

Thesis laboratory research continues until the student has defended a thesis through an open seminar and is examined by the Supervisory Committee.

The thesis laboratory is a 900-level course for 15 credit units for a fall term, 18 credit units for a spring term, and 6 credit units for a summer term, for a total of 39 credit units per year (fall, spring, and summer terms).

Qualifying Assessment Requirement for M.S. Degree

Within the first two years of their thesis research, students undergo a Qualifying Assessment, which consists of a written thesis proposal and an oral presentation. The primary aim of the Qualifying Assessment is to provide the student with an invaluable opportunity to receive intensive and constructive feedback in order to strengthen their thesis proposal. Additional information about the Qualifying Assessment can be found in other sections in this catalog as well as in Protocol 1026.

Thesis Defense Requirement for M.S. Degree

The completion of a body of research that addresses a significant biological problem is required for the successful completion of the M.S. Degree. The Supervisory Committee will ultimately assess whether this criterion is met during the Thesis Defense. If available, published work forms the main body of a thesis. A detailed literature review precedes the thesis and a discussion of the possible next steps in the research follows the thesis. A detailed reference section is added at the end of the thesis with citations throughout the document.

To defend the thesis, a student presents an open seminar and subsequently is examined by the Supervisory Committee. Satisfactory defense of the thesis and fulfillment of all requirements of GSSIMR results in the granting of the M.S. Degree in Biology.

In extraordinary circumstances, a proposal to modify the structure of the Thesis Defense may be submitted by the student to the Supervisory Committee. The Supervisory Committee would need to unanimously agree to the request and then submit a written plan to the Dean for final approval.

For the complete Master's Degree Protocol, please refer to Protocol Number 1029.

Co-Curricular Requirements for M.S. Degree

Co-curricular programs are learning activities that complement the formal curriculum. Programs identified as co-curricular align with and augment the curricular goals stated in the Core Competencies. These programs serve to enhance the academic program, are assessed with learning objectives based on the Core Competencies and are not credit bearing. There are five required co-curricular activities. These are Scientific Conferences and Courses, Science Club,

SIMR Lecture Series, Laboratory Safety, Radiation Safety, and Biosafety Level 2 Trainings, and Responsible Conduct of Research Course. Additional information about the co-curricular requirements can be found in other sections in this catalog as well as in Protocol 1052. There are various extra-curricular opportunities available to students including GSSIMR Course Teaching Assistant, Crossroads Program, Data Clubs, Supergroup Participation, and Open Mic Science Club. Additional information about the extra-curricular activities can be found in other sections in this catalog as well as in Protocol 1052.

M.S. SAMPLE PLAN OF STUDY

Fall - Year 1

Course Number	Course Title	Credit Hours
BIO 702	Genomic and Computational Approaches to Understanding Gene Expression	2
BIO 706	Neuroscience	2
BIO 708	Cell Biology	2
BIO 710	Genetics	2
BIO 712	Gene Expression: Transcription to Translation	2
BIO 714	Prokaryotic Biology	2
BIO 715	Cell Dynamics in Development and Evolution	2
	TOTAL HOURS FALL	**14**

Spring - Year 1 – Standard Admission

Course Number	Course Title	Credit Hours
BIO 8XX	Rotation Lab- PI Name 1	6
BIO 8XX	Rotation Lab- PI Name 2	6
BIO 8XX	Rotation Lab- PI Name 3	6
BIO 713.1	Scientific Communication (Part I)	1
BIO 781	Research Integrity Course	0
	TOTAL HOURS SPRING	**19**

Spring - Year 1 – Direct Admission

Course Number	Course Title	Credit Hours
BIO 9XX.2	Thesis Lab- PI Name	18
BIO 713.1	Scientific Communication (Part I)	1
Form Supervisory Committee (Direct Admission)		

Summer - Year 1

Course Number	Course Title	Credit Hours
BIO 9XX.1	Thesis Lab- PI Name	6

Fall - Year 2

Course Number	Course Title	Credit Hours
BIO 9XX.2	Thesis Lab- PI Name	15
BIO 713.2	Scientific Communication (Part II)	1
Form Supervisory Committee (Standard Admission)		

The student consults with the Dean and then submits a formal request to their Supervisory Committee to pursue the M.S. program due to unforeseen change in personal circumstances.

Spring - Year 2

Course Number	Course Title	Credit Hours
BIO 9XX.3	Thesis Lab- PI Name	18

TOTAL HOURS COMPLETED **73**

M.S. PROGRAM COMPLETION REQUIREMENTS

The minimum requirements for successful completion of the M.S. program at GSSIMR are the passing of all modules, successful completion of a minimum of 73 credit units, a passing grade on the Qualifying Assessment, a written thesis on original research, and the defense of the written thesis.

SUPPORT RESOURCES AND SERVICES

FINANCIAL SUPPORT

GSSIMR is committed to giving each student the best research experience in an unrivaled research environment. The program philosophy embraces hands-on experiences, research as the primary component, and self-directed learning. In order to fulfill those goals, students must constantly read, study, learn, and apply their knowledge. It is the belief of GSSIMR that students should not be encumbered by a financial burden and should be given the opportunity to focus on research and gaining knowledge in order to successfully pursue innovative and creative investigations in the biological sciences. Therefore, GSSIMR does not charge tuition for the graduate program, nor does it participate in Title IV funding. For additional information please refer to the Policy 935 Financial Responsibility and Refund Policy and Protocol 1005 Funding Support.

GSSIMR provides highly competitive funding support throughout the program for each student in good standing, does not charge tuition for the graduate program, purchases a laptop and necessary textbooks for each student, and with SIMR covers all costs of instruction and research. The amount of the funding support is reviewed annually to ensure it remains competitive. As the Ph.D. program requires full time and effort, a student may not supplement the funding support from other sources unless a written agreement to do so is obtained in advance from GSSIMR. For the complete policy, please refer to Policy 131GS Outside Employment. Living expenses during the Ph.D. program are the student's responsibility.

BENEFITS

In addition to the competitive funding support, GSSIMR provides the following insurance benefits, effective on the first day of the program: medical, pharmacy, vision, dental, basic life insurance, and accidental death and dismemberment. Students are eligible to participate in the Stowers Group 403 (b) Plan. GSSIMR also provides the students with travel and conference allowances, a laptop computer, and assistance with English language proficiency as needed.

HEALTH AND WELLNESS

GSSIMR works with SIMR to provide many support tools for the overall health and wellness of the students. InBalance is the official wellness program that focuses on whole-person wellbeing. InBalance focuses on six pillars of wellbeing and supporting each individual in each of these areas: Career, Financial, Social, Physical, Community, and Mental. Programming and support for each component is provided and participation from the students is encouraged. Within the umbrella of InBalance, the Stowers Connection is a program that specifically aims at creating a web of information, resources, and social interactions to support the emotional wellbeing of SIMR members including students.

Students also have access to the Stowers Employee Assistance Program (EAP). The EAP is a short-term counseling and coaching benefit for personal or professional challenges from daily stressors to major crises and everything in between, via phone, face to face, and online resources. The EAP is available 365 days a year and 24 hours a day and is no charge to the students. SupportLinc is the Employee Assistance Program (EAP) as of 2023 and is offered as a free and confidential service for students and their families to access 24 hours a day. These services include

professional counseling and coaching, work-life balance support, daily living support, financial assist, child/adult care resources, legal assist, and a robust website for additional supports. EAP services are provided by highly trained and qualified professionals in counseling, coaching, well-being, stress, family matters, relationships, and much more.

Students with SIMR medical benefits can access health care providers for physical and mental health needs via the website associated with their benefit plan.

Students have 24/7 access to the campus fitness center. Equipment and classes are provided at no charge to the students. They can work on their fitness at their own pace or participate in group exercise classes taught by certified instructors, such as yoga, body conditioning, strength, and agility. In addition to the on-site recreation opportunities, students are invited to participate in the annual Corporate Challenge activities with the Stowers Group of Companies (SGC). Started in 1980, the Kansas City Corporate Challenge is an Olympic-type event that allows Kansas City area corporations to interact with each other through a variety of sporting events.

ADDITIONAL COUNSELING SERVICES

Students are eligible for free and confidential counseling on-site with a contracted mental health professional. Sessions are limited and can be scheduled by visiting the provider's website at: http://sheryl-lavelock.clientsecure.me.

GSSIMR has contracted with the University of Missouri-Kansas City (UMKC) to provide counseling services to students. Students can access counseling through UMKC's Community Counseling and Assessment Services. Counselors are Ph.D. students who are in the last stages of their program and understand the unique demands of doctoral programs. This service is free to GSSIMR students, has convenient hours, and is located near GSSIMR. For additional information and to schedule an appointment call Kathryn Brewer, Ph.D. at 816-235-2725 or 816-235-5614 or contact her via email brewerkj@umkc.edu.

RELOCATION

GSSIMR provides each student with financial assistance for eligible moving expenses to enable them to move from their previous city of residence to the Kansas City area. Upon arrival in Kansas City, a student is provided with up to seven nights of transitional housing accommodations while they complete their arrangements to move into their own housing.

FACILITIES AND EQUIPMENT

GSSIMR is housed on the 10-acre campus of SIMR in the heart of Kansas City, Missouri. Lectures occur in conference and seminar rooms in the 600,000 square-foot facility, and laboratory research takes place in various laboratories and core facilities.

The SIMR campus is regarded as one of the most technologically advanced biomedical research facilities ever built. Students conduct research in laboratories and scientific support facilities that contain basic, common research supplies and equipment as well as specialized equipment as needed by that laboratory or facility. Scientists also share equipment that is housed in common research areas.

SIMR's support facilities encourage collaboration among scientists and foster efficiency in research. Each facility is headed by an expert in the field who works with research teams to offer access to the latest technology and techniques.

GSSIMR's administrative offices are in a central location within the Research Buildings. The area contains a comfortable space in which students can meet, exchange ideas, and socialize. Also in the area are the R. Scott Hawley Classroom, a place to practice scientific talks, a kitchenette for snacks and beverages, and a work room with printers and office supplies.

The Stowers Café offers subsidized meals and a diverse menu. It is open for breakfast and lunch Monday-Friday and makes available packaged meals for other times. A self-service espresso and tea station is open 24 hours a day in the Café and is free of charge.

OMBUDSPERSON

GSSIMR Ombudsperson serves as a confidential, informal, neutral, and independent resource to students, and promotes constructive problem-solving, effective communication, mutual respect, fairness, and has an increased organizational capacity for conflict management. The work of the Ombudsperson helps address student concerns or conflicts at early stages and suggest appropriate resolutions. Because of this, students are encouraged to reach out with their concerns no matter how small. The response of the Ombudsperson is unique to the dynamics of the situation, the nature of the concerns, and the student's desires. Where the Ombudsperson provides a neutral and confidential channel of communication, it supplements rather than replaces existing formal channels of communication/resolution.

For more information, see Policy 947 Ombudsperson and the Ombudsperson FAQs document on the Graduate School Helix page. To contact the Ombudsperson, send an email to **ombuds@stowers.edu**.

LEARNING RESOURCES AND SERVICES

ASSISTANCE WITH SCIENTIFIC WRITING AND PRESENTATIONS

Many of the module courses require students to provide evidence of their understanding through written documentation and oral presentations. Some students may find this aspect of science challenging, for reasons such as not being a native English speaker or not having much experience in scientific writing before starting the program. Therefore, support is provided by GSSIMR in the form of language classes. Students can sign up for the language courses through Stowers Immigration Services. Any student who has specific concerns about scientific communication should discuss those concerns with the Assistant Dean for Academic Affairs who may make arrangements for additional assistance. GSSIMR, in consultation with the student's thesis advisor and the Dean, may also support subsequent requests for editorial assistance.

LIBRARY SERVICES

The Stowers Library is dedicated to advancing scientific discovery and academic excellence by providing seamless access to world-class information resources, personalized research support, and a dynamic learning environment. As an integral part of the graduate program, library services empowers students, researchers, and faculty with cutting-edge tools, expert guidance, and collaborative partnerships to foster innovation in biomedical and life sciences.

Stowers Library supports students, their studies, and their research in the biomedical and life sciences with:

- **Access to 125+ electronic journals** and **593+ eBooks** through the online catalog with 24/7 access to digital resources.
- **A physical collection of 400+ specialized books** that continues to grow.
- **Top research tools** like ScienceDirect, Scopus, and JoVE (Journal of Visualized Experiments).
- **Fast interlibrary loans**—receive materials from other libraries in about 24 hours and books within ten days.
- **Scientific Publications and ODR -** Library Services tracks all published papers by researchers in the Library Service's LIMS publication module and according to the Scientific Publications and ODR Policies.
- **Poster Printing Services -** Library Services offers high-quality, full-color poster printing services for conferences and presentations.
- **Thesis Binding Information** - The library uses Houchen Bindery part of the HF Group in Utica, Nebraska for all our binding needs. **Turn-around time is approximately one month.**
- **Personalized help** with using databases, LIMS, and EndNote reference manager and DocuWare (Lab notebook viewing once a lab notebook has been scanned).
- **A quiet, well-equipped study space** with computers and Wi-Fi

The Stowers Library Specialist is a professional member of the ALA, Amigos, MLA, SLA, among others. The library received the 2009 Outstanding Biomedical Library Award and the 2014 Excellent Return on Investment Library Award from the Health Sciences Libraries Network-Kansas City.

Students and faculty using the Stowers Library also have access to all the library resources of consortial neighbors: Linda Hall Library of Science, Engineering and Technology; the AR Dykes Library of the University of Kansas, Medical Center; and the Miller-Nichols Library of the University of Missouri-Kansas City.

Whether a student is writing a paper, diving into research, or just needs a quiet place to study, Stowers Library has them covered!

PUBLICATION ACKNOWLEDGEMENTS AND DISCLOSURES

AI Usage Disclosure. Any use of generative AI for work produced must be clearly disclosed with a statement clarifying its usage, unless explicitly permitted otherwise by course instructors or thesis advisors. Students must include a statement describing how generative AI was used, specifying the tools involved and their role in the work.

Below is a sample disclosure statement that can be modified to fit different situations, or you can provide you own statement.

"I acknowledge the use of generative AI tools to assist with data analysis, generation of tables, and/or editing, rewriting, rephrasing, and/or paraphrasing parts of my work to ensure quality and the English used. Generative AI use was limited to enhancing the efficiency and presentation of my work. All intellectual contributions, interpretations, and conclusions are entirely my own, and I take full responsibility for the content, accuracy, and originality of my presentation, assignment, and/or experiment. "

Acknowledgments. When preparing an article for publication, students should list their affiliation with SIMR and use the following statement:

"This work was performed to fulfill, in part, requirements for _____'s thesis research in the Graduate School of the Stowers Institute for Medical Research."

When an article is published, a student must provide the citation to the Graduate School's Administrative Coordinator for record keeping purposes.

STUDENTS' INVOLVEMENT OPPORTUNITIES

GSSIMR encourages students' involvement in GSSIMR outside of their research. The three main mechanisms for further involvement are:

Graduate Student Council. The council is a standing body that provides formal feedback to GSSIMR leadership on matters of concern to students. The representatives on the council serve as liaisons between students and the Graduate School leadership when necessary, meets with the students as a whole prior to the leadership meetings to discuss issues and concerns, receive feedback, and communicate information and updates from the Graduate School, and formally meets with the Graduate School leadership at the conclusion of the Fall and Spring terms. The representatives on the council are the graduate school representatives on the following committees: Academic Progression Committee; Admissions Committee; Crossroads; Curriculum

Committee; Strategic Planning Committee. In addition, the students elect a chair who serves on the council for one year.

Peer Mentor Program. In order to help ease the transition to graduate school, current senior students (those who have been placed in a thesis lab) are matched to an incoming student. Peer mentors support their mentees throughout their first year by answering questions prior to arrival to Kansas City, meeting with their mentees once a month, discussing the laboratory rotations selection process, discussing the thesis placement process, assisting with reporting issues and managing conflicts that might arise during the first year.

Representatives on Committees. Three GSSIMR faculty committees and one GSSIMR committee have student representatives as members. The Academic Progression and Assessment Committee, Admissions Committee, Curriculum Committee, and Strategic Planning Committee each have one or two students serving on the committees. These committees meet on a regular basis to discuss the business of GSSIMR. The students participate by providing input into the policies and protocols related to students and the academic program, providing feedback regarding the curriculum, and participating in the planning activities of GSSIMR.

The goal is to have a broad representation of students on GSSIMR committees and achieve a balance that includes gender, year in program, background, and scientific research area. Each appointment is for one year with the possibility of being reappointed for an additional year. In order to participate in committee service, students must be between year three and year five of their graduate program. When committee positions are available for students, the Graduate School emails eligible students. Students then self-identify with their interest in an email reply. The Dean appoints students to the committees.

GSSIMR Ambassadors. Students have the opportunity to participate in the on-site admission interview weeks by serving as ambassadors. This gives the current students opportunities to meet and get to know the applicants. The ambassadors guide applicants to and from interviews, attend formal receptions and dinners, and interact with the applicants in informal settings. Feedback from the students regarding the applicants is shared with the Admissions Committee prior to final selection.

Monthly Gatherings. During the fall and spring terms, the students have monthly gatherings in the late afternoon. In addition to its social function, this time is used to discuss governance issues, report on ongoing projects, and solicit feedback from the students as needed. Topics in the past have included pay increase discussion, accreditation and certification updates, rotations, and use of social media. Dinner is provided.

PREPARING FOR CAREER OPPORTUNITIES

As a student progresses through the program, the best source for career advancement and placement is their thesis advisor. With the advisor's established networks of colleagues, the advisor is well suited to both evaluate and assist each student with the next step in their career. Furthermore, the members of each Supervisory Committee bring a wealth of experience placing developing scientists in applicable career paths. In addition, the Dean and the Assistant Dean for Student Affairs assist students in any way possible to help them reach their career goals.

Crossroads. GSSIMR participates in the Crossroads organization at SIMR that fosters a sense of community among graduate students and postdoctoral researchers. Crossroads activities are organized by a volunteer committee and include a variety of career-related and professional development workshops covering skills such as funding and grantsmanship, oral presentation skills, and effective manuscript writing. The annual Crossroads Research Conference is one of the major scientific and social events that Crossroads organizes. Crossroads Research Conference provides graduate students and postdoctoral researchers with the opportunity to present their research to their peers with oral and poster presentations and to socialize on an Institute-wide level. Crossroads also organizes career development workshops that provide career resources for graduate students and postdoctoral researchers to help them reach the next stage of their careers.

Graduate School Career Development Series. The Graduate School Career Development Series aims to empower students and postdoctoral researchers at every stage of their academic journey. Students can participate in workshops, seminars, and panels that cover topics such as science communication; interviewing for that next position; mentoring; CVs, resumes, and cover letters; negotiation; alternative careers; and life after Stowers. Events also include those hosted by other internal organizations such as the Crossroads Research Conference and the Faculty EDGE Series.

TechEDGE. The TechEDGE symposium is an opportunity to catalyze projects, expedite productivity and accelerate interdisciplinarity and research progress. At this semiannual event, students spend the morning listening to talks showcasing state-of-the-art and innovative capabilities from each of the Technology Centers and success stories of successful collaborations between senior postdoctoral researchers and technology centers. In the afternoon, new postdoctoral researchers pitch their research ideas to technology center experts to talk through their projects and can arrange for subsequent one-on-one meetings to strategize next steps. Students can also sign up for these sessions.

POLICIES

The following GSSIMR policies apply to students enrolled in the Ph.D. and the Master's programs. Current versions of these policies are found in the GSSIMR Policy and Protocol Manual. Additional copies can be obtained by contacting the Graduate School office.

Academic Conduct Policy: Number 900

Students must demonstrate personal integrity and honesty at all times in their coursework and research. Students are obligated to refrain from acts they know or should have reason to know will impair their integrity or the integrity of the School. Because scientific research is the vital part of the curriculum of the School, students are expected to adhere to the same high ethical standards in every facet of research as faculty and staff and to abide by policies of the School, Stowers Group of Companies (SGC), and Stowers Institute for Medical Research (SIMR). All forms of academic dishonesty or misconduct are prohibited. Violations under the jurisdiction of this Policy include, but are not limited to, cheating, plagiarism, fabrication, falsification, forgery, alteration, misrepresentation, or other practices that deviate from those commonly accepted within the academic and scientific communities, as determined and communicated by the School in its discretion.

Discipline

Violations of this Policy may result in a discipline up to and including dismissal from the School.

A suspected violation of this Policy should be referred first to the relevant faculty member or the Dean for Academic Affairs. The faculty member will promptly review the facts and circumstances, determine whether a violation occurred, and, if so, recommend appropriate discipline to the Dean for Academic Affairs.

Suspension

Regardless of other language provided in this Policy, a student may be suspended immediately from any classroom or lab session for inappropriate or unsafe behavior or failure to adhere to any School academic policy.

Immediate suspension may last from several hours up until the determination of the Dean for Academic Affairs. Faculty members are solely responsible for making the decision to suspend immediately a student from classroom or lab sessions in progress for inappropriate or unsafe behaviors. The faculty member will notify the Dean and Dean for Academic Affairs as soon as practicable when a student receives an immediate suspension. At the time of a suspension by the faculty and as soon as practicable following an immediate suspension, conditions for reinstatement are explained by the Dean or Dean for Academic Affairs. Failure to meet the conditions of reinstatement may result in course failure.

During any suspension under this Policy, if it is an extended period, the student's schedule will be halted and frozen until they are released from the suspension and return to class, lab activities, and program and activities.

The Dean for Academic Affairs will review the faculty member's recommendation based on information provided by the faculty member, determine whether a policy violation occurred and, if so, what interventions need to occur, and notify the student of the determination in writing.

Academic Appeal

A student may appeal any of the following:

1. Failing final course grade.
2. Suspension from lab or course activities exceeding two weeks.
3. Recommendation for dismissal.

An appeal is initiated by the student submitting a typed statement to the Chair of the Academic Progression and Assessment Committee, no later than seven (7) business days after being notified of the failing final course grade, suspension from lab or course activities, or recommendation for dismissal. The typed statement must include the following:

1. A description of the issue.
2. Specific steps that have already been taken to resolve the issue with the faculty and/or School administration.
3. Evidence supporting why the student believes the decision made was inconsistent with existing School, SIMR or course policy, was arbitrary, or lacked sufficient evidence.

In preparing the appeal, it is the student's responsibility and burden to prove that the action taken by the faculty was inconsistent with existing policy, arbitrary, or lacked sufficient evidence. The student may seek assistance from a School faculty member as an advisor in preparing the statement for an appeal. The role of the advisor is to assist the student in understanding the policy and procedure. The advisor's role does not include gathering information or presenting evidence.

The student will submit the letter of appeal with supporting documents to the Chair of the Academic Progression and Assessment Committee. The Chair will forward appeal documents to faculty involved in the subject matter of the appeal or its resolution. Faculty will submit to the Chair of the Academic Progression and Assessment Committee within five (5) business days their response to the appeal document, including their supporting documentation. The Chair of the Academic Progression and Assessment Committee will forward the faculty's response to the student.

The Academic Progression and Assessment Committee will meet within seven (7) business days of receiving all the written appeal documents to hear the appeal. The student may request one continuance, not to exceed one week, for good cause. The student and faculty will be notified 72 hours before the hearing of the time, date, and location of the hearing. It is preferable that students and faculty attend the committee hearing in person. However, GSSIMR will accommodate the use of speakerphone or approved virtual method for a student, advisor, faculty member or committee members who are unable to participate in an in-person hearing. Members of the Academic Progression and Assessment Committee, the involved student and faculty, and the student's advisor will hear the appeal. The meeting is confidential and restricted to those persons listed. If an incident involves more than one student, each student will be heard individually.

An Academic Progression and Assessment Committee member, who has been directly involved in the awarding of a failing course grade or recommending dismissal, will be replaced by a faculty member appointed by the Dean. If an Academic Progression and Assessment Committee member is the involved student's thesis advisor, a replacement committee member will be assigned by the Dean for the purpose of the appeal.

The student may be accompanied to the Academic Progression and Assessment Committee hearing by their thesis advisor. When the Academic Progression and Assessment Committee has heard all the evidence, the committee members will meet, in private, to discuss the appeal. The committee will make a decision within seven (7) business days after the hearing.

In an appeal of a failing course grade, the Academic Progression and Assessment Committee can either: 1) uphold the assigned grade or 2) return the grade to the faculty for reconsideration. If the faculty is asked to reconsider a grade by the committee, the faculty can uphold the assigned grade or change the grade. The faculty member will notify the committee of their decision within 72 hours. The faculty member's decision is final. The Academic Progression and Assessment Committee will notify the Dean and the student of the outcome of the appeal.

If the outcome of an appeal results in dismissal from the program or suspension from lab or classroom activities for more than two weeks, the student may make one last appeal to the Dean. The Dean of the Graduate School may take any action they deem is appropriate under the circumstances of the case. The decision of the Dean is final.

Readmission Following Dismissal

Dismissal from the School is a serious action and results when two (2) failing grades are earned in any course or the Academic Progression and Assessment Committee determine dismissal as the appropriate action. Therefore, a student who has been dismissed from the School should not expect to be readmitted. A student who is dismissed from the School may choose to apply for readmission through the Admissions Committee. The Admissions Committee may consider an application for readmission if there is clear evidence of probable future academic success. It is the student's responsibility to support the application for readmission by submitting the following materials to the chairperson of the Admissions Committee:

1. A letter indicating the student's interest to be considered for readmission and including a written plan for achieving future academic success in the program.
2. Letters of recommendation for readmission from both the academic advisor and another faculty member from the most recent course taken.

The Admissions Committee reviews these materials and the student's overall academic record in making a decision and reserves the right to stipulate additional requirements for readmission.

Attendance Policy: Number 901

The SGC expects good attendance and punctuality. If a Covered Individual is going to be late for work or absent, the Covered Individual must call in each day of the lateness/absence as early as possible, and no later than one hour before the start of work unless prior arrangements have been made. Notifying a co-worker is not sufficient; the Covered Individual must make every effort to speak with their supervisor and, if that is not possible, must leave a message for the supervisor on voicemail or e-mail.

Excessive absences or late arrivals may result in discipline, including termination. In general, absences will be considered excessive when the absentee rate is 3% or greater. For calculating the absentee or late arrival rate, absences will not count if they are authorized. Authorized absences include but are not limited to FMLA absences, vacation leave, jury duty leave, or approved unpaid leave. Sick days do count toward the absentee rate; the exceptions are FMLA sick days or sick days for which leave has been granted under the Americans with Disabilities Act

or similar laws. Failure to call in or come to work three days in a row, absent extenuating circumstances, will be considered a voluntary resignation.

This policy will be interpreted in accordance with all applicable laws, including the Family and Medical Leave Act and the Americans with Disabilities Act.

Students:
To meet the goals of the program, students are expected to comply with the above policy, fully participate in all phases of the research program, and maintain an acceptable time and attendance record. A student who is unable to meet the time and attendance standard must notify the Dean for Academic Affairs in advance of the tardiness or absence. With prior approval from the advisor and the Dean for Academic Affairs, a student may take personal days, the number of which will be determined by the student's need. Excessive absences or late arrivals may be grounds for dismissal from the program. As defined by the SGC Attendance Policy, "In general, absences will be considered excessive when the absentee rate is 3% or greater. For calculating the absentee or late arrival rate, absences will not count if they are authorized."
Authorized absences for students include, but are not limited to, FMLA absences, jury duty leave, or approved unpaid leave.

Module Attendance for Students:
Students are required to attend all portions of all modules. The required times will be distributed in the schedules that accompany each syllabus. These will include:

1) Lectures, both in-class and Wednesday seminars and Friday Science Clubs
2) Journal clubs
3) Laboratory sessions, both the scheduled time as well as any extra time that may be necessary to complete the work. If finished early, predocs may be dismissed by the laboratory instructors.

Any absence needs to be cleared by the lead faculty of that module prior to the absence through email. Exceptions to this policy are made for emergencies where it may not be possible to contact faculty ahead of time. In those cases, predocs are encouraged to contact the faculty and/or the Dean for Academic Affairs as they are able. Unexcused absences for non-emergency reasons will be referred to the Dean for Academic Affairs for subsequent action. In the event of class cancellation due to any reason including weather, students will be notified via email.

Dress and Personal Protective Policy: Number 902

Dress Policy (General)
While in the lab, PPE Requirements must be followed. In addition, it is recommended that Covered Individuals confine long hair and loose clothing. When Covered Individuals are not in a lab setting, they are not restricted from wearing clothing that does not cover the legs (shorts, skirts, dresses), open-toed shoes, perforated shoes, and canvas sneakers.

PPE Requirements (Personal Protective Equipment)

Students and summer scholars spend most of their time in a laboratory setting and they are to abide by the same requirements and recommendations for personal safety as others who work in laboratories at the Stowers Institute for Medical Research (SIMR). A baseline clothing requirement for entry to any laboratory space (or other space where hazardous materials may be used or stored) has been established and includes:

- Closed-toe, solid top shoes that completely cover the top of the foot
- Clothing (pants, leggings, scrubs, long skirt) that covers the legs so that there is NO exposed skin. Nylons, stockings, and pantyhose do NOT meet this requirement.
- Gloves if touching potentially contaminated equipment

When handling chemical, biological or radiological materials, one must wear the appropriate protective equipment which includes, at a minimum, a lab coat, safety glasses, and appropriate gloves, all of which are provided by SIMR. For a more complete description of the requirements, see the complete PPE Requirements from Environmental Health & Safety on the following page.

Any student or summer scholar who does not abide by the recommendations will be reprimanded by their faculty or advisor with a verbal warning. If more than one verbal warning is required and the problem persists, the student or summer scholar can be referred to the Dean for Academic Affairs for further intervention and issue resolution. Any student or summer scholar who does not follow the proper procedures when handling chemical, biological or radiological materials will be referred to their faculty or advisor for intervention and issue resolution and may be prohibited from working with those materials in the future.

Technology and Software Policy: Number 904

One benefit provided by GSSIMR to students is a laptop with necessary related devices (e.g., adapters) and software ("equipment"). This equipment is owned by the School and is issued to students once, when they start the graduate program. An iPad may be loaned from the School if needed for coursework. It is the responsibility of each Covered Individual to be a responsible steward of this School equipment. When a Covered Individual arrives at SIMR from travel outside the United States, for security purposes the hardware is wiped and reimaged before allowed to access the SIMR network. Prior to bringing the hardware to the SIMR campus, the Covered Individual needs to back up any data on the hardware and contact IT to make arrangements for IT to receive, reimage, and return the hardware in a timely manner.
For the complete Technology and Software Policy, please refer Policy Number 904.

Grievance Policy: Number 910

In all situations, a student with a grievance regarding on-going coursework, faculty, policies and protocols of the School or non-academic issues should attempt to resolve the grievance with the person responsible. If not resolved, the student should consult with the Dean for Academic Affairs and/or the Human Resources Officer who will advise the student and serve as a liaison between the student, the person responsible, and/or the administration of the School and SIMR. All reports will be promptly investigated, and every effort will be made to conduct the investigation in as confidential a manner as possible.

Specifically, a student with a grievance regarding a final grade or academic progress should refer to the Academic Conduct Policy in the Catalog & Handbook or Policy and Protocol Manual.

A student with a grievance regarding scientific conduct should consult their advisor. If further resolution is necessary, the student should follow the Stowers Group of Companies ("SGC") Scientific Misconduct policy (Policy Number 602R). In addition, the student should notify the Dean and the Dean for Academic Affairs.

A student with a grievance regarding equal opportunity, sexual harassment and other forms of harassment, reasonable accommodations, ethics, conflict of interest, fraud, or a similar matter

should contact the Dean for Academic Affairs or the Human Resources Officer who will serve as a liaison for the student as they follow the process outlined in the applicable School and SGC policy.

If the grievance involves the Dean for Academic Affairs or the Human Resources Officer, the student should consult with the Dean.

After the process in this Policy has been used and completed, a student not satisfied with the result may present the unresolved issue or appeal in writing to the Dean and to the Academic Progression & Assessment Committee or Supervisory Committee, whichever is applicable. The Dean has 7 business days to present a resolution of the grievance. Final appeals may be made to the President of GSSIMR. Students who are dissatisfied with the resolution offered by the School may contact the Missouri Department of Higher Education at (573) 751-2361 for information on filing a formal grievance.

Education Records Privacy and Release Policy: Number 930

GSSIMR conforms to standards established and accepted in higher education to protect the privacy of education records and provide rights to students and their families with regard to access and privacy of academic records. This policy is designed to protect the privacy of education records of students who are currently or formerly enrolled. Education records of students who have applied to, but have not attended GSSIMR, are not subject to protections under this policy. For the complete Education Records Policy, please refer to Policy Number 930.

Transcript Issuance Policy: Number 931

A current or former student who wishes to obtain a copy of a transcript from the School must complete and sign a Transcript Request Form then submit the form in person, by mail, or as an e-mail attachment to the Graduate School office. Each request form must contain an original signature and/or be submitted as a signed PDF from the student's e-mail address. All financial obligations to the School must be paid before a transcript will be issued. Three business days should be allowed for processing transcript requests, except at the close of a term when more time may be required.

Transcripts are issued at no charge. Photo identification is required to pick up a transcript from the Graduate School office. Transcripts are mailed by standard U.S. Postal Service first-class delivery. Fees for any special delivery (such as Fed Ex) are charged to a student's credit card or collected in cash before sending the transcript.

Copies of transcripts from other institutions are not provided.

Withdrawal Policy: Number 932

A student who wishes to withdraw from GSSIMR must meet with the Dean or their designee then submit a written notice to the Associate Dean for Administration & Registrar. The Associate Dean subsequently takes the necessary steps to end the student's affiliation with GSSIMR in a timely manner.

If a student withdraws from GSSIMR, their transcript indicates a grade of "W" for the courses in which they were enrolled at the time of withdrawal. "Withdrawal from Program" and the date of withdrawal is noted on the transcript following the last term's grades. The effective date of

the withdrawal is a date indicated in the student's written notice or, if no date is indicated, it is the date the written notice is received by the Associate Dean for Administration & Registrar.

A student who withdraws from GSSIMR and later wishes to be reinstated must reapply by following the same admission application process as all applicants.

Transfer and Prior Learning Credit Policy: Number 933

No credit is given for hours earned at another institution. The School does not accept or award credit for prior learning experiences or experiential learning. Due to the structure of the School, courses taken at other institutions, prior learning experiences, and experiential learning are likely to be incompatible with and contrary to the School. The modular structure of the School's program, as opposed to the more common didactic courses at other institutions, immerses students immediately in a research dynamic that extends through their laboratory rotations and into their thesis research. Moreover, the program is organized around the core disciplines and state-of-the-art capabilities of the Stowers Institute for Medical Research (SIMR) itself and the faculty. To award credit for hours earned at another institution, for prior learning experiences, or for experiential learning would be contrary to the philosophy and structure of the School's program.

Complete Policy List

Policy Name	***Policy Number***
Academic Conduct	Policy Number 900
Attendance	Policy Number 901
Dress and Personal Protective Equipment	Policy Number 902
Consumption of Alcohol	Policy Number 903
Technology and Software	Policy Number 904
Medical Insurance	Policy Number 905
Grievance	Policy Number 910
Grading	Policy Number 911
Issue Resolution	Policy Number 912
Sexual Harassment	Policy Number 913
Admissions and Recruitment	Policy Number 914
Reasonable Accommodation	Policy Number 915
Academic Probation	Policy Number 916
Laboratory Entry	Policy Number 920
Master's Degree	Policy Number 921
Educational Records Privacy and Release	Policy Number 930
Transcript Issuance	Policy Number 931
Withdrawal	Policy Number 932
Transfer and Prior Learning Credit	Policy Number 933
Credit Hours	Policy Number 934
Financial Policy	Policy Number 935
Faculty Bylaws	Policy Number 940
Faculty Governing Council Bylaws	Policy Number 941
Equal Opportunity	Policy Number 942
Nondiscrimination	Policy Number 943
Graduate School Seal Usage	Policy Number 946
Ombudsperson	Policy Number 947
Emeritus Faculty	Policy Number 950
Code of Conduct	Policy Number 100GS
Drugs and Alcohol in the Workplace	Policy Number 103GS
Coaching and Counseling	Policy Number 104GS
Solicitation	Policy Number 108GS
Visas	Policy Number 109GS
Pay Practices	Policy Number 115GS
Parental Leave	Policy Number 121GS
Employee Assistance Program	Policy Number 127GS
Use of Computers and Phones	Policy Number 129GS
Children on Premises	Policy Number 130GS
Outside Employment	Policy Number 131GS
Response to Anti-Science Incidents	Policy Number 132GS
Workplace Violence and Weapons	Policy Number 133GS
Equal Opportunity	Policy Number 134GS

Personal Relationships in the Workplace	Policy Number 135GS
Whistleblower and Other Reporting of Misconduct	Policy Number 136GS
Intellectual and Other Property, Confidential Information and Nonsolicitation	Policy Number 201GS
Conflict of Interest	Policy Number 202GS
Fraud	Policy Number 203GS
Gift Acceptance	Policy Number 204GS
Contracts	Policy Number 206GS
Records Retention Management	Policy Number 207GS
Purchasing Procedures	Policy Number 300GS
Acceptable Vendor List	Policy Number 301GS
Vendor Recognition	Policy Number 302GS
Small/Women-Owned/Disadvantaged Business	Policy Number 303GS
Competitive Bids	Policy Number 304GS
Media Relations	Policy Number 400GS
Service Mark Usage	Policy Number 401GS
Social Media	Policy Number 402GS
Business Related Travel and Expenses	Policy Number 500GS
Scientific Publication	Policy Number 600GS
Honoraria	Policy Number 601GS
Scientific Misconduct	Policy Number 602GS
Open Source Software	Policy Number 603GS
Institutional Animal Care and Research	Policy Number 604GS
Recording of Laboratory Data	Policy Number 605GS
Material Transfer Agreements	Policy Number 606GS
Protocols Involving Human Materials	Policy Number 607GS
Additional Ethical Review for Research Involving Human Embryonic Stem Cells	Policy Number 608GS
Distribution of Mouse Strains	Policy Number 609GS
Records Retention and Management of Scientific Data	Policy Number 610GS
Grants	Policy Number 701GS
Use of the Health Club	Policy Number 800GS
Facility Use	Policy Number 801GS
Tobacco-Free Campus	Policy Number 802GS
Vehicle Parking	Policy Number 804GS
Emergency Action Plan	Policy Number 805GS

LEGAL STATUS

The Graduate School of the Stowers Institute for Medical Research is a Missouri corporation organized exclusively for charitable, educational, and scientific purposes within the meaning of Sections 501(c)(3), 170(c)(2)(B), 2055(a)(2), and 2522(a)(2) of the Internal Revenue Code of 1986, as amended, or any corresponding section of any future federal tax code. The business of GSSIMR is managed by, and all of the powers are exercised by, the GSSIMR Board of Directors. The conditions of Board membership are stated in the GSSIMR bylaws.

REVISING THE CATALOG AND HANDBOOK

The Catalog and Handbook for Students will be reviewed at periodic intervals of no greater than three years. The Catalog/Handbook was originally approved on November 10, 2010 and was revised on August 17, 2012; August 15, 2013; August 7, 2014; January 26, 2015; August 10, 2015; August 2016; August 2017; August 2018; August 2019; August 2020; January 2021; August 2021; August 2022; August 2023; August 2024; August 2025

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2025-2026 ACADEMIC CALENDAR

August 11-26	Orientation and Pre-Courses[1]
August 18	Fall Term Begins Thesis Laboratory Research Continues[2]
August 19	Scientific Communication (Part II)[3]
August 27	Module I Begins[1] (2 weeks)
September 1	Labor Day Holiday
September 15	Module II Begins[1] (2 weeks)
September 29	Module III Begins[1] (2 weeks)
October 13	Indigenous Peoples' and Columbus Day
October 14	Module IV Begins[1] (2 weeks)
October 27	Module V Begins[1] (2 weeks)
November 10	Module VI Begins[1] (2 weeks)
November 11	Veterans Day
November 24-28	Thanksgiving Holiday[1]
November 27-28	Thanksgiving Holiday[2]
December 1	Module VII Begins[1] (2 weeks)
December 15	Winter Break Begins[1]
December 24-31	Christmas Holiday[2]
January 1	New Year Holiday
January 2	Spring Term Begins
January 5	Laboratory Rotation I Begins[1] (8 weeks) Thesis Research Begins (Direct Admission Students) Scientific Communication (Part I)[1]
January 19	Martin Luther King Holiday
February 16	Presidents Day Holiday
March 2	Laboratory Rotation II Begins[1] (8 weeks)
April 27	Laboratory Rotation III Begins[1] (8 weeks)
May 25	Memorial Day Holiday
June 19	Juneteenth Holiday
June 22	Summer Term Begins
July 3	Independence Day Holiday
August 14	Academic Year Ends

[1] First-Year Students
[2] Second and Subsequent-Year Students
[3] Second Year Students