Graduate School Student Handbook
2019 – 2020

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PREFACE

This Student Handbook is subject to review and change from time to time, and policies may be revised in the course of any given academic year. We therefore suggest that you check this Handbook to confirm policies and requirements in effect at any given time. This Handbook is not intended and should not be construed to constitute a contract.

Mission Statement

The mission of the Graduate School of Biomedical Sciences is to provide rigorous training in basic science, as well as in patient and population-based research, which will prepare our students for leadership roles in scientific discovery, clinical innovation, science education, and health policy.

Statement of Accreditation

All educational programs of the School of Medicine and its affiliated institutions have been approved by the governmental, academic, and professional bodies having responsibility in the respective areas. These include the Board of Regents of the State of New York, the State Education Department, the Board of Higher Education of the City of New York, Council on Education for Public Health, Accreditation Council for Genetic Counseling (ACGC) and medical specialty boards and professional societies.

Diversity Statement

At the Icahn School of Medicine at Mount Sinai (ISMMS) we center our approach to education, research, clinical care and service to society on the values of diversity, inclusion, and equity.

At ISMMS:

- Diversity embodies inclusiveness and values multiple perspectives. Diversity embraces and celebrates intersectional social identities including but not limited to race, ethnicity, gender, gender identity, sexual orientation, socioeconomic status, language, nationality, religion, geographic location, disability status, and age.

- Inclusion fosters belonging, "connectedness," respect and value for all. Inclusion considers differences in ideas, thoughts, opinions, experiences, beliefs and practices in all discussions and decision-making.

- Equity is the experience of freedom from bias or favoritism, where everyone has the opportunity to attain their full potential and no one is disadvantaged or favored due to social position or other socially-determined circumstances.

We believe diversity, inclusion and equity

- are imperative to achieving excellence in all our missions

- create an environment of respect and affirmation of intersecting social identities and lived experiences

- allow our community of learners, educators, providers and investigators to use medicine, science, and policy as platforms for advocacy and social justice

We are committed to increasing and sustaining the representation of individuals underrepresented in medicine and science. We will focus our recruitment and retention efforts on students, residents and trainees, faculty, and staff who identify as Black, Latino/a, educationally and economically disadvantaged, and women. We will also be intentional in our efforts to create an inclusive and welcoming environment for all LGBTQ identified students, faculty, residents and trainees, staff, and patients.

As individuals pursuing careers, or working in, medicine and science, we have the obligation to be agents of change.We are committed to providing an authentic and intentionally diverse, inclusive, and equitable

environment for all patients, students, residents and trainees, staff and faculty. Our goal is to be a health system that is free from racism and bias, in which health care is a human right and is accessible to all.

CHAPTER 1 – Policies, Procedures, and Services

Introduction

The following sections detail the policies and administrative practices of the Graduate School of Biomedical Sciences of ISMMS. In some cases, there may also be additional guidelines that are specific to a student's program of study. All students are required to familiarize themselves with the information contained within this chapter and for their program of study.

Responsible Conduct in Research

General Statement

Students are expected to maintain the high standards of ethical and personal conduct that are the prerequisite for a productive research environment. Students are required to participate in special seminars about the ethical issues and dilemmas that arise in research environments and are encouraged to seek guidance with respect to optimal forms of record keeping. Thesis and capstone advisors should familiarize their students with expected practices.

Academic Integrity

Failure to adhere to ISMMS's standards of academic integrity will be treated as serious offenses that are inconsistent with the goals and activities of the academic environment. Breaches of academic integrity will be subject to disciplinary action, up to and including expulsion from the School. Some examples of behaviors that are unacceptable include, but are not limited to:

A. Cheating: using unauthorized notes, study aids, or information on an examination; altering a graded work after it has been returned, then submitting the work for re-grading; allowing another person to do one's work and submitting that work under one's own name; submitting identical or similar papers for credit in more than one course without prior permission from the course instructors.

B. Plagiarism: Plagiarism is the representation of the words or ideas of another person as your own on any submitted work regardless of whether or not that work is in final form. This includes collaborating with another on an assignment or assessment without the explicit permission of the course director. Work of others must be clearly delineated from your work and properly attributed using standard methods. If you have any questions about methods of properly citing sources, you should consult with the course director.

C. Written computer code is considered the same as any other written document and as such it is also subject to this plagiarism policy. Unless explicitly stated by the course director, you may not use any code from other sources in your programming. This includes open-source code. When permission is given by a course director to use another's code, it must be properly attributed using inline comments bracketing the borrowed code and the source of the material must be explicitly stated. Use of code libraries is permissible only if specifically indicated in WRITTEN course information.

D. Fabrication: falsifying or inventing any information, data or citation; presenting data that were not gathered in accordance with standard guidelines defining the appropriate methods for collecting or generating data and failing to include an accurate account of the method by which the data were gathered or collected

E. Obtaining an Unfair Advantage: (a) stealing, reproducing, circulating or otherwise gaining access to examination materials prior to the time authorized by the instructor; (b) stealing, destroying, defacing or concealing library materials with the purpose of depriving others of their use; (c) unauthorized collaborating on an academic assignment (d) retaining, possessing, using or circulating previously given examination materials, where those materials clearly indicate that they are to be returned to the instructor at the conclusion of the examination; (e) intentionally obstructing or interfering with another student's academic work, or (f) otherwise undertaking activity with the purpose of creating or obtaining an unfair academic advantage over other students' academic work.

F. Aiding and Abetting Academic Dishonesty: (a) providing material, information, or other assistance to another person with knowledge that such aid could be used in any of the violations stated above, or (b) providing false information in connection with any inquiry regarding academic integrity.

G. Falsification of Records and Official Documents: altering documents affecting academic records; forging signatures of authorization or falsifying information on an official academic document, grade report, letter of permission, petition, drop/add form, ID card, or any other official University document.

H. Unauthorized Access to computerized academic or administrative records or systems: viewing or altering computer records, modifying computer programs or systems, releasing or dispensing information gained via unauthorized access, or interfering with the use or availability of computer systems or information.

I. Distance Education students will be subject to student identity verification processes intermittently throughout the online experience. Students are expected to fully and truthfully comply with all requests for information that would verify their identity.

J. All graded essays, papers, and problems, and all written materials submitted as part of the Thesis Proposal or the Thesis, must be entirely the work of the individual student or referenced appropriately. Even editing (e.g. syntax assistance for foreign students) should be sought only if explicit permission is obtained.

If faculty observe or have knowledge of students engaging in any of the above-mentioned activities, the faculty member should, depending on the circumstances, discuss the matter with the student at once. Students and faculty who believe that any of the above-mentioned activities have occurred should report the matter in writing to the Dean of the Graduate School immediately. The Dean will designate the Associate Dean or Director of the MD/PhD program plus the Course Director to review the allegation of academic misconduct. Based on their report, the Dean may choose to bring the matter for review to the Graduate School Committee for Academic Review to determine appropriate action including whether the student remains in good academic standing.

If it is determined that the student has been involved in any form of academic misconduct, the student will receive an F for the assignment or course. Additional consequences, including dismissal from the program, are at the discretion of the Dean of the Graduate School. If the student wishes to appeal the decision of the Course Director or the Graduate School Committee for Academic Review, this must be put in writing to the Dean within two weeks of receiving notification of the consequences of the incident of academic misconduct. The issue will then be pursued according to the appeals process detailed below (see "Appeals Process", a subsection "Academic Policies and the Registrar's Office).

The Responsible Conduct in Research and Rigor and Reproducibility Courses and Curricula

All incoming students, except those in the Clinical Research Educational Program, Master of Science in Biostatistics, Master of Science in Genetic Counseling (MSGC), and Master of Science in Health Care Delivery Leadership (MSHCDL), must complete the Graduate School's 1/2-credit Responsible Conduct of Research course in the fall semester. The classes are led by several faculty and take the form of highly interactive lectures and expert panel discussions. Classes cover fundamental issues of training ethics, authorship, biohazards, relationships in the research environment, mentoring, conflicts of interest, record keeping, sharing reagents, etc. Attendance is mandatory to all sessions in the course. The Clinical Research Program, MSGC and MSHCDL students participate in program-specific research ethics courses and other required integrated curricular components, in order to meet the requirement for RCR

All students must also take the Rigor and Reproducibility course offered in the spring semester. This ½ credit course is led by several faculty and covers current issues to enhance rigor and reproducibility using common examples. Attendance is mandatory, and students are letter graded based on a take-home exam.

Clinical Research students should refer to Chapter 5 of this handbook for details regarding their RCR Course requirements.

Policies and Procedures on Ethical Practices in Research

The School hereby affirms its commitment to the highest ethical standards in the conduct of scientific research, the promotion of original research of high quality, and the importance of academic freedom. It also acknowledges that unethical conduct in research is extremely serious and threatens these principles. The School is, therefore, committed to preventing unethical conduct in research from occurring and, should it occur, to dealing with it swiftly, fairly and thoroughly.

Procedures for handling allegations of misconduct in research are described in detail in the Faculty Handbook (Chapter VI) at the following URL:

http://icahn.mssm.edu/about-us/services-and-resources/faculty-resources/handbooks-and-policies/faculty-handbook/research-environment/research-integrity.

Allegations of misconduct in research must be reported to the Institution's Research Integrity Officer (RIO) who will have primary responsibility for implementation of the institution's policies and procedures on unethical practices in research.

The RIO has general responsibility for overseeing the investigation of all allegations of unethical conduct in research and shall be available to:

♦ Consult confidentially with persons uncertain about whether to submit an allegation of unethical research practices and if the allegations do not involve unethical practices in research, refer the individual to other offices with responsibility for resolving the issue.

♦ Receive allegations of suspected unethical research practices and work with the Research Integrity Committee to determine and pursue the appropriate method for investigating and resolving these allegations.

Manuscript Policy

In conformity with the principles of academic freedom, faculty and students are not required to obtain prior approval before submitting a manuscript for publication or to amend such manuscripts to comply with suggestions made by others. However, it is recommended they provide Department Chairpersons with copies of manuscripts prior to publication.

No graduate student may submit a manuscript to a journal from the ISMMS or describe work conducted in the Graduate School without review and approval by a faculty member. That review should include the appropriateness of the authorship(s) and acknowledgment(s) of grant support, as well as the substance of the report. Similarly, students are required to subject all extramural applications to faculty review.

Policy on Responsibilities of Authors and Data Retention

A. *Responsibilities of Authors* – A clear designation, delineation and acceptance of authorship responsibility has been established, which requires the following formal procedure for sign-off by all coauthors of all publications:

a. A checklist will be signed by each author to signify that each coauthor has read the final submitted manuscript and verified the accuracy of the data bearing on his/her contribution.

b. The checklist will indicate the responsible author for the paper.

c. The checklist will stipulate the storage site of the data from which the publication is derived.

d. The responsible author will be responsible for the receipt and retention of these statements and to make a "best effort" to obtain signatures from coauthors (see 4.A-1, above) who are not or no longer on the faculty of ISMMS.

B. *Data Retention* – All original laboratory data books or journals, etc., from which a publication is derived, must be stored in the laboratory for a minimum of six years from the date of publication. If the senior author leaves the Icahn School of Medicine at Mount School before the six-year period elapses, he/she will be required to retain and make available, if requested, to ISMMS all these data until the completion of this minimum time period. In the case of large ongoing database related research, the responsible investigator must retain the pertinent mass data storage device (hard drive, tape, disk, etc., not necessarily in hard copy) containing the data on which a publication is based. The stored data can be used for verification of data, as well as the base for ongoing studies of the same project. In the latter instance, however, a clarifying statement that describes the nature and the composition of the reutilized and incremental data should accompany the publication. The data storage device cannot be reused for unrelated projects. Although it is understood that this rule governing database storage may not be appropriate in all situations, individual modifications must be approved by the Dean. For additional information see the [ISMMS Handbook for Research](#).

Policy and Procedures on Protecting Whistleblowers

The School of Medicine strongly believes in the importance of protecting whistleblowers from retaliation and addressing good faith allegations of such retaliation. Accordingly, the School affirms that it will adhere to any applicable policies and procedures promulgated by federal or other oversight agencies in dealing with such allegations. Whistleblower complaints or complaints of subsequent retaliation may be brought, as appropriate, to the School's Faculty Relations Committee (see Faculty Handbook, Chapter III), Harassment Grievance Board (see Faculty Handbook, Chapter III), or Department of Human Resources, or Office of Compliance.

Copies of the policies and procedures of the Harassment Grievance Board are available from the Office of the Dean, Reserve Section of the Levy Library, House Staff Affairs Office, Postdoctoral Affairs Office, Office of the Graduate School, and Office of Student Affairs. Human Resources policies are available from the Department of Human Resources.

Policy on Financial Conflict of Interest in Research

As an academic institution, ISMMS has an obligation to assure that its scientific and clinical research is conducted pursuant to the highest standards of ethical conduct free from any improper external bias. At the same time, ISMMS encourages scientific collaboration with industry and supports collaborative research geared towards developing new and improved diagnostic and therapeutic products. ISMMS appreciates, however, that these economic relationships with industry have the potential for directly and significantly affecting the approval, design, conduct, monitoring or reporting of a research study. Situations can occur in which an independent observer might reasonably conclude that the potential for individual or institutional profit could influence the outcome of a research study. Even in the absence of an actual conflict of interest, such situations may require actions to minimize the appearance of a conflict.

Therefore, to safeguard the academic integrity of both ISMMS and its investigators, the institution has adopted a rigorous conflicts policy predicated on full disclosure and appropriate management. The Policy sets out the requirements for disclosing potential conflicts of interest in research and specifies the procedures for reviewing such disclosures and determining what corrective measures, if any, should be instituted. Furthermore, the policy includes clinical trials that evaluate the safety and efficacy of a drug, medical device or treatment, and research on technology in which the Investigator/Covered Person and/or the Institution has an ongoing financial interest, to the most rigorous review and stringent conditions.

This Policy is based on the standards set forth in the federal regulations governing research funded by the Public Health Service (PHS) or the National Science Foundation (NSF) (42 CFR Part 50 Subpart F) and the recommendations promulgated by the Association of Academic Medical Centers.

The complete policy on Conflicts of Interest can be found here.

Financial Support

Stipend and Tuition

Tuition is only charged for courses taken at ISMMS. Students who are granted transfer credit for courses taken at other institutions, may apply for tuition credit on a per credit basis. Non-matriculated students may also enroll in courses that are part of a Master's program at the tuition rate charged by that program.

Payments may be made by personal check, bank draft, or money order, drawn to the order of Icahn School of Medicine at Mount Sinai. Tuition and fees must be paid by the first day of each term. For payment plan arrangements, please contact Tuition Management Systems, an independent company, at (800) 722-4867 or online at https://icahnschool.afford.com.

All financial obligations must be cleared prior to completion of each term. Students who have not cleared their account will have a financial hold placed on their account. Financial holds will not allow students to re-register, receive a transcript or letter of recommendation, have academic credits certified, receive other student services, attend class/clerkship for the current academic term, or have a degree conferred.

A late fee of $100 is added to students' accounts if tuition is not paid before classes begin. At the end of the academic year, students with unpaid balances will be placed on hold and not permitted to continue. Students who have unpaid balances and have withdrawn or stopped attending school will be referred to a collection agency. Student Financial Services (SFS) can assist most students with taking out student loans to cover their balances., but they must see SFS and apply for the loans prior to the end of their current semester.

The Board of Trustees reserves the right to revise all fees, including tuition.

A. *PhD and MD/PhD in Biomedical Sciences or Neuroscience* – All MD/PhD and PhD in Biomedical Sciences or Neuroscience students are offered a stipend, the full cost of tuition and a comprehensive health insurance package. Exceptions to this occur when students come to the program with external funding already in place. When such awards allow it, the student's financial package may come from that funding source. Continuation of this support is contingent upon maintaining satisfactory progress (see section on Satisfactory Progress) in the Program at all times. The Program reserves the right to discontinue support in the absence of such progress. The stipend for academic year 2019-20 is $39,000 and is adjusted periodically as the school endeavors to enable its students to keep pace with expenses and rising costs.

During their early training, students are supported by the Graduate School through generalized funds, including training grants and institutional fellowships. This allows students to complete the General Program Requirements and to choose a dissertation advisor and a Multidisciplinary Training Area without concern for source of support. First year students receive 100% support from the GSBS while taking their Core Courses even after they join a lab. After this time, it is expected that the dissertation advisor will be responsible for 75% of the stipend, tuition support, and health insurance for the student if he/she is not supported by a Training Grant or individual fellowship until the end of second year, and then 100% of this support for the remainder of the PhD. Students are encouraged to apply for individual fellowships from extramural sources. Students who are awarded a fellowship receive from the Graduate School for the duration of the award an additional $2,000 annual bonus. For PhD students, stipend support will end on the day the

student deposits his/her dissertation and health insurance coverage will end on the last day of the month in which the student deposits, unless the student deposits on the first day of the month in which case, benefits will terminate on that day. For MD/PhD students, stipend support will end on the day the student receives his/her final degree, but health insurance coverage will continue until June 30 of the year they receive their final degree.

B. *PhD in Clinical Research and all Master's Degree students* – With the exception of MS in Genetic Counseling, all Master's Degree programs and the PhD in Clinical Research program's tuition charge is billed on a per-credit-hour basis at the current published rate.

Tuition Refund Policy

Withdrawal from the Institution – Students who withdraw from the institution during an academic term, regardless of the program course sequence, will receive a tuition refund based on the below institutional schedule. Tuition refunds will be calculated based on the date that the Registrar's Office receives the withdrawal form.

Institutional withdrawal prior to the end of the course, tuition refunds will be given based on the following schedule:

Time of Withdrawal	Tuition Refund
First week of class	100% of Tuition
Second week of class	75% of Tuition
Third week of class	50% of Tuition
Fourth week of class	25% of Tuition
Fifth week of class or beyond	NO REFUND

Withdraw from a Course

Students whose tuition is charged per credit hour and who choose to drop course(s) use the same schedule of tuition refund as listed above when withdrawing from school. Dropping classes might cause a status change from full-time to part-time. Changing the status or the number of credit hours in a program may have significant academic and/or financial consequences. Consult the Office of Financial Services and your advisor before making any changes to your schedule.

For students receiving federal financial aid processed through the Office of Financial Services, be advised that all funds from federal Title IV programs will be returned to the government according to federal regulations.

No refunds will be granted to students who have been dismissed or suspended by the institution.

Financial Aid

General Policy – Admission to ISMMS is independent of financial requirements.

♦ Applications – Degree seeking students who are interested in applying for Federal loans to cover the cost of attendance must complete the Institutional Application for Graduate School Students and a 2019-2020 FAFSA application. Students can supply FAFSA data on the Web at http://www.fafsa.ed.gov. Reapplication is required annually for all loan and scholarship recipients.

♦ Entrance Counseling - Students requesting federal student loans must complete online entrance counseling on the website studentloans.gov. This requirement is imposed by the

Department of Education as a form of financial literacy for 1st time borrowers. This counselling will cover loan basics, type of federal student loans and loan limits. Students will have a clear understanding of their rights and responsibilities at the completion of this online entrance counseling.

♦ Exit Counseling – Student loan borrowers are required to complete exit counseling prior to graduation or separation from ISMMS. The on-line exit counseling must be completed on the website: studentloan.gov. This exit counseling will provide loan balances, terms of repayment, deferment and forbearance options available to borrowers. Students are encouraged to schedule a one-to-one interview with SFS before graduation and after their online exit interview for additional advice and explanation of how to manage their student load debt.

Debt Management and Counseling

Throughout the student's education the Office of Student Financial Services is available to discuss indebtedness, career choices, and money management issues. Graduating students should be aware of the requirements of the various external student loan programs in which they may have participated. It is important to maintain contact with Icahn School of Medicine and the appropriate lending institutions, to understand the terms of each loan program, and to plan for repayment. Timely loan repayments are essential in establishing a good credit rating.

SFS hosts debt management and financial literacy workshops in the spring semester. We advise all students to participate or review the recorded sessions on Blackboard's Student Resources section.

Academic Progress

Academic Progress refers to the satisfactory completion of courses, research, and thesis requirement as established by the Graduate School. Additionally, federal regulations require that students receiving federal aid make satisfactory academic progress (SAP) in accordance with these standards set by the School.

The length of time to complete the degree for each program is summarized in the table below:

Degree	Usual Time (Years)	Maximum Limit (Years)
MD / PhD	7.8	10
PhD (Biomedical Sciences or Neuroscience)	5	7
PhD (Clinical Research)	4	7
MS Genetic Counseling	2	3
MS Biomedical Informatics	2	5
MS Biomedical Sciences	1.5-2	3
MS Clinical Research	2	3
MS Biostatistics	1	1*
MPH	2	5
MSHCDL	2	3*

*This time limit may be extended by a program committee for 1 year for compelling cases.

Enrollment Services and the Graduate School will assess each student's academic progress on a semester basis. A student who is not making SAP will be placed on Academic Probation and registration hold. Students will be notified in writing and will be informed of the reasons for this determination. A student who is not making SAP may be required to appear before the Committee for Academic Review.

A student who fails to meet one or more of the standards for SAP may be ineligible for financial aid beginning with the term immediately following the term in which the SAP requirements were not met. In this situation, the student can be placed on financial aid probation and receive aid if the Committee for Academic Review approves an academic plan for the student that will ensure, if followed, that the student is able to meet the SAP by a specific point of time, normally an academic year. A student must be enrolled in at least 50% of a course load to remain eligible for financial aid. A student shall become eligible again for financial aid when he or she has satisfactorily completed sufficient coursework to meet the standards of progress within the maximum time frames delineated above. A student who does not meet the SAP requirements by the end of the financial aid probationary period is ineligible for financial aid.

In the PhD, MD/PhD, and Master's programs, benchmarks of satisfactory progress must be completed as outlined in the specific program requirements. Students who are approaching the time limit for completion will be reviewed with enough notice so that a plan is in place to enable the student to complete the requirements by the end of the time limit.

Completion of Course Requirements

It is crucial that students, Advisory Committees, and/or Program Directors monitor the students' progress throughout the duration of their academic training. Continued financial support is contingent upon maintaining satisfactory progress at all times. Additionally, failure to achieve and maintain satisfactory progress, after counseling is sought from the Advisory Committee and/or Dean of the Graduate School, can result in academic probation and ultimately, dismissal from the Program. For requirements regarding academic progress, refer to the appropriate program specific information provided in the section in this chapter entitled "Academic Policies".

Travel Award

Introduction
Presenting one's work is an important part of a student's development as a scientist and the promotion of his/her research. The Graduate School encourages students to submit their research to national meetings. To help enable students' participation in these meetings, the Graduate School provides support to students (up to $500) to help cover the cost of attendance. Funding is made available through the Mount Sinai Alumni Travel Fund.

Eligibility
Students who are attending a national or international meeting and have been selected to present a poster and/or talk are eligible for a travel award. Students may only receive one award during their tenure in the program. For students who received an award as part of one program and then switched to another, for example a student who started in MSBS and joined the PhD program upon completion of his/her master's degree, are eligible for a second Travel Award.

Use of Funds
A. Travel funds are provided as a reimbursement and not in advance of travel. That is, students pay for the travel expenses upfront and will receive a reimbursement after they have submitted all of the necessary paperwork and required expense receipts.

B. Travel funds from the Graduate School may be used for any travel related expenses, for example, airfare, hotel, meals while away, conference registration, etc., but not for expenses incurred in preparation for the meeting, for example expenses associated with collection/analysis of data, printing of a poster or development of slides, etc.

C. The Travel Award is only applicable for travel taking place while the student is enrolled in the Graduate School and is in good academic standing. The Award cannot, for example be used to cover travel after a student had deposited his/her thesis.

D. Award recipients must meet with the Graduate School's Financial Administrator, Osei Tutu, to discuss ISMMS-required paperwork. All paperwork is submitted through SinaiCentral. Student must complete:

   a. A Mount Sinai Travel Request form at least two weeks prior to the departure date. The form must have the dissertation advisor's funding source for the portion of travel that is not funded by the Travel Award.

   b. A Travel Voucher Form to be completed and signed by the dissertation advisor and student upon returning from the trip. This form must be submitted before the Finance Department can process a reimbursement.

   c. Failure to complete and submit these forms will prevent a reimbursement.

E. In cases where the only travel money is coming from the Graduate School, Mr. Tutu will help the awardee complete all required paperwork. In cases where the recipient's lab is also contributing money to pay for a student's travel, paperwork will be processed through the PI's Department. In either case, students **MUST** meet with Mr. Tutu shortly after receiving an award notice to initiate the process. Failure to do this may jeopardize the student's reimbursement.

F. Students will be responsible for making their own travel arrangements.

G. Students are required to provide all expense receipts as well as boarding passes for air travel. In addition, under some circumstances, the Finance Department may require "proof of payment", which could be provided by a credit card or bank statement showing payment of the expense. ISMMS will not reimburse travelers for alcohol nor will it reimburse for expenses that are not documented with a receipt.

Applying for a Travel Award
To apply for a Travel Award, students must provide a:

A. completed Travel Award Application

B. copy of the submitted abstract

C. curriculum vitae

D. letter or email inviting the applicant to present at the meeting

E. brief description of the meeting and how attendance will impact the student's professional development

F. Application deadlines are as follows:

Application Deadline	Awards Announced	Travel Period*
August 1st	August 15st	Fall Travel
December 1st	December 15th	Spring 1 Travel

March 1st	March 15th	Spring 2 Travel
May 1st	May 15th	Summer

*For travel that spans two Travel Periods, applications should be submitted by the earlier period deadline.

Application Screening Process and Budget

The Graduate School Travel Award budget will be split between the 4 application cycles shown above. All completed applications that are submitted by the deadline will be considered. Applications will be screened by a committee chaired by the Senior Associate Dean for Student Affairs and three other Graduate School program leaders, one from the PhD Program, one from the MD/PhD Program, and one from a Master's Program. Applications will be evaluated and scored based on the submitted abstract, the quality of the meeting to be attended, and the impact of attendance on the student's career. Awards will be made to the most meritorious applications.

Any unused funds will roll over to the next funding period.

Special Merit Award

One large award (up to $2,500) may be made each year. This award will be granted on a competitive basis to a student who proposes a trip outside the USA for the purpose of presenting a paper at a high impact meeting or for attendance at a unique course that would greatly impact his/her program of study. Application for this award must be made by August 1st as detailed above.

Failure to submit all required paperwork in accordance with these established guidelines and by the stated deadlines would void the award.

Guidelines Concerning "Supplemental Work-in-Another-Department"

It is Graduate School policy that all students be supported at the same stipend level for the activities involved in their training program and that their program activities represent a full-time commitment. There are a variety of cogent reasons – fairness being one of them – for this policy. Nonetheless, there are students whose personal circumstances require them to seek additional funds. Students should contact the Financial Aid Office for additional information. If necessary, the Graduate School Office will try to help find activities that conflict as little as possible with the student's program and complement the student's educational advancement. If a dissertation advisor strongly wishes to help a student with a unique need to secure additional funds, it is required that the student be assigned specific, documentable activities that are distinct from those involved in the training program for which the extra funds will be earned ("supplemental work in other department"). Such arrangements must, furthermore, be approved in advance by the Dean of the Graduate School. Failure to do so will jeopardize the student's total funding package.

Teaching Assistantship

Many courses in the medical school and graduate school offer teaching assistantships to qualified students. Teaching assistantship activities may include videotaping of lectures, discussion-group leadership, holding review sessions, tutoring of students in course work, laboratory preparation, supervision, and cleanup and assisting in the preparation and grading of problem sets and/or examinations. The course director and student would work out the specifics of the assistantship together and will vary from course to course.

Students may be paid for serving as a teaching assistant or may receive credit on their transcript, but not both. A maximum of one credit per semester for assisting in teaching activities is available, or a total of 30 hours of paid teaching. Credits earned for Teaching Assistantships cannot be used to meet the minimum 72 credit requirement or for any other Core Curriculum requirement. A TA Appointment Form must be completed with the instructor's signature before the student can register for the credit.

Tuition Waiver

Tuition is charged for all students regardless of employee status. Non-faculty employees are eligible for a tuition reimbursement from the Department of Human Resources of up to $2,400 per calendar year. Under certain circumstances, students may also be eligible for a tuition waiver from the Dean of the Graduate School of Biomedical Sciences. The Dean of the Graduate School may waive tuition for Mount Sinai employees (e.g., research technicians) wishing to enroll in basic science PhD level course(s) who have an interest in pursuing a PhD in Biomedical Sciences or Neurosciences at ISMMS.

Process to request a tuition waiver: An employee must apply as a non-matriculated student and have written permission from both his/her Supervisor, approving the activity, and from the Course Director(s), approving the student's enrollment in the course(s). To apply for a tuition waiver, the student must:

A. Complete the Tuition Reimbursement Application, which is available at the Office of Training and Education, 19 East 98th Street, 2nd Floor. Complete Part 1 of the form. Part 2 of the form should be completed by the student's Department Administrator. NOTE that this is a tuition reimbursement. The student must pay the course tuition upfront.

B. Once a student has completed and passed the course, he/she must return to the Training and Education Office with proof that the course has been completed with a passing grade and a copy of the tuition bill to finalize the reimbursement.

C. Each non-faculty employee is eligible for up to $2,400 of tuition reimbursement per calendar year from the Office of Training and Education.

D. If tuition exceeds $2,400 in a given calendar year, the student can appeal to the Dean of the Graduate School of Biomedical Sciences for a waiver of the remaining tuition balance. In order to obtain this waiver, the student must submit a written request to the Dean of the Graduate School. The request should describe the reasons for enrolling in the course and how it fits into the student's long-term goals for graduate training. The deadline to apply for this waiver from the Dean is one week prior to the beginning of the course.

The number of course credits that a non-matriculated student can take from offerings of the PhD degree program in Biomedical Sciences will be limited to a total of 12 credits and no more than 12 credits of tuition will be waived.

The tuition waiver policy does not apply to the MSHCDL program.

Support for Senior PhD or MD/PhD Students in the Biomedical Sciences or Neuroscience by Graduate School Funds

Faculty who experience difficulty in funding students already committed to thesis work in their laboratories ought to take the following steps to secure funding support for the students in question: a) Discuss the issue with their Department Chair to determine whether departmental funds can be applied toward support of the student in question; b) If departmental funds are not available, the faculty member and the Chair should notify the Dean of the Graduate School and if deemed appropriate by the Chair, apply for Bridging Funds through the Office of the Dean of ISMMS ; c) Should both of these avenues fail, the faculty member should meet with the Dean of the Graduate School to discuss the details of the situation and establish a plan for the student and resumption of funding support by the faculty member. If the student's support is provided by Graduate School funds, the faculty member and the Dean of the Graduate School will meet every three months to review the funding status and plan accordingly.

Academic Policies and the Registrar's Office

Registrar's Office

The ISMMS Registrar's Office supports teaching and learning by maintaining the integrity of academic policies and the student information system. The Registrar's Office is the steward of ISMMS's student records. The Registrar's key functions in carrying out this mission focus on guarding the integrity and security of all student records in accordance with ethical and legal standards, maintaining accurate and timely records of academic progress, and providing students with enrollment services necessary to pursue their educational goals.

Transcripts
To request an official transcript, complete the [Document Request Form](#)

Transcripts will not be sent out for any student with a hold on his/her account. To be considered "official" a transcript must:

A. Bear the Registrar's signature.

B. Be stamped with the Seal of the ISMMS.

C. Be sent directly from the Registrar's Office to a designated person or institution.

D. Be on official transcript paper.

Students may print an unofficial copy of their transcript for their personal records. This will be stamped "Student Copy", not be printed on official transcript paper, or stamped, and may not be used for official purposes.

Grading, Course Examinations, and Missed Examinations
Course Directors have the option of giving letter grades A(-), B(+/-), C(+/-), and F or grading the course as P/ F, with the exception the Neuroscience, Systems Biology, and Biomedical Sciences core courses and Biostatistics, which are only offered for letter grades. However, MSHCDL grading will be on a Pass with Distinction/Pass/Fail basis. Clinical rotations for MS programs, laboratory rotations and departmental seminars and journal clubs are always graded as P/F. For students in the PhD or MD/PhD programs in Biomedical Science or Neuroscience, elective courses outside of the student's training area may be taken P/F, even if it is a graded course.

Under extraordinary circumstances (such as medical emergency), a temporary grade of Incomplete (I) may be recorded for a student who is unable to complete course requirements. To receive an incomplete grade, the student must be passing the course up to the time of the request and make a formal request using the Incomplete Grade Request Form. The form must be signed by the student, the course director, and the Program Director (MTA Director for PhD in Neuroscience and Biomedical Sciences). The request will include the reason for the incomplete, the work to be completed, and the final due date for that work. The Registrar's Office will record the Program Director's approval. Students ordinarily have one semester to satisfy an Incomplete. Failure to complete the required work within this timeframe will result in the Incomplete automatically converting to a failing grade (F).

A student who is not in good academic standing in a course should withdraw from the course; an Incomplete should not be given.

Students who fail a course have three options: 1) Retake the course (see Retaking Courses below); 2). Request a remediation plan from the Course Director. Granting a remediation plan is at the sole discretion of the Course Director and there is no path for appealing such a decision. In the case that a student successfully remediates the course, the student's transcript will reflect the remediation by indicating a grade of F/P (for pass/ fail courses) or F/A, F/B, or F/C, depending on the grade earned through remediation. The

student's GPA will be calculated using only the remediation grade. Students who fail the remediation process will have an F recorded on their transcript; 3) Allow the F to remain on the transcript (with the exception of core requirements) – Note that students with a cumulative GPA below 3.0 will automatically be placed on Academic Probation.

Students who fail a core course or have multiple remediation grades will be placed on probation and be required to meet with their respective review committee (e.g., CAR for PhD in Neuroscience or Biomedical Sciences).

Course Directors are required to submit all grades within two weeks of the end of the semester.

Students must maintain a GPA of 3.0 at all times. Students who fall below 3.0 will be placed on Academic Probation and must meet with their advisor to develop a plan for remediation. Students whose GPA is below a 3.0 for two consecutive semesters will automatically be dismissed from the school. Students may appeal their automatic dismissal by following the established process described in section 15 below.

Students should be aware that proper citation practices are required on all course take-home exams and papers as well as in proposals, dissertations and publications. Plagiarism will not be tolerated.

If a student will miss an exam or quiz due to illness or other emergency, the student must notify the course director(s) and program director(s) on or before the day of the examination (or as soon thereafter as possible). Once able, the student should see student health or their doctor and obtain documentation of illness. The documentation should be submitted to the Course Director and an exam or quiz will be scheduled at the earliest possible date.

If an exam or quiz is missed without illness or extenuating circumstance, a score of zero will be recorded for that assessment.

A student who has missed an exam should sign a statement certifying that they have not discussed the exam with any other class member who may have taken the exam earlier.

Calculation of GPA

In calculating the GPA, all credits with the following grades are counted in the total used to compute the grade point average/cumulative index: A (-), B (+/-), C (+/-), and F.

To compute the grade point average, follow the steps below:

♦ Determine the total number of credits completed by adding up all the credits with letter grades. This total must include any credits with "F" grades.

♦ For each course with a letter grade, which counts toward the GPA, multiply the number of credits by the appropriate quality point value, as indicated below:

Grade	Quality Point Value
A or F/A	4.00

A- or F/A-	3.70
B+ or F/B+	3.30
B or F/B	3.00
B- or F/B-	2.70
C+ or F/C+	2.30
C or F/C	2.00
C- or F/C-	1.70
F	0.00

◆ Add the quality point values for all the courses to determine the total quality points.

◆ Divide the total quality points by the total number of credits (as computed in Step 1).

◆ The resulting figure is the grade point average/cumulative index. Please note that the index is computed to two decimal points and the index is not rounded off.

Credits with grades of Pass (P), Satisfactory Progress (SP), or Satisfactorily Completed (SC) do not figure into the computation of the grade point average but do count toward the degree. Transfer credits also count toward the degree but do not figure into the index. Credits for undergraduate courses are neither counted toward the degree nor computed into the average. For MSHCDL students, please see your section on grading.

Retaking Courses
Students seeking to improve their GPA may retake a course. If a course is retaken, both grades will be listed on the transcript and the higher of the two grades will be used in the determination of the student's GPA. A student who has earned credit for a course may repeat it once, but will not receive additional credit. Master's Degree students will be charged at the per-credit rate for all retake courses.

Students cannot receive financial aid to cover the tuition for retaking a course.

Graduate School Grade Appeals Process
A student has one (1) month from the date of receiving a course grade to make an appeal. The student must realize that the grade may be amended in either direction. Students must bring all course grade appeals to the course director. If there is still a discrepancy after a meeting between the course director and the student, the student should present the issue in writing to the Program Director or Senior Associate Dean for Student Affairs in the Graduate School who will establish an ad hoc committee to address the appeal. The Course Director should not be a member of the Appeal Committee.

Information for the appeal should be solicited from both the student and the course director. In some cases, at the discretion of the Chair of the Appeal Committee, it may be appropriate to hold a meeting during which the student must state the rationale for the appeal to the Committee. The Committee will investigate the issue and present its finding(s) to the Program Director or Senior Associate Dean for Student Affairs for a final decision. The Program Director or Senior Associate Dean for Student Affairs will inform the student of the decision. If a student wishes to appeal a decision, an appeal should be

made in writing to the Dean of the Graduate School. The Graduate School Dean's decision is final.

Unless there are extenuating circumstances, a decision should be reached before the end of the next semester.

Transfer Credits and Course Exemptions/Waivers

A. Transfer Credits –

Credit for graduate courses taken at other institutions may be awarded under certain conditions and subject to approval by the Program Director (excluding the MSHCDL and MGC programs where transfer credits are not accepted). Program Directors reserve the right to establish degree requirements for all students in their programs. Courses being considered for transfer credit must be relevant to the program, have the course content reviewed by the Program Director and deemed to be equivalent to ISMMS's course, and have been completed with a grade of B or better at an accredited institution.

Courses taken on a pass/fail basis may be used for transfer credit if proof (a letter from the course director or previous Program Director) is provided that a grade of B or better would have been earned. Credits may be transferred from coursework taken in another degree-granting program only when the student did not earn an actual degree in that program (with the exception of MSBS and MSCR students who can count all of their ISMMS coursework if they subsequently matriculate into the ISMMS PhD or PhDCR degree program). The number of credits transferred can be no more than the number of credits given by ISMMS for the equivalent course. All transfer credits will be assigned a grade of P. Courses approved for transfer may reduce the number of total credits taken at ISMMS. Students who receive a Master's Degree from ISMMS may transfer all credits with a B or higher into the corresponding PhD program.

If a student successfully completes a course that is required by the Graduate School (even if that course was used towards the attainment of another degree at ISMMS or at another academic institution) the student may be granted an exemption from having to take the equivalent course at ISMMS. In such cases the student will not receive credit towards the ISMMS degree but instead, will take an additional elective course to earn the necessary number of credits.

The maximum allowable transfer credit for each program is as follows:

Program	Maximum # of Transfer Credits
PhD or MD/PhD	40
MSBS	16
MPH	10
MSGC	0
MSCR	16
PhD CR	40
MSHCDL	0

Programs that require tuition payment on a per credit basis may decrease the number of tuition-bearing credits by the number of transfer credits.

B. *Courses taken at partner institutions:*

   i. *CUNY Graduate Center*

      1. *The course exchange program between CUNY Graduate Center and ISMMS Graduate School is designed to encourage graduate students from each College/University to experience academic courses, not offered at their home institutions.*

      2. *CUNY GC course credit does not count toward their ISMMS degree, may not be used to substitute core courses or core requirements. Students may request a course taken through the ISMMS –CUNY Exchange Program by submit the course description and in some cases syllabus for review by the ISMMS academic advisor, for course approval.*

   ii. *Grove School of Engineering – coming soon*

C. *Required Course Exemptions –*

If a student successfully completes a course that is required by the Graduate School (even if that course was used towards the attainment of another degree at ISMMS or at another academic institution) the student may be granted an exemption from having to take the equivalent course at ISMMS. In such cases the student will not receive credit towards the ISMMS degree but instead, will take an additional elective course to earn the necessary number of credits.

Students seeking exemption from required courses, based on prior course work, must meet with the Course Director to ensure appropriate content overlap and rigor. Exemption from certain courses may require an exemption exam or other assessment. If approved by the course director, student will need to complete a course exemption form and return it to the Office of the Registrar. The course will appear on the student's transcript as "EX".

D. Course Waivers –

On occasion a program may grant a course/credit waiver. A petition for such consideration should be made by the student to the Program Director and the Dean of the Graduate School. Students who receive course waivers must still meet the total credit requirement for their degree program.

Guidelines for Registration and Cross-Registration

On-campus students conduct their research and take their courses at the ISMMS campus. Courses offered in all programs for the academic year are published in three announcements (Fall, Spring I, and Spring II) and are available on the Graduate School web

page. It is important that students consult their advisors and MTA Directors to plan their programs.

All incoming students will receive instruction regarding the online enrollment process once they accept our offer of admission.

Continuing students can access the school's student information system for registration information at students.mssm.edu. Students must meet with their advisors with respect to courses covering their specific training needs and timely completion of requirements.

PhD students who have completed all course requirements but have not reached the required number of credits for completion should register for Independent Research. This is an appropriate course only for advanced students who have already chosen a research mentor.

PhD students in Biomedical Sciences or Neuroscience, and MD/PhD may register for courses in other graduate programs at ISMMS (e.g. MD, MPH, MS in Clinical Research, etc.) with the permission of their dissertation advisor, the course director, and their Program Director. The Graduate School will pay the tuition for a maximum 6 credits during the PhD program. Exceptions to this limit require the approval of both the Program Director and research mentor/advisor. Payment of tuition for additional courses will be the responsibility of the student or his/her dissertation advisor.

In some instances, a student may wish to take a course that is not available at ISMMS. Students must receive permission from their dissertation advisor and their MTA Director. Payment of tuition for such courses will be the responsibility of the student or their dissertation advisor. Courses taken at another institution will appear as transfer credits as long as the student provides the Registrar's Office with an official transcript and submits a Transfer of Credit form.

Students are required to complete on-line course evaluations for each course taken. These evaluations provide valuable feedback to the Course Directors and the Curriculum Committee and are used to improve course offerings. Evaluations must be completed within 4 weeks of the end of a course. If such evaluations are not completed in a timely manner, students will receive an "Incomplete" on their transcript and may be placed on "academic hold" by the Registrar.

All registration should be completed in a timely manner, on or before the posted deadline for that term. A $100 late fee will be charged to the student for failure to register on time. Students who do not register by the final late registration deadline will be administratively withdrawn from the Program. These students can petition for readmission by submitting an Application for Readmission, with the requisite re-application fee.

The add/drop period lasts 2 weeks from the beginning of the term. In the rare instance that a class begins after this 2-week period, the add/drop window will be one week from the beginning of the course. Courses dropped within this period will not appear on the students' transcript. Students may not withdraw from a course after 2/3 of the course is complete. If the withdrawal occurs after the add/drop period, the course will be listed on the student's transcript with a "W". Students are not permitted to register for courses after the add/drop deadline.

A. *Maintenance of Matriculation* – Matriculated students must either register for at least one credit-bearing course or register for "Maintenance of Matriculation" for every term, up until graduation. Maintenance of Matriculation allows students continued access to essential academic and student services, such as access to the ISMMS network and email; however, students on Maintenance of Matriculation status will not be eligible for financial aid. Students with compelling circumstance who wish to maintain their matriculation status but need to discontinue their studies for a period of time can apply for a Leave of Absence from the program (see Leave of Absence and Withdrawal section). The Maintenance of Matriculation fee is $500 per academic semester or $333 per term for students in programs on trimesters. MSBS students are exempt from the Maintenance of Matriculation fee, but must still register for maintenance of matriculation if they are not registered for at least one credit.

B. *Full-time Equivalency Status* – Graduate students who carry 9 or more credits are considered full time students. Those students who register for less than 9 credits may, in certain situations, be granted "full-time equivalency" by the Dean of the Graduate School. Typically, full-time equivalency is granted if one of the following applies:

   a. You are taking 7-8 credits of coursework, and working as a teaching or research assistant for your program

   b. You are completing or have fulfilled all coursework requirements and are working full-time on thesis or dissertation research.

   c. MPH students are considered full time with a minimum of 5 credits

Students who are granted full-time equivalency will be designated as "full-time" by the Registrar following approval by the Program Director.

International graduate students (with the exception of MPH students) who enroll in less than 9 credits and who are not eligible for full-time equivalency may jeopardize their visa status and should consult with the Office of International Personnel.

Courses taken at partner institutions
ISMMS GRADUATE SCHOOL - CUNY Graduate Center Exchange Program
The course exchange program between CUNY Graduate Center and ISMMS Graduate School is designed to encourage graduate students from each College/ University to experience academic courses, not offered at their home institutions.

The program is available to All ISMMS Degree seeking Graduate Students

A. Program Details:

   a. The course exchange program is *free of tuition and application fees are waived* for full time, matriculated (degree-seeking) graduate students from each Graduate School.

   b. ISMMS Students may only register for CUNY GC courses in the Exchange program that *are not offered* by ISMMS during their program.

   c. If an ISMMS student wishes the CUNY GC course credit to count toward their ISMMS degree, *they must submit the course description and in some cases syllabus for review by the ISMMS academic advisor, for course approval.*

d. CUNY GC courses may not be taken as a substitute for a program's core course requirements.

B. ISMMS student process to receive approval to participate in the CUNY-ISMMS Exchange Program

    a. ISMMS student completes two CUNY forms:

        i. Exchange Program application

        ii. Permit Out Form (POF)

        iii. Both are located at: http://icahn.mssm.edu/education/students/registrar/graduate-forms, under OTHER forms

    b. The POF requires three approval signatures: 1. The ISMMS MTA Director/ Program Director who must agree to take the course credit in transfer; 2. the ISMMS Registrar; 3. the CUNY GC Course faculty allowing you to take the course.

    c. ISMMS student indicates desired courses to take at CUNY and attaches course description to the form for the ISMMS faculty member to review, determining that it meets the degree requirements.

    d. Student brings (or emails) form to MTA Director or to their Program Coordinator/Director (if MS student).

    e. Program Coordinator/Director or MTA Director signs off on form, approving the CUNY GC course for credit toward the degree based on the course description or, approving the course for general academic reasons, but not to be counted toward the degree.

    f. Student drops the form off at Graduate School office, and Graduate School personnel makes copy of POF and sends the packet of forms to ISMMS Registrar's office.

    g. Student sends form to CUNY GC registrar for registration authorization – by email at http://www.gc.cuny.edu/Prospective-Current-Students/Current-Students/Registrar

    h. CUNY GC Registrar registers the student and informs ISMMS student on how to claim their CUNY Portal account, if the CUNY course faculty member chooses to use Black-Board.

    i. Student is responsible to have official CUNY GC transcript sent to the ISMMS Registrar at the end of each semester, if they want to have CUNY GC credit transfer toward their degree; no later than 30 days after each semester.

    j. CUNY Registrar sends ISMMS list of students registered for CUNY GC courses including which department the course is in, and the number of credits – two weeks after the ADD/DROP period.

For additional information, please contact: Nelson Pe at nelson.pe@mssm.edu ISMMS's Registrar, Rewtie Offin (rewtie.offin@mssm.edu) PhD & MSBS Program

Manager or Bianca Taylor-Starobin (bianca.taylor-starobin@mssm.edu) MSTP Program Manager.

Visiting Scholars

Students who are pursuing a graduate degree at another institution and have been invited by an ISMMS department or laboratory/center to do research in their field of study may apply for Visiting Scholar status. International Visiting Scholars must contact the Office for International Personnel to discuss visa and reporting requirements.

Visiting Scholars are expected to follow the same guidelines required for all incoming Mount Sinai employees. Visiting Scholars must (i) complete a physical examination; (ii) take the toxicology-screening test; and (iii) complete HIPAA training. All Visiting Scholars will be subject to a criminal background check.

♦ *Course Registration* – Should a Visiting Scholar wish to take a credit bearing course, he/she must fill out a Non- Matriculating Student Application, available online by navigating to http://icahn.mssm.edu/education/graduate-school and selecting the "Apply Online" tab.

♦ *Duration of Stay* – Visiting Scholars will be admitted for the period of time specified in the initial invitation letter. A Visiting Scholar who wishes to continue beyond the period initially agreed upon has to submit a letter of approval from the home institution and a letter from the host department or laboratory/center requesting the extension.

♦ *Health Insurance* – A Visiting Scholar must provide proof of basic health insurance coverage. International students must have insurance that meets all the requirements specified by the federal regulations for J-1 students.

♦ *Financial aid* – A Visiting Scholar is not eligible for financial aid services from ISMMS.

♦ *Employment* – A Visiting Scholar may receive compensation for work done for the host research group. In compliance with federal regulations, international visiting students are not allowed to have any other employment, either on-campus or off campus. Students on a visa must discuss employment regulations with the Office of International Personnel.

♦ *Housing* – ISMMS does not guarantee housing for Visiting Scholars and their requests are determined based on availability.

Non-Matriculating Status and Course Auditing

A. *Non-matriculating Status* – Non-matriculated students may register for courses in the Graduate School by filling out an application to the Graduate School as a non-matriculated student and paying the full application fee. Students will be billed for the appropriate amount of tuition and will be entitled to receive a transcript. The number of course credits that a non- matriculated student can take from offerings in the Graduate School will be limited to a total of 12 credits.

B. *Official Audits* – A full-time matriculated student may audit a course with the permission of the course director. Students auditing a course do not write examinations or papers and do not necessarily participate in class discussions. However, auditors should clarify expectations at the start of the course with the course director and may be required to fully participate in the class. A completed Course Audit Form, with all required signatures, must be submitted to the Office of the Registrar prior to the end of the add/

drop period. An audited course will appear on the student's transcript with the designation "AU". Students cannot receive credits for a course being audited.

C. Non-matriculated students, including employees, who wish to audit a course and have the audited course appear on a transcript as "AU" will be billed at the same rate as for courses taken for credit. All students wishing to take a class must submit a Non-Matriculated Student Application to the Admissions office and turn in a completed Course Audit Form to the Office of the Registrar. Employees may petition the Dean of the Graduate School for a waiver of course fees. Decisions are at the discretion of the Dean.

Satisfactory Academic Progress

It is crucial that students, Advisory Committees, and/or Program Directors monitor the students' progress throughout the duration of their academic training. Continued financial support is contingent upon maintaining satisfactory progress at all times. Additionally, failure to achieve and maintain satisfactory progress, after counseling is sought from the Advisory Committee and/or Dean of the Graduate School, can result in academic probation and ultimately, dismissal from the Program. Students who do not complete their degree within the maximum duration allowed will be dismissed from the program.

Under exceptional circumstances, the dissertation advisor, with the support of the student's Advisory Committee, may petition the Dean in writing to let a student continue his/her studies beyond the 7-year time limit for PhD students or 6 years in the PhD phase for MD/PhD students in Biomedical Sciences or Neuroscience and 5 years for students in the PhD in Clinical Research program. For those receiving a stipend, there is no guarantee that full stipend support will continue under these circumstances and each case will be renewed and approved by the Dean of the Graduate School of Biomedical Sciences.

PhD in Biomedical Sciences or Neuroscience Students:

Satisfactory progress is maintained in the following ways for PhD students by:

♦ Matriculation on a full-time basis

♦ For first year students, demonstrating potential for research and timely progress toward the choice of dissertation advisor and Training Area through their rotation activities

♦ Timely submission of a completed Laboratory Rotation Agreement Form and a completed Laboratory Rotation Evaluation Form for each rotation (see section on Laboratory Rotation)

♦ Students must maintain a minimum cumulative GPA of 3.0 and achieve a cumulative GPA of 3.0 for all of the Core Curricula (see details under General Program Requirements). For this program, the Core Curriculum consists of a year-long core course (BMS, Neuro, or Systems) AND an approved biostatistics course.

♦ Completing at least 14 letter-graded credits of coursework

♦ Must complete the Thesis Proposal Exam by the end of the 4th semester in the program

♦ Successfully reaching and passing each of the Program Milestones by the required deadlines (see details in section on Program Milestones), and timely submission of registration and documentation memos

♦ Meeting with the full Advisory Committee at least once per semester and submitting an Advisory Committee Meeting Form following each meeting

- Enrolling in journal clubs and seminars as required by the student's MTA

- Demonstrating the ability to grow in research skills and movement towards project goals following the selection of a dissertation advisor

- Completing at least 72 graduate credits for the PhD degree

- Completing all requirements for the PhD degree, including defense and deposit of the Dissertation, within the time limits of the Program, i.e., (defend and deposit by June 30 of the seventh year in the Program)

- Developing a research project, under the supervision of one or more faculty members, which results in a thesis that reports the new findings, and is presented, defended and deposited

If the dissertation advisor is dissatisfied with the academic progress of a student and is considering removing the student from the laboratory the following steps must be taken:

1. Document sources of dissatisfaction.

2. The advisor will have direct discussions with the student to clarify the issues and to set a plan to correct the problems. A summary of the discussions should be documented.

3. If dissatisfaction continues, mediation between the student and advisor should be sought by meeting with the MTA Director and the student's Advisory Committee.

4. If required, a discussion between the student, the advisor, and the Dean or Senior Associate Dean should be also sought to determine whether the issues are potentially irrevocable.

5. The Dean may place the student on probation for a period not exceeding a semester.

If the student is placed on probation and fails to achieve sufficient academic progress during the following semester, the Committee for Academic Review will review the Student's status and may recommend dismissal from the PhD program.

MD/PhD Students:
To maintain satisfactory progress, MD/PhD students must comply with those requirements detailed above for the PhD Program and:

- Complete USMLE Step I by the end of the second MD year and USMLE Step II at the end of the third MD year (or make specific, approved plans for different timing)

- Successfully reach and pass each of the MD/PhD Program Milestones by the required deadlines (see details in section on Program Milestones), and submit registration and documentation memos on time

- Complete the Thesis Proposal Exam by the end of the 6th semester in the program

- Enroll and actively participate in the formal Clinical Refresher course during the spring of the final year of the PhD phase

- Complete all requirements for both the MD and PhD degrees within the Program time limits, including no more than five years between the Thesis Proposal and the Defense

Clinical Research Program Students (see Chapter 5, section 5 for more details):
PhD in Clinical Research students maintain satisfactory progress by:

- Earning a minimum of a B in each of the required core courses

- Maintaining a minimum cumulative GPA of 3.0 throughout the program

- Successful and timely completion of all courses as outlined in each PhD track checklist

- Successfully reaching and passing each of the PhD milestones by the required deadlines and submitting registration forms and other required documentation on time

MS or Certificate in Clinical Research students maintain satisfactory progress by:

- Maintaining a minimum cumulative GPA of 3.0 throughout the program.

- Successful and timely completion of all courses as outlined in the MSCR coursework checklist

- Completing the master's thesis within the program time limits

MS in Biomedical Informatics Students:
MS-BMI students maintain satisfactory progress by:

- Matriculating on a full-time or part-time basis

- Maintaining a minimum cumulative GPA of 3.0 throughout the program

- Having no more than two incomplete grades, unless they resulted from an approved leave of absence which occurred before a final grade could be assigned

- Meeting with one of the Program Directors at least twice each year

- Demonstrating the ability to grow in relevant skills and moving towards project goals after selection a capstone project advisor and project no later than by the end of the first year

- Completing a least 45 graduate credits for the Master of Science degree

- Completing all requirements for the Master of Science degree including completion of the capstone project within the parameters of the Program

MS in Biomedical Sciences Students:
MSBS students maintain satisfactory progress by:

- Matriculating on a full-time basis

- Students must maintain a minimum cumulative GPA of 3.0 and achieve a cumulative GPA of 3.0 for all of the Core Curricula (see details under General Program Requirements). For this program, the Core Curriculum consists of a year-long core course (BMS, Neuro, or Systems) AND an approved biostatistics course

- Completing at least 14 letter-graded credits of coursework

- Demonstrating the ability to grow in research skills and movement towards project goals following the selection of a dissertation advisor

- Completing at least 45 graduate credits for the Masters in Biomedical Sciences

- Developing a research project, under the supervision of one or more faculty members that results in a thesis that reports the new findings, and is presented, defended and deposited

MS in Biostatistics Student:
MS in Biostatistics students maintain satisfactory progress by:

- Matriculating on a full-time basis

- Maintaining a minimum cumulative GPA of 3.0.

- Meeting with faculty advisors at least twice in the fall term, and at least once per term thereafter

- Completing a least 34 graduate credits for the Master of Science in Biostatistics degree

- Completing all requirements for the Master of Science in Biostatistics degree including successful completion of the capstone project within the requirements of the Program

MS in Genetic Counseling Students:

MS in Genetic Counseling students maintain satisfactory progress by:

- Matriculating on a full-time basis

- Maintaining a minimum cumulative GPA of 3.0.

- Completing at least 30 credits of coursework by the end of the 1st year.

- Having no more than two incomplete grades, unless they resulted from an approved leave of absence which occurred before a final grade could be assigned

- Meeting with the Program Leadership at least twice each year

- Actively participating in journal club, case conferences and seminars.

- Achieving basic genetic counseling and clinical skills in each of the required clinical rotations as defined by the clinical supervisor

- Demonstrating the ability to grow in clinical research skills and moving towards project goals after selection of a thesis advisor and project no later than by the end of the first 10 months of the program

- Completing the core curricula for the Master of Science in Genetic Counseling

- Completing at least 50 distinct, supervised face-to-face genetic counseling cases as defined by the Accreditation Council of Genetic Counseling

- Completing all requirements for the Master of Science degree in Genetic Counseling including presenting and depositing the clinical research project (thesis) within the parameters of the Program

MS in Health Care Delivery Leadership:

MS in Health Care Delivery Leadership students maintain satisfactory progress by:

- Successful completion of all courses in the defined sequence Students must pass all courses in order to graduate

- Attendance and completion of all in-person seminars

- Active participation in all online elements, including but not limited to discussion boards, blogs, synchronous sessions, and all course assignments

- Active engagement with peer learners and faculty in each course

- Accessing all course resources, including but not limited to recorded lectures, assigned readings, multi-media elements, and case studies or simulations

- Satisfactory progress on all milestones for the Capstone project

Academic Standing

Students may be terminated from a degree program at any time if, in the judgment of the Graduate School or the Medical School, a student fails to make satisfactory progress towards the completion of the degree (regardless of grades).

Status of suspension and dismissal are permanently reflected on a student's academic record. Below are the categories of student standing:

A. Good Standing – A student will be considered in good standing if he/she is meeting minimal academic standards in terms of course performance and other expectations of their degree program.

B. Probation – Students in poor academic standing may be placed on probation by the Dean for Medical Education or the Dean for the Graduate School, or their appointed representatives: Academic/Student Affairs Associate Deans in each school, the Promotions Committees (Medical School) or Committee for Academic Review (Graduate School), or Graduate School Program Directors. Once a student is placed on academic probation, scholarly progress must be made within a specific time period. Academic expulsion is the likely consequence if performance continues to be unsatisfactory. Students on probation are considered enrolled

C. *Suspension* –Academic suspension may occur when the School withdraws the student for failing to maintain satisfactory academic progress or to meet standard educational goals of the degree program. Students who are suspended from the School are required to spend a defined period of time away from the School. During this period, the student may be required to successfully complete activities defined by the Schools' Dean, Promotions Committees (Medical School) or Committee for Academic Review (Graduate School), or Program Director if they are to be considered for readmission to ISMMS. Students on suspension are not considered enrolled. See specific sections related to Disciplinary processes in each specific program's section of the handbook.

Suspension and Dismissal
The Dean of the Graduate School of Biomedical Sciences can administratively suspend a student pending committee review or may administratively dismiss a student. Suspensions will generally be imposed for students who exhibit the following: failure to meet academic milestones, positive toxicology result, disruptive behavior, illegal behavior, egregious misconduct, or failure to meet administrative responsibilities (including financial obligations). Dismissal at the discretion of the Dean of the Graduate School may result when a student is convicted of a misdemeanor or felony, exhibits a serious breach of academic or professional conduct (including cheating) or following suspension. Any student who fails to comply with a directive to undergo an administrative evaluation or fails to fulfill the requirements that stems from this evaluation will be dismissed from the Graduate School.

Committee for Academic Review (CAR)
Review of Student Academic Performance and Professional Behavior–

Students in graduate programs at ISMMS have been carefully selected for the demands of graduate study. Some students, no matter how qualified, may have difficulty in meeting the graduate program's requirements, such as satisfactory completion of courses and other requirements within a given timeframe or maintaining standards of professional conduct at all times. Such cases will be reviewed by the appropriate program committee for possible

remediation or disciplinary action. Processes for review of student performance/behavior are detailed below.

A. Each program should conduct an annual review of all students currently enrolled in their program. In the case of PhD in Biomedical Sciences or Neuroscience students, the Committee for Academic Review (CAR) will perform this review. The Committee will make recommendations to the Dean of the Graduate School with regard to promotion, non-promotion, or dismissal from the school for academic or other reasons.

B. The Committee for Academic Review will meet once each semester as needed. Additional meetings may be called by the Dean of the Graduate School when the Dean, MTA Directors or Graduate Program Directors request that the Committee meet to review a particular student or students.

C. When problems arise in a student's academic performance or professional behavior, the student will be reviewed by an appropriate student performance review committee. Some programs have internal (i.e., program-specific) review committees, while others do not. When a program does not have its own student review committee, Graduate School structures will be used for an initial review. The process for either situation is described below.

   a. For programs that have an internal student performance review committee, those committees will investigate a complaint raised against a student according to the program's written policies and procedures and render a judgment. For information regarding program-specific review procedures, refer to the Student Handbook chapter for that program. Once the internal committee has reached a decision the Chair of the review committee is responsible for meeting with the student and providing him/her with both an oral and written summary of the actions taken. During this discussion, the student must be informed of the process available for an appeal of the decision (see below for details regarding the appeals process).

   b. When a program does not have an internal student performance review committee, a Program Director will confer with the appropriate Graduate School Associate Dean to determine an appropriate course of action. There are two possible courses of action:

      i. The Associate Dean and Program Director will perform a full review of the matter and render a judgment. The student must be given an opportunity to meet with the Program Director and Associate Dean to make a statement and answer questions about the incident in question. If it is determined that some action needs to be taken, the Program Director and Associate Dean are responsible for meeting with the student and providing him/her with both an oral and written summary of the actions taken. During this discussion, the student must be informed of the process available for an appeal of the decision (see below for details regarding the appeals process);

      ii. The matter will be referred to the Graduate School's Committee for Academic Review. In such cases, the Associate Dean will assemble a subcommittee of CAR, acting as its Chair, to investigate the issue. The Associate Dean will also assign a senior Graduate School staff person to help guide the student through the process. The student must be given an opportunity to make an in-person statement to the subcommittee and to answer any questions committee

members might have. The student should also be given an opportunity to invite faculty or other relevant people to speak to the subcommittee on the student's behalf. Once the subcommittee has considered all available information and met with the student, it will render a decision regarding the validity of the complaint against the student and provide a recommendation for remediation or disciplinary action to the full committee. The full committee will approve the recommendation or amend it prior to approval. Once the full committee has reached a decision, the Program Director, the subcommittee Chair, and the Chair of CAR are responsible for meeting with the student and providing him/her with both an oral and written summary of the actions taken by CAR. During this discussion, the student must be informed of the process available for an appeal of the decision (see below for details regarding the appeals process).

c. Membership of CAR –

   i. Full Committee - The Committee for Academic Review will consist of a chairperson appointed by the Dean of the Graduate School, one of the Co-Directors (or their designee) of each MTA, one faculty representative from each training program (PhD in Clinical Research, MSBS, MPH, MSGC, MSCR, and MSHCDL), and one student representative from each training program (PhD, MD/PhD, PhD in Clinical Research, MSBS, MPH, MSGC, MSCR, and MSHCDL). PhD student representatives should be in their 4th year or higher, while Master's degree candidates should be in their 2nd year or higher. Student members should recuse themselves when the student under review is from their program.

   ii. Investigating subcommittees – Investigating subcommittees are assembled and charged by the chair of CAR and the Senior Associate Dean who is initiating the review. The subcommittee should consist of at least three people and should have at least one student member. The subcommittee can also include ad hoc members if deemed necessary by the CAR chair and Associate Dean. Ad hoc members could include members of the student's training area or thesis advisory committee. The student under review has the right to request that student members are excluded from the subcommittee. In addition, student members of the subcommittee cannot be from the same training program as the student under review.

d. As mentioned above, students under review must be informed in writing of any requirements for remediation or disciplinary actions taken by CAR. The student must sign a copy of the document to indicate that he/she has received it and understands the content. This signed document will be added to the student's academic file.

Appeals Process

Students have the right to appeal actions taken by a review committee or the Dean of the Graduate School. Refer to Figure 1 for the appeals process hierarchy. Students may direct an appeal to the committee or person immediately above the committee/person who rendered a decision. All appeals must be made in writing with a detailed description of the basis for the appeal no more than 15 days after a decision is communicated. In considering appeals, the Committee for Academic Review or the Dean of the Graduate School will consider whether the decision below was arbitrary or capricious, including whether proper

procedures were followed. An appeal to the Dean of Academic and Scientific Affairs may only address whether proper procedures were followed and whether the sanction is appropriate. The Dean of Academic and Scientific Affairs will accept factual findings made below.

A person hearing an appeal may choose, at his/her sole discretion, to convene an ad hoc committee to hear the appeal. The person/committee hearing an appeal may collect any information deemed necessary to render a decision. The student will be given an opportunity to meet with the person/committee hearing the appeal. At the conclusion of the appeal process, a written decision will be issued. NOTE: Grade appeals do not utilize this process. Instead, grade appeals should follow the process outlined in Section 6 above.

Leave of Absence

A student who wishes to interrupt his/her graduate studies for not more than one academic year due to serious illness or compelling personal reasons or military service, may request a leave of absence. If the leave is approved by the Dean of the Graduate School, the student will be reassured of readmission at the end of the approved leave. Such approval can only be obtained if the student maintains satisfactory progress (as defined above) and has the approval of the Program Director. PhD and MD/PhD students must also inform their Thesis Advisor, Advisory Committee, and the MTA Director. Master's degree students who are performing thesis or capstone work, must also inform their thesis/capstone advisor.

Students who fail to follow any condition of the leave of absence, will be administratively withdrawn from the Program. If the student wishes to return at a later date, s/he must apply for readmission.

Students on a leave of absence are not eligible for any benefits associated with maintenance of student status, including the stipend, tuition remission, student health insurance coverage and travel award for the duration of the leave. Students on a medical leave of absence may request continuation of housing privileges and/or student health insurance coverage. Students on a personal leave of absence may request student-housing privilege based on availability and   continuation of student health insurance coverage at the student's expense.

Taking a leave of absence (medical, personal, administrative) may have implications for student loan grace period, deferment, repayment status or financial aid eligibility. Before applying for a leave of absence, students must investigate these implications as they may pertain to their situations and should meet with a member of the Office of Student Financial Services.

Students must submit a Leave of Absence Request Form with a letter stating the reasons for the leave. If the request is for medical reasons, a doctor's letter must accompany the form. International students may only request a leave of absence for medical reasons

Figure 1. Appeals process hierarchy.
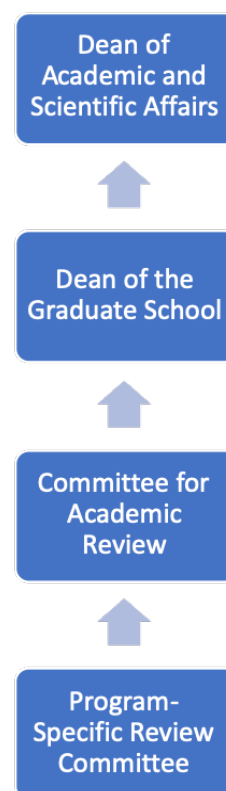
because of visa requirements and should consult with Mount Sinai's International Office personnel to discuss their status while on leave. Students should notify the Office of Enrollment Services and the Registrar when they return from a leave of absence. If the leave of absence is for medical reasons, a doctor's letter should confirm that the student is eligible to return.

If the School approves a leave of absence, the student will be notified in writing of the approval, including conditions of the leave and the expected date for the student to return to the program.

If a student misses one semester without prior authorization, his/her academic record will be closed and in order to continue in the program, he/she will need to apply for readmission.

N.B.: The period of an authorized leave is not included in the Program time limit.

Requests for an extension of a leave of absence must follow the same procedure as indicated above.

Return from Military Service
Students returning from a leave of absence due to military service, will be readmitted for any term within a year after the student's release from active service without a need to reapply for admission or pay an application fee. The student must be free of any previously acquired holds and eligible to register for courses. Students should direct any questions about the return from active service process to their student affairs dean or the veteran certifying official located in the Office of Student Financial Services

Withdrawal and Readmission
A. *Voluntary Withdrawal* – A student may voluntarily withdraw from school at any time, upon application to the Director of the MD/PhD program (for MD/PhD students) or the Graduate School's Senior Associate Dean for Student Affairs (for PhD, Master's students). The request must be made by submitting a Request for Withdrawal Form. The School may require an Administrative Evaluation prior to acceptance of a withdrawal. Failure to comply may result in dismissal. For further information on withdrawing from a specific program, refer to the program-specific chapter of this handbook.

B. *Administrative Withdrawal* – In certain circumstances, a student may be administratively withdrawn from the school at the discretion of the Dean or their designees. Examples include a student who has exceeded two years on medical or personal leave, a student whose GPA falls below a 3.0, or a student who fails to meet satisfactory progress as defined for each program and detailed in other sections of this handbook. Other reasons include noncompliance with an institutional, programmatic, and/or administrative requirement or policy. Students who have been administratively withdrawn from a program have the option to appeal the decision. Please refer to #16 of the Academic Policies and the Registrar's Office section of this chapter for details of the appeals process.

C. *Clearance* – Clearance to withdraw is required. Students must complete the appropriate paperwork found in the Registrar's Office. The request must be made by submitting a Request for Withdrawal Form.

D. *Readmission* – Students who wish to reapply to a program following any type of withdrawal can do so by adhering to the same application protocols outlined by the admissions office for all applicants.

Holds

ISMMS utilizes a system of holds when students fail to meet standard educational obligations. A "hold" prevents the release of a student's academic transcript and freezes a student's registration status so that they may not continue to the next term until the student resolves the hold. All financial obligations must be satisfied before a student can register for another term and continue studies and/or research. Students with holds will not be eligible for financial aid refunds until the student resolves the hold.

Types of ISMMS Holds: Admissions, Academic, Administrative, Student Health, Housing, Financial, and Registrar.

PhD in Biomedical Sciences and Neuroscience Student Vacation Policy

In general, the Graduate School anticipates that students will take two weeks of vacation each year, exclusive of travel to scientific meetings and days taken off for study and preparation for examinations. Individual circumstances may cause a specific student mentor pair to agree to an individual vacation plan that is appropriate given the nature of the student's efforts over a period of time, particular family circumstances, parental leave, etc. Students must, however, inform the thesis advisor (or the rotation advisor) of all proposed and planned absences so that the flow of experimental work can be planned and discussed.

In the event of an unanticipated absence, students should make every effort to communicate with the laboratory and the Graduate School Dean as soon as possible. Any unexplained absence will constitute lack of satisfactory progress in the Program and can result in academic probation, administrative leave of absence, or dismissal from the Program.

Parental Leave

A student anticipating the need for parental leave (e.g., maternity leave, paternity leave, or others) should discuss this with their thesis advisor well in advance (about 4-5 months) of the anticipated leave. Parental leave must be approved by the program director and the Dean of the Graduate School. During the period of parental leave, completion of academic assignments (exams, written assignments, and any other academic requirements) and academic progress milestones may be postponed for up to 12 weeks.

Recognizing that mothers-to-be may need time before a child is born as well as time to recover from the birth and to care for their new babies, female graduate students will be allowed 8 weeks maternity leave to be taken in any combination of pre-natal and post-natal time. During this leave, full-time student status will be maintained, i.e. health and housing benefits will continue and visa status will remain unchanged. If a student chooses to continue a leave beyond 8 weeks, she is entitled to up to 12 weeks. These additional 4 weeks will be taken from vacation time, followed by unpaid leave. During the unpaid leave, all benefits (health, housing, etc.) will be suspended. International students should be aware that their student status might be compromised by unpaid leave.

In the event that medical complications require more than an 8-week leave, students will be covered by the medical leave policy of the Graduate School.

Students on training grants or individual fellowships must abide by the leave policies of the institutional NRSA or individual fellowship. In the event that the amount of leave allowed by an external funding agency is less than what the Graduate School allows, the Graduate School will pay the stipend and health benefits of the student for the time not covered by the grant or fellowship, such that the student will receive the equivalent of 8 weeks paid leave.

Students who adopt a child will be entitled to the same 8-week maternity leave described above for the birth of a child, to be taken in any combination of pre- and post-adoption time.

Fathers, or partners in a legal domestic partnership, will be allowed 2 weeks of paid parental leave for either childbirth or adoption. The leave can be taken as needed either before or after the arrival of the child.

If a graduate student receives a stipend from a dissertation advisor, and if continuing the stipend for the period of the parental leave constitutes a hardship for the dissertation advisor, the dissertation advisor should discuss the possible limitations of continuing the student's support during the period 31 / 216 of the parental leave with the Dean of the Graduate School. The Graduate program may participate in working with the dissertation advisor in an effort to continue stipend support of the student.

Student Services

Career Services and Strategy

The Graduate School hosts the Office of Career Services & Strategy (OCSS). Established in 2015, the office offers a number of services and recurring talks and workshops - from "CV to Resume Conversion" to "Interviewing", "Negotiations", "Networking", "Cover Letters" and many others. The office provides one-on-one advising services, mock interviews, digital professional portraits and business card ordering. Additionally, OCSS subscribes to many on-line resources accessed through its website as well as supports several large-scale initiatives. The office has appointed Advisory Board of Mount Sinai alumni who have successfully transitioned in careers beyond Icahn School of Medicine. Myers-Briggs workshops are held quarterly. The office, under the umbrella of the Graduate School, encourages graduate students and postdocs to participate in the myIDP (Individual Development Plan) program. The program consists of an assessment, followed by an open dialogue with faculty for enhancing the career awareness and preparedness of trainees.

The Graduate School is a charter member of the New York Science Alliance, a citywide consortium sponsored by the New York Academy of Sciences. The Alliance sponsors workshops/symposia with dynamic speakers where a variety of career paths are explored. An bi-annual event "What can you be with a PhD?" is organized by New York University and sponsored by research and academic institutions in the tristate area, including the ISMMS's Graduate School of Biomedical Sciences.

International Student Services

The Office of International Personnel together with the Graduate School of Biomedical Sciences co-ordinate services for international students who have been accepted to one of the School's residential graduate programs. The F-1 student visa for Icahn School of Medicine at Mount Sinai's international students is sponsored by ISMMS. Upon acceptance into one of the programs at ISMMS, the student will be given the Application for Certification of Eligibility (I-20) Form (Application). The Application should be duly completed and returned via email to an immigration specialist which will be designated on the Application.

All international students must register with the Office of International Personnel within 15 days of matriculation at ISMMS and must notify this Office of any changes in their academic program, enrollment status or if they plan to leave the country to preserve their visa status. Students must show proof of a valid I-20 before the fellowship

package can be activated. It is the student's responsibility to make sure that s/he is always in status, as mandated by the United States Homeland Security.

All visa questions should be addressed to the Office of International Personnel at (212) 241-8300.

Academic Informatics and Technology

Academic Informatics and Technology (AIT), with the Gustave L. and Janet W. Levy Library at its core, serves as the information resources and technology hub for all students, residents, fellows, and the clinical and basic science faculty of ISMMS, regardless of where they are across the City and around the world. AIT includes the Levy Library, Archives & Records Management, Academic IT Support Center (ASCIT), Instructional Technology Group (ITG), and Multimedia Services.

The Library

Overview:

The Gustave L. and Janet W. Levy Library is the core of the Academic Informatics and Technology department, supporting the education, research, and clinical information needs of the Mount Sinai Health System. The library provides an extensive collection of resources covering biomedical information, patient education, and more, all accessible both on campus and remotely. The library is located on Annenberg 11, and serves as an inviting environment designed to facilitate research, study, teaching, and collaboration

The library offers custom classes, research consultations with librarians; mobile resources and apps; online interlibrary loan and document delivery; and printing, scanning, photocopying, and phone charging stations.

http://icahn.mssm.edu/about-us/services-and-resources/levy-library

Education and Research Services:

Levy Library offers an Ask a Librarian service which allows users to connect with reference librarians via phone, email, chat, or in person. Librarians are available 9:00am-5:00pm Monday-Friday. Users can contact reference librarians outside of regular business hours by emailing refdesk@mssm.edu

Levy Librarians are experts in biomedical information resource search methodology and offer support for systematic review and meta-analysis search design. Librarians also offer publication support including assistance with journal selection, designing literature reviews, and research impact and evaluation.

Collection:

Levy Library offers a rich electronic collection of biomedical resources including e-books, e-journals, databases, and mobile apps. Collection highlights include access to over 50,000 e-journals, 70,000 e-books and 150 databases, clinical decision support tools (UpToDate), citation management tools (EndNote), and board examination materials (BoardVitals).

Library Space:

The Levy Library space includes: 2 hands-on computer classrooms (seating 12 and 35); over 80 publically available computers; study tables, carrels, small group study rooms, and printing/copying/scanning services. Library spaces are open seven days per week. During the academic school year, the library is open until 1:50am Sunday-Thursday. Hours vary. Visit our website for more information.

Archives and Records Management Division
Overview:

The Archives and Records Management Division of the Academic Informatics and Technology group serves the Mount Sinai community by:

♦ Identifying the appropriate retention for all records created and maintained at Mount Sinai, regardless of their format

♦ Helping departments to manage the records throughout

♦ their life cycle Overseeing the appropriate destruction process at the end of that cycle

♦ Ensuring the permanent retention of all records of enduring value in the Mount

♦ Sinai Archives Answering questions and providing images related to Mount Sinai history

Archives and Records Management is located on the 10th floor of the Annenberg Building, Room 10-49. Complete descriptions of our services may be found on our website: http://library.mssm.edu/services/archives_records.shtml

Research Support:

The Mount Sinai Archives provides historical information and images about the Icahn School of Medicine, The Mount Sinai Hospital, and related institutions. The collections may be used to provide background information for grant proposals, images for publications or lectures, or to serve as resources for research on historical topics.

The Records Management Program provides support for researchers to help them manage their responsibilities regarding ownership and retention of research records. Records retentions schedules governing these records may be found here: http://intranet1.mountsinai.org/recordsManagement/retention.asp

Collection:

The Mount Sinai Archives collection consists of over 1500 linear feet of paper records and photographs dating from 1852 to the present day. There is also a large collection of audio-visual material, including films and videos made by and about Mount Sinai; oral history interviews with Mount Sinai faculty, staff, and students (1965-2012); and other video and sound recordings that document Mount Sinai history. The Mount Sinai Archives also maintains a digital repository where electronic records are preserved and made available. The digital collections may be found here: http://dspace.mssm.edu/

Academic IT Support Center (ASCIT)

The Academic IT Support Center supports students, faculty, and staff through:

♦ Distribution of site-licensed software

♦ Assistance with resolving hardware and software computing issues

♦ Scheduling of work orders for hardware repair

♦ Configuring mobile devices for email

- ♦ Support for network logins and email accounts for users on medical school computing networks

- ♦ Questions regarding Google Apps for Students

The Academic IT Support Center is located on the 11th floor of the Annenberg Building, Room 11-39. The Support Center staff is available for consultation in person, via email at ASCIT@mssm.edu or by phone at 212-241-7091. Office hours are Monday through Friday from 8:00 am to 8:00 pm; Saturday from 9:00 am-5:00 pm and Sunday from noon to 8:00 pm.

Details of our services can be found on our website here: http://icahn.mssm.edu/about-us/services-and-resources/computer- services/levy-library-computing-help-desk

Instructional Technology Group (ITG)

The Instructional Technology Group (ITG) is comprised of a creative team of instructional designers, technologists and medical illustrators connected closely to the academic mission of the School. We utilize current best practices for integrating technology into teaching and learning materials. ITG actively partners with faculty and researchers to enhance learning experiences and improve learning outcomes. If you would like to take your learning content online, our team can work with you to translate existing learning materials into a digital experience delivered online. We also develop, maintain and train faculty, students and researchers on the effective use of the following academic systems:

- ♦ Learning Management System (Blackboard)

- ♦ Lecture Capture System (Echo360)

- ♦ Virtual Microscopy (Olympus Webslides)

ITG is available for consultation in person, via email at ASCIT@mssm.edu or by phone at 212-241-7091. We are available for consultation Monday through Friday from 9:00 am to 5:00 pm.

Multimedia Services

The Multimedia Services department is located on the 10th floor of the Annenberg building. Multimedia Services is responsible for supporting the entire ISMMS campus for all audio-visual needs. We offer services ranging from presentation assistance to video conferencing. Multimedia Services has also added GoToMeeting support to our request forms.

Video conferencing (via Polycom and Tandberg systems) has become an everyday routine event. Through a ticketing system we are able to flawlessly coordinate these video conferencing meetings with the other hospitals within the MSHS and its affiliates. Many of these video conferences incorporate content sharing, which allows us to reach clients as close as Upstate New York and Virginia or as far away as Germany and Israel.

Multimedia Services also provides support for Medical Education's classrooms, including Annenberg 12-01 (Polycom and Echo 360) and 13-01 (Echo 360) lecture halls and the small class rooms on those floors.

The Multimedia Services Department has a staff of 6 technicians and our operating hours are from 7:00 AM to 6:00 PM. Direct phone line - (212-241-7060).

Medical Insurance

All graduate students are required to have medical insurance coverage. For information about student health coverage, refer to: http://icahn.mssm.edu/education/student-resources/resources-for-current-students/student-health-and- insurance/student-benefits. Students may enroll in the School's student health insurance policy or provide proof of coverage of another carrier. Students who fail to provide proof of insurance coverage will automatically be enrolled in the Student Health Insurance plan.

For continuing students, open enrollment occurs in early June for the upcoming academic year. At that time, students have the option to enroll, unenroll, or change their insurance elections. No other changes will be processed for the year unless students have a specific qualifying life event. Qualifying life events include birth of a child, adoption, marriage, divorce or loss of employment. In the case of a qualifying event, students only have 30 days from the date of the qualifying event to change their insurance benefits. Students who have inquiries regarding enrollment for medical insurance should contact Enrollment Services at (212) 241-5245 for information.

♦ Medical insurance coverage will end on the last day of the month in which the student terminates by depositing a thesis, unless the student terminates on the first day of the month, in which case, benefits will terminate on that day.

♦ Prescriptions are available for generic and brand medications with co-payment in the Mount Sinai Employee Pharmacy, provided the medication prescribed is in the Pharmacy formulary. Students who receive prescriptions for medications not carried by the formulary can obtain prescriptions at a local drug store.

♦ Open Enrollment Period: During the first two weeks of June, students will be able to change their benefit choices. During this time period, students enroll or disenroll in any combination of health, dental, and vision coverage. However, students must always carry basic medical insurance. If a student disenrolls from the ISMMS student health insurance plan, they must file a waiver form in the Enrollment Services Office and present proof of insurance from another source. When a student marries, has a child, or goes off their parent's insurance policy s/he must notify the Enrollment Services Office within 30 days of that event so that the policy can be altered appropriately.

♦ The insurance plan coverage runs from July 1 – June 30. Coverage will be terminated by the school upon graduation or if a student does not re-enroll for the next academic term. Medical insurance coverage will end on the last day of the month in which the student terminates by depositing a thesis or graduating, unless the student terminates on the first day of the month, in which case, benefits will end on that day.

♦ Students can also use the Student Health Office for minor illnesses. For additional information, you may call Student Health at (212) 241-6023.

Student Health Services

The Student Health Center is located at 17 East 102nd Street, East Tower, 4th floor, Room D4-246. The Student Health Center provides administrative services to the school to ensure compliance with OSHA, immunizations, tuberculosis screening, and influenza vaccination as mandated by the Health System and New York State. The Student Health Center provides confidential medical evaluation and treatment for all matriculated medical and graduate students, including primary and preventive care, gynecological services, STI screening, tuberculosis surveillance, travel medicine, and acute care. Students may choose to see Student Health physicians for any of the above visit types, or they may seek care with their own primary or subspecialty care physicians.

The staff consists of physicians and a full-time nurse. Students schedule appointments via MyChart. For any difficulties with scheduling, students may call for an appointment (ext. 46023) or walk-in to the office, and Student Health will do its best to accommodate them., For after-hours emergencies, students may be seen in the Mount Sinai Urgent Care Center or the hospital Emergency Department. Students must bring their insurance

information for all urgent and emergency visits. Visits will be billed to the student's insurance, but the student remains responsible for any co-payments or for any services not covered by insurance. If the student needs to be admitted, s/he will be given the first available bed on a semiprivate service.

All students must make arrangements to have a comprehensive physical examination performed by their private physician prior to matriculation. All student health forms are available on the enrollment website and must be completed and submitted to the Student Health Center prior to matriculation.

The school may require that a student be seen by our Student Health physicians. Failure to comply with any of the student health requirements may negatively impact the student's academic standing.

Immunization Policy
Immunizations are required for TDaP (if not administered within the past 10 years), Polio (if initial series and booster have not been given) and an annual influenza vaccine. Proof of immunity must be provided for Measles, Mumps, Rubella, Varicella and Hepatitis B. If students do not have proof of immunity to any of the above, they will be required to obtain booster vaccinations as indicated and follow-up titers to verify protection.

Annual influenza vaccination is required for all Mount Sinai students and employees, as mandated by the Health System and New York State. Every student must obtain an annual flu vaccine during flu season or submit a written declination to the Student Health Center. In addition to providing written proof of declination, any student who declines the flu vaccine will be required to wear a mask while on campus property throughout the flu season (usually December through May).

Upon enrollment, all ISMMS students must have an annual screening for tuberculosis (PPD skin test or IGRA). Annual TB testing is required of all students and employees at Mount Sinai. Students are responsible for meeting annual tuberculosis screening compliance requirements. Students who are recent converters will be managed appropriately with chest x-rays to rule out the presence of active disease and prophylaxis with medications. Failure to follow appropriate treatment may result in dismissal from the institution.

Non-compliance with the above regulations is forwarded to the Registrar for "student health hold" and Program Directors (Graduate School) or the Administrative Director of Student Affairs (Medical School) are notified. Students in the HCDL MS, an on-line program are except from this requirement.

Dental and Vision Care
Students have the option to elect dental and/or vision coverage at their expense. Policy information is available in the Office of Enrollment Services. The same annual enrollment dates for Medical Coverage enrollment also pertain to Dental and Vision coverage.

In addition, ISMMS has a dental clinic that is available to provide emergency and routine services for medical and graduate students at a reduced fee. These services include oral examinations with x-rays and dental cleanings. More extensive services such as root canal therapy, prosthetic and cosmetic dentistry are available for a fixed fee. Students should bring their student ID to identify themselves as a medical or graduate student. It is most effective to visit the clinic in person to arrange a time slot. The dental clinic is located on the second floor of the Annenberg building and can be reached at (212) 241-7121.

Student Mental Health Service

All correspondence with this office is completely confidential; there is no correspondence with the school by this office whatsoever – unless specifically requested and formally endorsed in writing by the student. No record of any contact is made available to or accessible to the school

Rapid access to strictly confidential psychiatric consultation, counseling, treatment, and referral is available to students through the Student Mental Health Service. The Student/Trainee Mental Health Program through the Department of Psychiatry provides initial consultations and ongoing psychotherapy and medication management for those graduate students in need of mental health services. The student's insurance will be billed for all services and the student will not be responsible for any co-pay. To make an appointment for an initial consultation, you can either write to the STMH email account (STMH@mssm.edu) or call the program at 212 659-8805.

Emergency psychiatric services can be initiated by contacting the psychiatrist on-call through the page operator (212) 241-5581, by calling the Psychiatric Emergency Service at (212) 241-7147, or by direct unscheduled presentation to the emergency room where it is never necessary to call in advance.

Student access to counseling and mental health services is a private health matter of the utmost importance. The rule of complete confidentiality always applies, as in any relationship between a therapist and patient. No person or office is notified or informed at any point that a student (or dependent) has seen or is seeing a counselor or psychiatrist through the Student Mental Health Service. Student use of the service is not made known to the school and is never recorded on any transcript.

Procedures

The School and the Department of Psychiatry have collaboratively established several confidential pathways of access to mental health care and enriched available resources beyond those afforded by the basic mental health insurance plan.

♦ The intent of this service is to provide direct access to specialized consultation with an absolute minimum of administrative complexity. When ongoing treatment is desired and indicated, informed referrals into affordable care are provided.

♦ Self-Referral – Students may freely seek and establish mental health services independent of the Student Mental Health Service, or any other campus framework, by any means of their choosing, and fully utilize their mental health insurance benefit. In this pathway of access, if insurance is utilized by the student, pre-approval of insurance must be obtained (see below). Students selecting this pathway for their care should be mindful of several considerations including the distinction between "in-network" and "out-of-network" terms for insurance reimbursement (please refer to the terms and conditions of the student health policy for details).

♦ Student Health Referral – Students may obtain a direct referral to a Mount Sinai clinician via Student Health Service at (212) 241- 6023. Referrals are made by Student Health to the "out-of-network" voluntary and full-time faculty on the roster described in (1) above. Referral requests remain strictly between Student Health, the student, and the clinician. No records of any kind are made available or are accessible to the Dean's Office or medical school administration.

Referrals conducted by Student Health are made in a general manner, without triage or consultation such as is provided by the Student Mental Health Service. Student Health will not conduct a formal clinical psychiatric assessment or inquiry to inform this referral.

After a name has been provided to the student, the next step is to obtain pre-approval of insurance to proceed into care with this "out-of-network" referral. "Good-faith" responsibilities for students will apply with regard to financial arrangements (see below).

If the student feels that the initial referral is unsuitable, s/he may request a second referral from Student Health. At any time, the student may request a consultation with

the Director of Student Mental Health as described in (1) above to more specifically inform the referral. Such consultation is required to obtain additional referrals if the student is dissatisfied with a second referral as conducted by Student Health.

Infection Control

All students are held to the Mount Sinai Health System's Infection Control Policies and Procedures. During orientation, students will be introduced to these policies and procedures. Further training is coordinated by each degree program.

Students who experience needle stick accidents and accidental blood/body fluid in the medical school will be supported (An exposure may be a percutaneous injury, such as a needle stick, cut with a sharp object or bite, contact of mucous membranes, contact of tissue, contact of skin when the exposed skin is chapped, abraded, or afflicted with dermatitis, or the contact is prolonged or involving an extensive area with blood or tissue or body fluids.). It is expected that students follow the published protocols immediately as anti-retroviral therapy for HIV exposure, if recommended, should commence immediately. Exposure to hepatitis B or C may require therapy or further follow-up. Care, evaluation, and expert advice must be available to students regarding relative risks, options for therapy, and follow-up. Coordination of multiple affiliate sites has been accomplished so that students have a clear idea of the protocol to follow and students receive state-of-the-art care. Students must attend annual seminars conducted by infection control experts and documentation of attendance will become a permanent part of the student's file. Students must follow protocol after a needle stick or other blood/body fluid exposure.

All exposures should be reported to Student Health. For complete information, view the Infection Control Handbook.

Disability Services

The Office of Student Disability Services (SDS), led by Christine Low (christine.low@mountsinai.org), works with all students of the ISMMS to facilitate equal access for students with physical, learning, psychological, sensory and chronic health disabilities by coordinating reasonable accommodations through a variety of support services (*e.g*., access modification, learning related technology, extended test times). SDS provides access to all aspects of the student experience so that each student is viewed on the basis of their ability — not disability. Individually designed accommodation plans and services are determined based on the documented needs of each student in conjunction with their program requirements.

Students register with the office and access accommodations by completing 3 steps; submitting the Application for Accommodations and Services, submitting documentation of the disability and meeting with SDS staff. The Director of Disability Services is responsible for determining the acceptability of documentation and reserves the right to require additional information. Students requesting academic accommodation for a disabling condition must be approved for the academic accommodation prior to the date of exam(s) or course assignments and deadlines. Since accommodations cannot be granted retroactively it is important that you plan ahead and include a minimum of two weeks to process accommodation requests.

For any questions or to make an appointment, please email the Director of Disability Services, Christine Low, MSW at christine.low@mssm.edu. The SDS webpage has helpful information including the application and related policies.

Students who do not have documentation of their condition, and /or who believe they have an undiagnosed condition, should contact the Director of Disability Services to discuss their circumstances further. In general, students are welcome to seek evaluation on their own at their own expense. However, administrative referrals for students with academic challenges will be supported by the Office for Student Affairs at the School of Medicine; the Associate Dean supports referrals for Graduate School students.

Housing (Applicable only to students in PhD and MD/PhD in Biomedical Sciences or Neuroscience)

The School of Medicine has made it a priority to provide convenient housing for students who are in the MD, MD/PhD, PHD- Neuroscience, PHD- Biomedical Sciences, and PREP students. In compliance with Medical Center policy, students may not possess illegal drugs, firearms, and/or ammunition in any facility operated by

The Jane B. Aron Residence Hall

The Jane B. Aron Residence Hall at 50 East 98 Street offers modern and affordable housing for eligible students. The 14-story building contains shared suites accommodating almost 600 residents. Each suite consists of four to six private bedrooms a shared bathroom for each two rooms, a living room and a kitchen. Each room has an individual heating and air conditioning unit. Living rooms have parquet floors and large windows, and all suites are furnished. Among Aron Hall's facilities are outdoor handball and basketball courts, a laundry room, a student lounge, a study room, and an exercise/gym room that is open to all medical and graduate students who can present their ISMMS student ID card.

Security provisions include doormen around the clock, a call light near the front door to summon a security guard for escort to ISMMS, an intercom from the lobby to all suites, and television cameras in elevators and ground floor areas. Building occupants are required to observe a number of security procedures; for example, ISMMS ID cards must be presented to the doorman whenever occupants are entering the building.

Couples Housing

Furnished and unfurnished apartments in other buildings owned by Mount Sinai are available for eligible students with a family size of more than one (1) as documented by proof of marriage or a domestic partnership. Documentation of the family size is required. For further information please contact: ISMMS Real Estate Office at (212) 659-9630 or housing@mountsinai.org

Student occupancy agreements are written for the term of student enrollment. A non-graduating student who wishes to permanently leave Mount Sinai housing may be released from the occupancy agreement as of June 30 of the year by requesting this in writing at the Real Estate Office on or before May 31. Non-graduating students, who vacate their Mount Sinai housing prior to June 30, or without giving proper notice, will be responsible for their rent until June 30. Special requests to terminate a lease early may be brought to the attention of the Director of Enrollment Services who will take any petitions for exceptions to the Housing Oversight Committee for review.

Occupants are charged a $25 late fee each month on any balances not paid by the 10th of each month. Students who fall more than two months in arrears will be put on "housing hold" and will not be considered to be in good standing with the school until the situation is corrected. Transcripts, letters of recommendation, change of status, and so on are all affected by this hold.

Students graduating in the spring term are expected to vacate their Mount Sinai housing by the Sunday following graduation. Notification of move out dates must be submitted to the Real Estate Office. Any student graduating at other times of year should give the Real Estate Office 60 days' notice to schedule their move out date.

The Medical Center's insurance does not cover occupants' personal property. Students are urged to purchase renters' insurance policies or to find out if their belongings can be covered under their parents' policies.

Real Estate Office

The Real Estate Division is open Monday through Friday, except holidays, from 9:00 A.M. to 5:00 P.M. In addition, a voice mail system will take messages during evenings, weekends, and holidays. For any unresolved problems with residential building services or repairs, you may ask for an appointment with the Director of Enrollment Services, who acts as liaison between students and Real Estate. For questions about Aron Hall housing, see the Housing Coordinator in the Real Estate Office. For additional information, including lease terms, guest visitation policy, room transfer policy, and subleasing policy, please visit the website at: http://icahn.mssm.edu/education/student-resources/resources-for-current-students/housing or contact:

ISMMS Real Estate Office
1249 Park Avenue,
1st Floor New York,
NY 10029
Tel: (212) 722-5096
Fax: (212) 831-3093

Safety and Security

Students' personal security is of paramount importance. For this reason, Security will, upon request, provide escorts within Mount Sinai and to on-campus residences. Call ext. 46068 approximately 10 to 15 minutes prior to departure.

Security measures at Mount Sinai are reviewed continuously to provide a safe environment for all who use its facilities. A committee of the Student Council addresses housing and security issues and meets on a regular basis with Security to discuss matters of concern.

Security Office Contact Information
♦ The Security Office is located at 1468 Madison Avenue, MC level, AMC-203.

♦ The Security Department telephone number is 46068 when dialed from a school or hospital telephone and (212) 241-6068 when dialed from off campus or cellphone.

♦ Students can also reach Security by dialing extension "60" from a hospital or school telephone in an emergency, when suspicious activities are observed or urgent request.

Identification Badges
Photo identification badges are issued to all students at the time of registration and **MUST BE WORN AT ALL TIMES** in all campus buildings and upon entering any residence hall. Students may be asked to present badges for identification at any time while on campus. Lost cards may be replaced for a $20 fee, payable to the hospital main cashier. Present the receipt to Security Administration who will issue a new badge.

Emergency Alert System *"Message One"*
In order to allow for a more coordinated and rapid response to emergency or disaster situations at Mount Sinai, the hospital uses a messaging system, MessageOne, which has the capability of informing students of and delivering instructions regarding citywide, hospital, or student specific (e.g. student housing intruder) emergencies requiring immediate attention. Signing up for this system is mandatory for all students. During the on-line registration process, students have the option to set the method of contact (e.g. cell-phone, text message, email).

Personal Property and Property Passes

Personal property is often the object of theft and should be protected at all times. It is the policy of Mount Sinai that no equipment, personal or that belonging to Mount Sinai, will be removed from the premises without a Property Pass. Property Passes are available from the Graduate School office during weekdays. Packages, backpacks, purses, or other large bags are subject to inspection by Security Officers at entrances and exits of all Mount Sinai buildings.

Sexual Assault

ISMMS is committed to maintaining a supportive and safe educational environment, one that seeks to ensure the wellbeing of all members of its community. Those who believe that they are the victims of sexual assault should:

♦ **Immediately call the NYC police department at 911.** Also, call the Mount Sinai Security Department at (212) 241-6068.

♦ **Get medical attention.** Campus security will provide transportation or escort to the Mount Sinai Hospital Emergency Department for emergency medical treatment and evidence collection. A counselor from the Sexual Assault and Violence Intervention (SAVI) program will be available to assist victims.

Caring assistance is available for persons who have been subjected to sexual assault or sexual misconduct. They are encouraged in the strongest terms to make a report. ISMMS works closely with Mount Sinai SAVI program. More information can be found here or by calling (212) 423-2140.

Consistent with Chapter 739 of the State Education Department signed into law in 1990, information concerning prevention of sexual assault is provided to all entering students.

Clery Act

Copies of Crime Statistics for the ISMMS area are available in the Security Office or through the U.S. Department of Education web site for campus crime statistics (www.ope.ed.gov/security). The ISMMS crime statistics for the past three years are listed on the school's website at https://icahn.mssm.edu/education/students/consumer-information

Fire Safety

One of the most serious issues facing the Mount Sinai Hospital students, employees, and patients is the threat of fire. The risk is increased because work conducted in clinical, research and other laboratories may involve flammable liquids and other hazardous substances. In addition, the use of specialized equipment such as lasers and other ignition sources utilized in oxygen-enriched atmospheres increases the threat of fire. This threat is far more critical in patient care areas since patients are often incapable of self-preservation. It is critical to your safety as well as our patients' well-being that you know what to do in the event of an actual fire. This knowledge is imparted to you through participation in fire drills, and fire safety training in-services.

CODE RED is the phrase used to alert the Mount Sinai Community to enact the R.A.C.E. protocol for fire emergencies.

R = Rescue
A = Alarm
C = Confine

E =   Extinguish

The ISMMS Intranet, http://intranet1.mountsinai.org/, under Core Administrative Services and Fire Safety Tabs, includes a link to the MSMC video entitled "CODE RED". Please take the time to view this important informational video and participate in your local fire drills.

Student Life

Bicycles
Bicycle racks are provided for daily use. All bicycle parking is at the owner's risk. Students must provide a lock and/or chain to secure their bicycle to the rack. The bicycle stands are available in several locations around the institution.

Bicycles will not be permitted in any Mount Sinai building.

Bookstore
Posman Collegiate Bookstore at Mount Sinai is located in the Annenberg west lobby. There you can purchase textbooks, popular books, supplies, snacks, and Mount Sinai gifts.

Buses
The Medical Center provides a shuttle bus service between all Health System hospitals as well as to the Bronx V.A., Elmhurst, North General Hospital, Adolescent Health at 320 East 94th Street, and the 125 Street Metro North Train Station. Schedules are available in KCC 1 North and tickets may be purchased at the cashier's booth at the 98th Street garage. Additional information about the shuttle service is available at:

http://intranet1.mountsinai.org/securityweb/html/shuttle/msh%20shuttle.html
or
http://www.mshsshuttle.org

Food Service
The cafeteria offers a variety of selections for breakfast, lunch, and dinner. One can choose from a soup and salad bar, a deli sandwiches section, including popular wrap sandwiches, Kosher Corner, Main Fare, grilled selections, freshly- prepared pizza, and a variety of desserts and beverages, plus regularly scheduled "special menus," candies, popcorn, and munchies. Vending machines offer a variety of hot and cold foods and are available for use 24 hours a day, every day of the week throughout the campus, with the main location being adjacent to the Plaza Cafeteria in the Guggenheim Pavilion Lobby. The cafeteria is located on the Atrium level of Guggenheim Pavilion. Information about menus and times of operation are posted at: http://intranet1.mountsinai.org/foodservice/

The Starbucks coffee kiosk is located in the Atrium of the Guggenheim Pavilion – hours are posted.

Recreation
Recreational activities at ISMMS are determined by the student body and are administered jointly by the Recreation Office and two committees of the Student Council, one responsible for social activities and the other for athletic activities. Each committee is composed of one elected student from each of the four classes. At the beginning of the academic year, following discussion with their respective classes, the Committee members formulate a program of activities for the entire academic year and allocate the necessary funds. Individual students interested in a particular activity should consult

appropriate class representative. Students are urged to coordinate as many activities as possible through the two Student Council committees and the Recreation Office.

In addition, the Recreation Office, (19 East 98 Street, Room 1E), also provides information about a wide range of activities. The Office offers discount tickets to Broadway and off-Broadway shows, concerts, operas, sports events and other events occurring in New York. For certain events such as the Metropolitan Opera a specific number of tickets are allocated for student purchase; each student is permitted to buy two tickets. Students may phone (ext. 49531) for daily listing of available events and (x47257) for future listings or check on the Web: http://icahn.mssm.edu/recreation under Employee Services then under Organizational Development Learning (ODL); also on the Internet: http://icahn.mssm.edu/recreation. General recreational information is also available in the Recreation Office. Discounts are available for health clubs, Circle Line, Great Adventure and other amusement parks. Discount buying services are available for hotels, restaurants, car rentals, travel, magazines, and many other items. The Recreation Office maintains listings of city recreational facilities available to students (ice skating, swimming pools, tennis courts, handball courts, and so on).

The Employee-Student Activities Committee schedules a number of activities. Check with the Student Activities Coordinator at the Recreation Office (ext. 46660) for more information. Students are invited to serve on this special committee.

There is a gym on the first floor of the Aron Residence Hall at 50 East 98th Street. In the back of Aron Hall there are several basketball half-courts and a handball court that are available for student use.

Membership passes for the 92nd Street Y are available by signing up online. First time users should contact The Graduate office for instructions how to sign up. The "Y" has aerobic classes, basketball courts, a running track, handball courts, exercise rooms, a large swimming pool, and a weight room, which is equipped with free weights, Nautilus, bikes, rowers and a stair machine. The passes may only be used by ISMMS students (not their guests). The ISMMS ID card plus the pass gains admission to the "Y" for the use of the facilities.

Institutional Policies

Policy on Harassment
Statement of Purpose
Harassment has become an increasingly prominent national concern in the workplace and in academic institutions. ISMMS regards any behavior that is harassing, discriminatory, or abusive as a violation of the standards of conduct required of all persons associated with the academic mission of the institution. The ideal of American medical, graduate and postgraduate education is to create an environment that nurtures respect and collegiality between educator and student. In the teacher-student relationship, each party has certain legitimate expectations of the other. For example, the learner can expect that the teacher will provide instruction, guidance, inspiration, and leadership in learning. The teacher expects the learner to make an appropriate professional investment of energy and intellect to acquire the knowledge and skills necessary to become an effective physician or scientist. The social relationships required in the achievement of this academic ideal –

mentor, peer, professional, staff – require the active trust of partnership, not the dependence of authoritarian dominance and submission.

ISMMS is responsible for providing a work and academic environment free of sexual and other forms of harassment. The institution may pursue any complaint of harassment known to it in order to achieve this goal. A Grievance Committee (the "Committee") was established in 1992 to serve as an educational resource to the medical school community on issues relevant to harassment and to address complaints of sexual harassment and other forms of harassment and abuse as defined below. Complaints about implementation of school policies concerning appointment, promotion, and distribution of resources, including notification requirements associated with these policies, will not be addressed by this Committee unless they involve, in addition to those complaints, an allegation of harassment or abuse as defined below. The Committee (and an appointed Investigative and Hearing Board (the "Board") below, if any) may only consider complaints of harassment and abuse brought by any faculty member, medical or graduate student, house staff or postdoctoral fellow against any other such member of the School community. Complaints by and against other employees of ISMMS will be handled by other appropriate existing grievance mechanisms (e.g., those available through Human Resources). The Committee may act (at the Committee's discretion) before or after other action(s) an individual may take to exercise his/her rights both within and outside the institution.

The Committee will attempt, whenever possible, to emphasize mediation and conciliation. It will rely on discreet inquiry and trust in dealing with complaints that are brought for its consideration. Confidentiality will be maintained to the maximum extent possible consistent with the need to investigate complaints and with the requirements of the law. Full cooperation with the Committee and an appointed Board, if any, is required of all members of the community.

To ensure an environment in which education, work, research, and discussion are not corrupted by abuse, discrimination and harassment, the following statement has been created to educate members of the academic community about what constitutes harassment and about the mechanism for the receipt, consideration, and resolution of complaints.

Issues also may be brought up during the Steering Committee of the Student Council's monthly meetings with the Dean, the Dean for Medical Education, the Dean of the Graduate School and the Associate Deans. It must be emphasized that appropriate professional behavior is expected of all members of the School of Medicine and the Hospital. Harassment in any form will not be tolerated.

Consistent with Sections 6432 and 6436 of the New York State Education law, information concerning prevention of sexual assault, domestic violence, stalking, and bias crimes will be provided to all entering students. A Student Safety Committee meets annually with Security to address student safety concerns.

Definitions of Unacceptable Behavior:
Certain behaviors are inherently destructive to the relationships that are required in a community organized to provide medical and graduate education. Behaviors such as violence, sexual and other harassment, abuses of power and discrimination (based on race, color, religion, national origin, gender, sexual orientation, veteran status, age,

disability, citizenship, marital status, genetic predisposition or any other characteristic protected by law) will not be tolerated.

♦ Sexual Harassment is defined as unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature when:

e. Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic success.

f. Submission to or rejection of such conduct by an individual is used as a basis for employment or academic decisions affecting such an individual.

g. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive work or academic environment. Sexual harassment is a violation of institutional policy and of city, state and federal laws. Sexual harassment need not be intentional to violate this policy.

h. *Examples of sexual harassment include, but are not limited to:*

i. Sexual assault

ii. Inappropriate sexual advances, propositions or demands unwelcome physical contact

iii. Inappropriate persistent public statements or displays of sexually explicit or offensive material which is not legitimately related to employment duties, course content or research

iv. Threats or insinuations, which lead the victim to believe that acceptance or refusal of sexual favors, will affect his/her reputation, education, employment or advancement

v. Derogatory comments relating to gender or sexual orientation

In general, though not always, sexual harassment occurs in circumstances where the harasser has some form of power or authority over the life of the harassed. As such, sexual harassment does not fall within the range of personal private relationships. Although a variety of consensual sexual relationships are possible between medical supervisors and trainees, such relationships raise ethical concerns because of inherent inequalities in the status and power that supervisors wield in relation to trainees. Despite the consensual nature of the relationship, the potential for sexual exploitation exists. Even if no professional relationship currently exists between a supervisor and a trainee, entering into such a relationship could become problematic in light of the future possibility that the supervisor may unexpectedly assume a position of responsibility for the trainee.

♦ Discrimination is defined as actions on the part of an individual, group or institution that treat another individual or group differently because of race, color, national origin, gender, sexual orientation, religion, veteran status, age, disability, citizenship, marital status, genetic predisposition or any other characteristic protected by law. Discrimination or harassment on the basis of these characteristics violates federal, state, and city laws and is prohibited and covered by this policy.

◆ Abuse is defined, for purposes of this policy, as behavior that is viewed by society and by the academic community as exploitative or punishing without appropriate cause. It is particularly objectionable when it involves the abuse of authority. *Examples of behavior, which may be abusive, include, but are not limited to:*

    i. Habitual conduct or speech that creates an intimidating, demeaning, degrading, hostile, or otherwise seriously offensive working or educational environment

    j. Physical punishment

    k. Repeated episodes of verbal punishment (e.g. public humiliation, threats and intimidation) removal of privileges without appropriate cause

    l. Grading or evaluations used to punish rather than to evaluate objective performance assigning tasks solely for punishment rather than educational purposes

    m. Repeated demands to perform personal services outside job description intentional neglect or intentional lack of communication

    n. Requirements of individuals to perform unpleasant tasks that are entirely irrelevant to their education and employment that others are not also asked to perform

Constructive criticism, as part of the learning process, does not constitute harassment. To be most effective, negative feedback should be delivered in a private setting that fosters free discussion and behavioral change.

Office of the Ombudsperson

The Ombuds Office is a strictly confidential resource for all graduate and medical students, postdoctoral fellows, residents and faculty at ISMMS and throughout the Mount Sinai Health System. Dr. George W. Huntley, PhD, is the Ombuds for the Graduate School of Biomedical Sciences, serving graduate students in all programs and postdoctoral Fellows. This confidential office provides an impartial and informal venue for promoting fair and equitable conflict resolution for individuals or groups who have identified problems in their workplace, research labs or studies. We offer advice, facilitate meetings, help negotiate solutions and/or can provide information for referral or additional Institutional resources. For further information or to set up an appointment, please contact Dr. George W. Huntley, 212-824-8981 or george.huntley@mssm.edu; or see https://icahn.mssm.edu/about/ombuds-office.

Grievance Committee

Purview of the Committee:

The Committee is charged with addressing any complaint of harassment or abuse brought by any member of the faculty, medical or graduate student, house staff officer or postdoctoral research fellow against any other such member of the school community.

Composition of the Committee:

The Committee will consist of at least 22 members. Among these will be 2 with counseling experience, 2 medical students, 2 graduate students, 2 house staff, 2 faculty with administrative appointments, and 2 research postdoctoral fellows. Faculty members of the Committee will be representative of both basic science and clinical,

junior and senior faculty. Every effort will be made to have the Committee reflect the full diversity of the medical school population. The Chairperson of the Committee (the "Chairperson") shall be a faculty member with experience in counseling and who does not have an administrative appointment. All members of the Committee, including the Chairperson, will be appointed by the Dean after consultation with relevant groups in the School. Faculty will serve staggered 3-year renewable terms; students, postdoctoral fellows and house officers will serve renewable 1-year terms.

Grievance Procedures:

♦ Any member of the faculty, any medical or graduate student, house officer or postdoctoral research fellow who believes that he or she has been harassed or abused by any other such member of the School community may contact any member of the Committee or the Chairperson to seek advice, or may submit a written complaint to the Committee. The Committee member contacted can discuss the matter with the complainant, advise the complainant of his/her alternatives in pursuing the complaint, including, if the complainant agrees, (and where permitted by law), helping the complainant to resolve the complaint informally without revealing the complainant's name. Such help may include, but is not limited to, assisting the complainant in drafting a letter to the alleged offender asking that he/she stop the behavior, or coaching the complainant in preparation for a conversation with the alleged offender. The complainant may ask the Committee member to meet directly with the person accused to seek a resolution. If the complaint includes an alleged violation of law, the Committee member initially contacted must bring the complaint to the full Committee, the complaint must be fully documented and investigated, and a report made to the Dean.

♦ Upon request of the complainant to the Committee member originally contacted, or upon receipt of written complaints to the Committee, or when required by law, the complaint, with the names of the complainant, respondent and department withheld, will be discussed by the Committee at its next regular meeting.

♦ Following discussion of the complaint, the Committee has 2 options:

   o. It can decide that even if the allegation is true, it does not constitute harassment or abuse. The complainant will be notified of the finding and can be offered guidance and/or assistance in resolving the matter, or be referred to another, more appropriate venue, such as Human Resources, the Faculty Relations Committee or a Tenure Review Committee to pursue the complaint.

   p. It can decide that the allegation is sufficiently serious to warrant further investigation. Unless previously submitted, the complainant will be requested to submit a full written account of the complaint. Upon receipt of the written complaint, the Chairperson will appoint a five-member Board and two alternates.

♦ The Chairperson will serve as chair of the Board (or, in case of conflict of interest or other inability to serve, appoint another Committee member) and will appoint at least 4 additional individuals and at least 2 alternates to consider the complaint. Students, postdoctoral fellows, and house staff members are to be excluded from the Board in cases involving a faculty member alleging harassment by another faculty member. In cases involving a student, postdoctoral fellow or house staff (either as an accuser or accused), at least one of the members of the Board will be from the same group.

Each Board will have at least one member with experience in counseling, and at least 3 faculty.

♦ Upon selection of the Board, the complainant will be notified of the names of Board members, and will have 48 hours from receipt of such notification to challenge, in writing, any member for cause. The respondent will be notified that a complaint has been brought against him/her, the name of the complainant, the nature of the complaint, and the names of the members of the Board. The respondent shall also have 48 hours from receipt of notification to challenge, in writing, any member of the Board for cause. In the event of a challenge, the Chairperson will decide on the merits and replace Board members if necessary. In the event that the Chairperson is unable to appoint a sufficient number of members not disqualified for cause, the Dean will appoint additional members.

♦ The preliminary stages of the investigation may consist of meetings of one or more members of the Board with the complainant, respondent and other members of the community who might have relevant information. In the event that preliminary meetings have been held, all information obtained in these meetings will be shared with the entire Board. In all meetings, confidentiality will be stressed.

♦ The respondent will receive the full written complaint with the supporting documentation provided by the complainant to the Board and will be afforded two weeks to provide a written response. This response will be distributed to the Board and provided to the complainant.

♦ The Board will then hold one or more hearings, which the complainant and respondent will attend, either individually or together, along with any other witnesses the Board deems relevant to the complaint. At the hearing, each of the parties may be accompanied by an advisor, who is a member of the Mount Sinai community, but who is not a lawyer, and who will not function as an advocate during the hearing.

♦ At the close of the hearing(s), the Board will deliberate the findings without the presence of either the complainant or the respondent. Upon concluding its deliberations, the Board will vote on whether or not there has been a violation of this policy based on a majority vote. Recommendations for remedial actions will be discussed. A full report will be drafted, including the findings, vote and recommendations of the majority. It will then be submitted to the Dean. The Board's written report will include:

a. A determination that a violation of this policy did or did not take place
b. A listing of its findings of fact
c. A summary of the written submissions of the parties
d. A summary of testimony at the hearing
e. A summary of evidence gathered during the investigation
f. The conclusions it has drawn from this material
g. Its recommendations for action to be taken by the Dean.

The Board may recommend sanctions based on the severity of the offense.

Sanctions may include, but are not limited to, verbal reprimand, written reprimand, change in job responsibilities, suspension, discharge, and expulsion.

The Board and/or the Committee may, at their discretion, modify the Grievance Procedures depending on the nature of a particular complaint.

♦ Dean's Review - the Dean may accept or reject conclusions and/or recommendations of the Board. However, in the event the Dean does not accept either the Board's conclusions or its recommendations, he/she will meet with the Board to discuss the reasons for the rejection before recording a final decision on the matter. The Dean will convey his/her decision in writing to the complainant, respondent and the Board.

Protection from Retaliation:

All individuals involved in registering a complaint, serving as representatives for the complainant or respondent, as witnesses, or on the Committee will be free from any and all retaliation or reprisal or threats thereof. This principle applies with equal force after a complaint has been adjudicated. Upon submission of a complaint or threat of retaliation, the Committee will review the facts and recommend appropriate action.

Re-Evaluation of Procedures:

The Committee will review the grievance procedures periodically. Proposed changes, approved by a majority of the Committee, must be reviewed and approved by the Office of the General Counsel before being implemented.

Mistreatment and Other Unprofessional Behaviors Directed at Students and Trainees

Purpose and Scope

This policy clarifies expectations for educator actions and behaviors related to mistreatment and other unprofessional behavior directed at students and trainees. It details how learners can report mistreatment and unprofessional behaviors directed at them and how the Icahn School of Medicine at Mount Sinai (ISMMS) Undergraduate Medical Education (UME) program, Graduate Medical Education (GME) program, and Graduate School of Biomedical Sciences (GSBS) and the ISMMS affiliated hospitals (collectively "Mount Sinai") review and handle such reports. This policy also provides a process for reporting and recognizing positive behaviors and excellence in teaching or mentoring.

Mount Sinai is dedicated to providing its students, postdocs, residents, faculty, staff and patients with a learning environment of respect, dignity, inclusion, trust, and support that protects civil and professional discourse and is free from mistreatment and other unprofessional behaviors directed at students and trainees. Mount Sinai is also committed to ensuring an environment in which students and trainees feel free to report such behaviors without fear of retaliation.

Educators (defined broadly to include anyone in a teaching or mentoring role, including faculty, postdocs, residents, fellows, nurses, staff, and students) bear significant responsibility in creating and maintaining this environment. As role models and evaluators, educators must practice appropriate professional behavior toward, and in the presence of, students and trainees, who are particularly vulnerable given their dependent status.

Everyone at Mount Sinai deserves to experience a professional learning and working environment. These guidelines supplement the institutional policies on professional conduct, discrimination, harassment, grievances and sexual misconduct; will assist in

developing and maintaining optimal learning environments; and encourage educators, students and trainees alike to accept their responsibilities as representatives of ISMMS in their interactions with colleagues, patients and staff. This policy is closely aligned with our institution's Cultural Transformation efforts, the ISMMS Racism and Bias Initiative, and related policies.

Mistreatment and unprofessional behaviors directed at students and trainees interfere with the learning environment, adversely impact well-being and the trainee-mentor relationship, and have the potential for negatively impacting patient care and research. Inappropriate and unacceptable behaviors can promote an atmosphere in which mistreatment and unprofessional behaviors directed at students and trainees is accepted and perpetuated in medical and graduate education. Reports relating to the clinical setting will be reviewed in accordance with the principles detailed in this policy as part of the relevant hospital's quality assurance program.

Policy

While individuals might perceive behaviors differently, examples of unprofessional behaviors prohibited by this policy include, but are not limited to being:

- threatened with physical harm or physically harmed
- required to perform personal services
- subjected to offensive remarks related to gender, sexual orientation, national origin, race, color, religion, or any other category protected by law
- denied opportunities for training or rewards based upon membership in a protected group
- subjected to lower evaluations or grades solely because of membership in a protected group
- publicly embarrassed or humiliated
- subjected to unwanted sexual advances
- asked to exchange sexual favors for grades or other rewards
- subjected to the threat of revoking visa status for foreign nationals

Mount Sinai has a *zero-tolerance* policy towards unprofessional behaviors directed at students and trainees. Zero tolerance means that all reported incidents are scrutinized and result in an action plan that may include feedback, remediation, or disciplinary action. Although under certain circumstances unprofessional behavior directed at students and trainees may require disciplinary action, we recognize in such episodes an opportunity to develop, improve, and remediate behaviors that detract from a learning and working environment of which we can all be proud.

Procedure

Reporting and Consulting Mechanisms – Introduction

As discussed below, students and trainees may seek advice and guidance about how to handle mistreatment and unprofessional behaviors directed at them, and may formally report these incidents. There are several ways for learners to share concerns, including through real-time reporting mechanisms and mechanisms for periodic review (course evaluations or periodic surveys). All reports, whether made in real-time or in the course of periodic review, must be submitted via the Feedback Form or as specified below. Reports will be reviewed by the respective office that oversees the learner/trainee. The person submitting a real-time report can also designate whether he or she wants to have the concern addressed immediately or to delay the review until a period of time

has passed. Anonymous reports of mistreatment and unprofessional conduct may be submitted; however, Mount Sinai's ability to investigate an anonymous report may be limited. Reports of alleged mistreatment and unprofessional behavior directed at students and trainees will be reviewed and handled in a timely manner. Seeking advice or guidance is not considered filing a report. Reports may only be made through the Feedback Form referenced above or the avenues specified below.

Resources for Seeking Guidance or Reporting
Each of the resources identified below for the purposes of seeking guidance can assist with advice, advocacy, recommendation, or referral. Contact information for all resources is listed at the end of this policy.

- *Medical Students:*
  - Seeking Guidance:

    - Course Directors

    - Clerkship Directors

    - Faculty Advisors, instructors, mentors, and Deans
    - Title IX Coordinator.
    - Ombuds Office
    - Mistreatment Resource Panel or Class Representative to Panel.

  - Real Time Reporting:
    - Feedback Form
    - Office of Human Resources
    - Title IX Coordinator
    - Compliance Hotline or Compliance Online Form: Compliance Hotline reports are shared quarterly unless the report is determined to be time-sensitive.

  - Reporting for Aggregate Review:
    - Course evaluations
    - Clerkship evaluations
    - Compliance Hotline or Compliance Online Form: Compliance Hotline reports are shared quarterly unless the report is determined to be time-sensitive.

- *Graduate Students:*
  - Seeking Guidance:

    - Course or Program Directors.

    - Faculty Advisors, instructors, mentors, and Deans
    - Title IX Coordinator
    - GSBS Mistreatment Resource Panel
    - Office of Human Resources
    - Ombuds Office

  - Real Time Reporting:
    - Feedback Form

- - Office of Human Resources Title IX Coordinator
    - Compliance Hotline or Compliance Online Form: Compliance Hotline reports are shared quarterly unless the report is determined to be time-sensitive.

  - Reporting for aggregate review:
    - Course evaluations
    - Compliance Hotline or Compliance Online Form: Compliance Hotline reports are shared quarterly unless the report is determined to be time-sensitive.

- *Residents and Clinical Fellows:*
  - Seeking Guidance:

    - Chair
    - Program Director
    - Teaching faculty
    - Faculty Advisors
    - Chief Residents
    - Office of GME
    - Title IX Coordinator
    - Office of Human Resources
    - Ombuds Office
  - Real-time reporting:

    - Feedback Form
    - Office of Human Resources
    - Title IX Coordinator
    - Compliance Hotline or Compliance Online Form: Compliance Hotline reports are shared quarterly unless the report is determined to be time-sensitive.

  - Reporting for aggregate review:
    - The GME Office will review any negative evaluation of a faculty by a resident or fellow, including reviewing prior evaluations to determine if a pattern of unprofessional behavior exists. The GME Office will batch such evaluations over a period of six months or four evaluations, whichever occurs sooner, and review them with the Chair or Program Director to maintain anonymity.

    - Regular resident evaluations of faculty in New Innovations (the GME Office batches these evaluations with no less than three others to protect the anonymity of the trainee).

- *Postdoctoral Fellows:*
  - Seeking Guidance:
    - Faculty Director, Office of Postdoctoral Affairs

    - Program Manager, Office of Postdoctoral Affairs

    - Head of lab or trainee's direct supervisor in lab

    - Office of Human Resources

- GSBS Mistreatment Resource Panel

- Ombuds Office

  o Real-time reporting:

  - [Feedback Form](#)
  - Title IX Coordinator
  - [Office of Human Resources](#)
  - Compliance Hotline [Compliance Online Form](#): Compliance Hotline reports are shared quarterly unless the report is determined to be time-sensitive.

  o Reporting for aggregate review:
  - [Feedback Form](#)

Ombuds Office

The [Ombuds Office](#) is <u>not</u> a mechanism for reporting mistreatment and unprofessional behavior. Ombudspersons are available to provide neutral, confidential, and informal assistance with conflict resolution. The Ombuds Office follows best standards of practice that are necessary to promote fair and equitable outcomes. (https://icahn.mssm.edu/about/ombuds-office).

Triage/Investigation

A Committee on Student/Trainee Learning Environment overseeing UME, GSBS, GME and postdoctoral learning environments will meet quarterly. The Committee membership includes the Dean for GME, Dean for Medical Education, Dean of the Graduate School of Biomedical Sciences, Dean for Diversity Affairs, CWO, Dean for Gender Equity in Science and Medicine, Title IX Coordinator, Director of the Ombuds Office, Chair of the Physician's Wellness Committee, Mount Sinai Hospital Chief Medical Officer, Human Resources representative, student, postdoctoral fellow, and housestaff representatives

Graded Response Policy

Unprofessional behavior can range from a single, first-time episode that is not egregious, to persistent low-grade mistreating behavior, to incidents that require disciplinary action. Below are examples of possible graded responses, each of which will be tailored to the circumstances of the conduct at issue.

- Counseling
- Monitoring the behavior of the person accused of unprofessional behavior
- Mandatory meeting with a senior member of the Committee on Student/Trainee Learning Environment
- Formal letter to Chair and Dean of ISMMS, mandatory meeting with the Chair
- Formal letter to Chair and Dean of ISMMS, mandatory meeting with the Chair as well as the Dean for UME and/or Dean for GSBS and/or Dean for GME, and/or the CMO. May or may not require referral to the Physician Wellness Committee, Employee Health Service, or Student-Trainee Mental Health
- Disciplinary action, up to and including dismissal.

- Other appropriate action

Closing the Loop

Quarterly aggregated and de-identified reports will be sent to students, residents, postdoctoral fellows, ISMMS Dean, all chairs, CMOs, and hospital presidents, head of Nursing and Director of Social Work for the Health System.

ACGME and the AAMC Graduation Questionnaire data are also shared with students, residents, postdoctoral fellows, ISMMS Dean, all chairs, CMOs, and hospital presidents, head of Nursing, and Director of Social Work for the Health System.

When the Complainant's identity is known, a senior representative of the Committee on Student/Trainee Learning Environment will reach out to the Complainant at the conclusion of the process.

Protection for Retaliation

Retaliation against or intimidation of any individual who seeks advice, raises a concern, or reports unprofessional misconduct or mistreatment in good faith will not be tolerated. Anyone who deliberately makes a false accusation with the purpose of harming or retaliating against another member of the ISMMS community will be investigated and appropriately addressed.

Contact Information

Compliance:
    Hotline: 800-853-9212
    Compliance Online Form

Mistreatment Resource Panel:
    Graduate School: mrp@mssm.edu or contact Mistreatment Panel representative
        directly
    Medical Education: email studentmistreatmentpanel@mssm.edu or contact
        Mistreatment Panel class representative directly
    GME Office: 212-241-6694

Office of Human Resources:
    Office phone: 212-241-4097

Ombuds Office: 212-659-8848

Title IX Coordinator:
    Office: 212-241-0089
    Cell: 646-245-5934
    TitleIX@mssm.edu
    sandra.masur@mssm.edu

Affirmative Action

It is the policy of ISMMS that all decisions regarding educational and employment opportunities and performance are made on the basis of merit and without discrimination because of race, gender, color, creed, age, religion, national origin, citizenship, disability, veteran status, marital status, sexual orientation, genetic predisposition, or any other characteristic protected by law. Sexual harassment is defined as a form of sex discrimination and, therefore, any sexual harassment at the school will constitute a violation of the medical school's nondiscrimination policy.

In keeping with our continuing efforts to achieve a broadening of the representation of women and minority groups throughout the medical school, we have:

♦ Developed an Affirmative Action Program, which details actions designed to realize the School's commitment to equal educational and employment opportunities.

♦ Insured our compliance with Federal, State and Local laws and regulations implementing equal opportunity objectives by meeting the spirit as well as the letter of the law and contractual requirements.

We cannot over-emphasize our commitment to the realization of these goals. Every decision affecting faculty, house staff, fellows, graduate students, employees, and medical students and other members of the medical school community rests solely on demonstrably valid criteria of merit, competence and experience.

Additional information concerning Mount Sinai's Affirmative Action Program, its interpretation and/or application may be obtained from the Affirmative Action Office located at 1245 Park Avenue, Ground Floor.

Alcohol and Drugs

The following statement describes ISMMS's policy regarding substance abuse for all employees, which include faculty, administration, house staff, students, graduate students, fellows, bargaining and non- bargaining unit employees. The school has a significant interest in ensuring that the educational and work environment is free from the hazards to patients, employees, students, and visitors that are created due to the unauthorized use of alcohol, drugs, or controlled substances.

The illegal sale, manufacture, distribution, or unauthorized use of drugs or controlled substances off-duty whether on or off medical school premises or reporting to classes or clerkships under the influence of un-authorized drugs or controlled substances may constitute grounds for immediate dismissal.

The unauthorized use or possession of alcoholic beverages on medical school premises or reporting to School under the influence of alcohol also may constitute grounds for immediate dismissal.

The school may in its discretion take appropriate disciplinary action up to and including dismissal or termination from employment against anyone who has violated the above rules.

Any employee or student who is suspected of being under the influence of any alcoholic beverage or drug while on duty and who refuses to be medically evaluated or to release the results of such evaluation to the medical school (as employer) or appropriate administrative officer of the School will be relieved from duty and will be subject to disciplinary action up to and including dismissal.

The Drug-Free Workplace Act of 1988 requires ISMMS, as a Federal grant recipient and contractor, to certify that it will provide a drug-free workplace. This is accomplished by providing to each employee or student engaged in a federal grant or contract, a copy of the School's Drug-Free Workplace policy and statement, and requiring that as a condition of employment under such a grant or contract the employee will:

♦ Abide by the terms of this Statement; and

♦ Notify the Director of Human Resources and Labor Relations or his/her designee of any criminal drug statute conviction for a violation occurring in the workplace no later than five (5) days after such conviction.

A Drug-Free Awareness Program has been established to inform all employees about the dangers of drug abuse in the workplace, The School's policy of maintaining a drug-free workplace, the available drug counseling, rehabilitation and employee assistance programs, and the potential penalties for drug abuse violations.

The Employee Assistance Program (EAP) offers professional guidance counseling and a referral service for substance abuse, as well as other concerns, to students, employees and their immediate families free of charge. For confidential information, contact EAP at (212) 241-8937.

Alcohol Policy – Levinson Student Center

The policy of the School of Medicine regarding alcoholic beverages in the Patricia and Robert Levinson Student Center is to maximize student utilization of the Center while assuring that clear policies are in place. Alcohol is permitted in the Student Center at events sponsored by student organizations or Departments within ISMMS under the following circumstances:

- A student-run organization that is recognized by Student Council is sponsoring the event.

- No student or guest under the age of 21 will be served or permitted to consume any alcoholic beverage. Alcoholic beverages are not sold at the event.

- Alcohol must not be taken out of the Student Center into other areas of Mount Sinai.

- Serving alcoholic beverages is always in the context of serving food and non-alcoholic beverages. A specific student (or students) is identified as responsible for the event.

- The responsible student will monitor the event so that anyone who is clearly intoxicated is not served any more alcohol.

- If a person has become intoxicated, steps should be taken to try and help the individual sober up prior to leaving the party.

- The responsible student monitoring the event must make certain that any person that has become intoxicated will not be allowed to drive. Cab fare should be provided, if necessary, or an escort should be provided to ensure that the person gets home safely.

- The Administrative Director of Student Affairs is notified in writing about the event at least one week in advance with the clear statement that alcoholic beverages are planned as part of the food and beverage service serving as the application for a permit.

- Funding for alcoholic beverages will not come from tuition resources or the Department of Medical Education budget.

There MUST be a written permission from the Event Coordinator of Student Affairs prior to the event. The person(s) responsible for the event must have the permit with them at the event. The Security Department will be notified that alcohol will be served at the event. Under no other circumstances should alcoholic beverages be used or available in the Levinson Student Center. Please contact the Event Coordinator of Student Affairs with any questions.

Drug Testing

All incoming students are required to undergo drug/alcohol screening. Subsequently, drug/alcohol testing may be requested of any student, at any time, including:

- When concerns about substance use issues arise.
- When any student returns from a leave of any kind.
- When a student self-reports a problem.

Failure to undergo testing as requested will result in dismissal from the school. A positive test will result in disciplinary action, which may include dismissal from the school.

Family Education Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (FERPA) of 1974 and its subsequent amendments afford students certain rights with respect to their educational records. Copies of this Act are available in the Office of the Registrar.

The Family Educational Rights and Privacy Act of 1974 and its subsequent amendments afford students certain rights with respect to their educational records. As detailed below, students have the right to:

♦ Inspect and review their education records.

♦ Seek amendment of their education records if they believe them to be inaccurate, misleading, or otherwise in violation of their privacy rights.

♦ Consent to certain disclosures of personally identifiable information contained in their education records.

♦ File complaints with the Department of Education concerning any alleged failure to comply with FERPA's requirements.

Student Access Rights

All currently registered and former students of ISMMS have the right to review and inspect their official education records at the School (including, for example, admissions and academic records prepared and maintained by the Registrar) in accordance with these rules. Students who wish to review their records should make an appointment with the Registrar. Access will be granted within 45 days from the receipt of the written request to inspect records.

Students have a right to a response to a reasonable request for explanations and interpretations of the student's educational records. Students seeking explanations or interpretations of their educational record may make an appointment with the Associate Dean of the Graduate School or Associate Dean for Student Affairs-Medical Education, as appropriate based on the student's program. If the Associate Dean is unable to provide a satisfactory explanation, the student will be referred to the Dean for Graduate Education or Dean for Medical Education, as appropriate.

Students may not copy records unless the failure to produce copies would prevent the student from exercising his/her right to inspect and review records. A copying fee will be charged.

♦ Limitation on Access – The Act limits a student's right to access information contained in his/her education records. Accordingly, the School need not permit students to view:

q. Financial records, including information regarding the student's parent(s), such as parental tax forms and other parental records submitted in support of a student's financial aid application or claim of New York residence.

r. Confidential statements and letters of recommendation placed in a student's file prior to January 1, 1975, provided that they are used for the purpose for which they were specifically intended.

s. Confidential letters of recommendation placed in the student's file after January 1, 1975, if:

i. The student has waived in a signed writing his/her right to inspect and review those letters (see below); and

    ii. The letters are related to the student's (i) admission to an educational institution; (ii) application for employment; or (iii) receipt of an honor or honorary recognition

t. Records of instructional, administrative and supervisory staff which are in the sole possession of such personnel

u. Records of professional and paraprofessional personnel which are created, maintained and used solely for the purpose of treatment and are disclosed only to individuals providing the treatment. The student has the right, however, to have such records reviewed by an appropriate professional of his/her choice.

v. ISMMS does not require students to waive their right of access to educational records as a condition for admission to the School, for receipt of financial aid or other services or benefits from the School, or for any other purpose. Under certain circumstances, however, a student may wish to waive his/her right of access to confidential letters of recommendation. A student may do so by signing a waiver form. In this event, the student will be notified upon request of the names of persons making such recommendations and the recommendations will be used solely for the purpose for which they are intended. A waiver may be revoked in writing with respect to actions occurring after the revocation. Waiver forms are available in the Registrar's Office

w. *Amendments and Hearing Rights* – If a student believes that his/her education records contain information that is inaccurate, misleading, or in violation of the student's rights of privacy, he or she may ask the School to amend the record. Requests for amendments shall be directed to the Registrar, who will respond to the request within a reasonable time. If the request is denied, the student will be notified of his/her right to appeal that decision as specified below.

x. When the request for an amendment is denied, the student may request a hearing to challenge the content of the record on the grounds that the information contained in the record is inaccurate, misleading or in violation of the student's privacy rights. Requests for hearing must be submitted in writing to the Associate Dean for Graduate Education or the Associate Dean for Student Affairs – Medical Education (as appropriate) within 10 days of receiving the Registrar's response denying a request for amendment as discussed above.

♦ *Hearing* –

y. The hearing will be held before the Dean for Graduate Education or the Dean for Medical Education, as appropriate.

z. A hearing will be held within a reasonable time after receipt of the request for hearing. The student will be given notice of the date, time, and place of the hearing

aa. The student shall have a full and fair opportunity to present evidence relevant to show that the information at issue is inaccurate, misleading, or violates the student's privacy rights. The student may be assisted or represented by an individual of his/her choice, including an attorney. The role of attorneys, however, may be limited at the discretion of the Dean hearing the case

bb. The decision, which shall include a summary of the evidence presented at the hearing and reasons for the decision, shall be rendered in writing within 15

business-days after the conclusion of the hearing. This hearing will relate only to whether the student's record is inaccurate, misleading, or otherwise in violation of the privacy of the student, with the decision based solely on evidence presented at this hearing. The hearing cannot determine whether a higher grade should have been assigned.

If it is determined after a hearing that the record in question should be amended, the Registrar will take appropriate steps to amend the record and will so notify the student in writing. If it is determined that the record is not inaccurate, misleading, or otherwise in violation of the student's privacy rights, the student shall be informed of his/her right to place a statement in the record commenting on the contested information in the record or stating why the student disagrees with the School's decision not to amend the record. This statement will be maintained as part of the record and will be disclosed whenever the part of the record to which the statement relates is disclosed.

All students have the right to file complaints to the Senior Director of Enrollment Services and Student Information concerning alleged failures by the School to comply with the requirements of the Act.

♦ *Release of Personally Identifiable Information –*

cc. *Disclosures with consent*

 i. To student shall provide a signed and dated written consent form before the School will disclose personally identifiable information from the student's educational record. The consent must (i) specify the records that may be disclosed; (ii) state the purpose of the disclosure; and (iii) identify the party or class of parties to whom disclosure may be made.

 ii. When a disclosure with consent is made the School will, upon the student's request, give him/her a copy of the records disclosed.

dd. *Disclosures without consent* - The Act permits the School to disclose personally identifiable information from the student's education records without the student's consent under any one of the following circumstances:

 i. To an official or duly constituted committee of ISMMS that requires access in connection with legitimate educational interests, including, but not limited to matters of financial aid, promotion, or consideration for election to the Lambda Chapter or Alpha Omega Alpha or other honors.

 ii. To officials of another school where the student seeks or intends to enroll. Copies of records will be made available upon request.

 iii. Disclosures in connection with financial aid for which the student has applied or which the student has received, if the information is necessary for such purposes as (i) to determine eligibility or conditions for the aid; (ii) to determine the amount of the aid; or (iii) to enforce terms and conditions of federal, state or private regulations governing such aid.

iv. Pursuant to a judicial order or valid subpoena. In certain cases, specified by law, the School will make a reasonable effort to notify the student of the order or subpoena in advance of the compliance therewith.

v. In connection with certain types of litigation between the School and the student.

vi. To parents of a dependent child as defined by the Internal Revenue Code.

vii. In a health or safety emergency, where disclosure is necessary to protect the health or safety of the student or other individuals or as otherwise provided by FERPA.

viii. In a directory, as set forth below.

ix. To an alleged victim of a crime of violence, where the information disclosed is the final results of School disciplinary proceedings with respect to the crime or offense.

x. Disclosure in connection with certain disciplinary proceedings.

xi. Certain disclosures to parents of a student regarding the student's violation of any federal, state or local law, or any rule or School policy governing use or possession of alcohol or controlled substances.

xii. To authorized federal, state or local officials and to accrediting bodies of the School.

The School will maintain a record of each request for access and each disclosure of personally identifiable information from educational records as required by FERPA regulations.

The School will make a reasonable attempt to notify the student of disclosures made pursuant to Section 1(a) and 1(c-l) above. Upon request, the School will give the student a copy of the record disclosed. A student has a right to a hearing to challenge certain disclosures consistent with the procedures outlined above.

♦ *Directory Information* –

ISMMS has designated the following information from a student's education record as "directory information," which may be disclosed under FERPA without the student's permission:

a. Name
b. Student Address Student Phone Number
c. Degree Program(s) & Major Field of Study Degree(s) Earned and Date(s)
d. Dates of Attendance
e. Full-/Part-Time Enrollment Status
f. Parent's Names
g. Parent's Address Parent's Phone Number
h. Academic Awards and Honors
i. Icahn School of Medicine email address Prior Postsecondary Institution(s) Attended Photograph/Digitized Image

j. Participation in officially recognized Icahn School of Medicine activities

Students' contact information is included in the student directory and published through BlackBoard.

♦ *Preventing Disclosure of Directory Information*

ISMMS and the Office of the Registrar will exercise discretion in the release of all directory information. In addition, ISMMS does not release or sell directory information to any outside entity for commercial, marketing or solicitation purposes.

♦ *Records Kept by the Institution –*

ee. Admissions Files

    i. Application form
    ii. Supplemental form
    iii. Transcripts
    iv. Letters of Recommendation
    v. Acceptance Letters
    vi. Medical College Admission Test Scores

b. Academic Files (Registrar)

    i. Transcript of grades at Icahn School of Medicine Course, clerkship, elective and other evaluations
    ii. Qualifying Exam Outcome
    iii. Thesis Documentation
    iv. National Board Scores Shelf Scores
    v. Dean's Letter
    vi. Correspondence and internal communications pertaining to academic and other matters.

c. Financial Aid Records

    i. Application
    ii. FAFSA Forms
    iii. CSS Profile Forms
    iv. Student and Parent(s) Tax and Income Information
    v. Proof of Citizenship
    vi. Draft Status
    vii. Drug Conviction Information (if any)

d. Bursar Records

    i. Record of Receipt of all Loans and Scholarships
    ii. Record of cash paid and date paid

Academic Records are only those that pertain to official files kept in perpetuity in the Office of the Registrar.

♦ Information Sharing and Confidentiality –

Icahn School of Medicine recognizes that confidentiality is very important to students. It is a basic right and privilege and we believe that the issue of confidentiality is part of the trust that we expect and value among students, teachers and administrative personnel. The following clarifies the protection of information related to students:

♦ Information Sharing and Confidentiality –

  e. *Health Information*

    i. All student health information is protected information. There should be no sharing of information except as provided by HIPAA for the care of the student as patient. Teachers, administrative personnel and deans may not receive health information from students' health care providers except as provided by HIPAA.

    ii. There is certain information that hospitals and health care facilities require as a condition of employment. That information includes PPD, immunizations, and in some cases evidence of toxicology results. Students will be informed that that information is being shared as obtained by Student Health as composite data (we only know who does not comply with completing this information and then would deny clinical privileges but do not know the exact results).

    iii. Toxicology screening is an institutional requirement. Any positive result will be reviewed by senior administrative representatives of the Deans (Graduate School and School of Medicine). The school may require a toxicology screen from any student at any time without need for a stated reason. Failure to comply with toxicology testing in the timeframe required will result in dismissal from school.

    iv. There are times when the Administration may ask a student to comply with an Administrative Psychiatric evaluation. When it is decided that such an evaluation is necessary, the student will be informed and will be apprised of the list of questions that will be sent to an administrative evaluator (usually a psychiatrist). Students do not have the option to decline such an evaluation when required and would be dismissed from school if they fail to comply. The information referred back to the School will be discussed with the student and will remain in the student's file which can only be opened by a Dean or his official representative or if requested as a legal document.

  f. *Academic Information*

    Academic information is maintained by the School Registrar.

    i. Students have access to their academic file for review but will not be given copies of their file.

    ii. The Registrar will not permit dissemination of the file information without the signed consent of a student unless required by law in accordance with FERPA Policy.

iii. Current teachers and clerkship directors do not have access to the student file, only deans and student affairs personnel in the School of Medicine may access the file.

iv. Any student wishing to review their file may do so in the presence of the Registrar or Dean's Designee coordinated through the Registrar.

g. *Other information*

If a student seeks counsel from a director, dean, teacher or ombudsman that information should remain confidential between the student and that individual.

i. Any plan to discuss information (e.g., Office of Student Affairs Representative or Program Director with one of the Dean's) should be with the student's knowledge and consent.

ii. Exceptions to this confidentiality include concerns about the safety of the student, someone related to the student, or the student's dependent. Safety concerns include suicidal ideation, homicidal ideation, harming another individual substance dependency, behavioral or health concerns that may affect the student or others.

Campus-Wide Policies, Regulations, and Requirements

Introduction

In accordance with the requirements of the Education Law of the State of New York, the Trustees of ISMMS have adopted rules for the maintenance of order and have established a program for their enforcement:

Rules of Conduct

- All members of the School community, including faculty, students, organizations, members of the staff of the School, and all visitors and other licensees and invitees, are expected to obey all national, state and local laws.

- All members of the School community are prohibited from conduct which is proximate cause of or does unreasonably and unduly impede, obstruct or interfere with the orderly and continuous administration and operation of the School in the use of its facilities and the achievement of its purposes as an educational institution, or in its rights as a campus proprietor. Such conduct shall include, but is not limited to, that which is the actual or proximate cause of any of the following:

h. Unreasonable interference with the rights of others;

i. Intentional injury to School property;

j. Unauthorized occupancy of classrooms, laboratories, libraries, faculty and administrative offices, patient care facilities, auditoriums, public halls and stairways, recreational areas and any other facilities used by the School (unauthorized occupancy being defined as failure to vacate any such facility when duly requested by the Dean, an Associate Dean, Assistant Dean, Hospital Administrator of similar responsibility or chair of a department of the School);

k. Malicious use of or intentional damage to personal property, including records, papers and writings of any member of the School community;

l. Any action or situation which recklessly or intentionally endangers the mental or physical health or involves the forced consumption of liquor or drugs for the purpose of initiation into or affiliation with any organization

Violations of these policies and regulations by students shall be referred to the Dean of the Graduate School. Students in violation may be expelled in addition to any other criminal or civil penalties. .

Nothing contained in any of the foregoing Rules and Regulations is intended to nor shall it be construed to limit or restrict freedom of speech or of peaceful assembly, or other individual rights guaranteed by the Constitution.

Student Behavior
The administration and faculty of the School are committed to providing a safe and healthy learning environment for all students. Students should conduct themselves appropriately everywhere on the campus of ISMMS, and at affiliated institutions. Appropriate behavior is mandatory when participating in patient care or attending any functions at which patients may be present. In small group seminars, as well as during clinical activities, students are evaluated not only on their fund of knowledge and ability to use this knowledge but also on their responsibility, dependability, reliability, maturity, motivation, attitude, honesty, integrity, and ability to relate and interact effectively with others.

Equally important, however, is the realization that one's responsibilities do not end with individual behavior but also include not tolerating inappropriate behavior among others. While formal mechanisms, outlined in other sections, exist to provide due process for any specific allegations of inappropriate behavior, general issues should be able to be discussed freely among peers, faculty, and administration. Concerns requiring confidentiality should be discussed with the Dean of Graduate School, individual faculty advisors, or through the School's Ombudsman Program.

Faculty, Staff, and Student Relations
Just as students are expected to behave in an appropriate and professional manner at all times, so also are faculty, staff, and other employees. Any allegations concerning harassment, abuse, or inappropriate professional behavior should be brought directly to the attention of one of the Associate Deans of the Graduate School or to a member of the Harassment Committee and Grievance Board.

The Executive Faculty has approved the following statement of principles concerning interactions among faculty, house staff, and students.

All interpersonal interactions at ISMMS will be conducted in an atmosphere of respect and concern for the dignity of every individual. Under no circumstances will patients, students, faculty, or staff of Mount Sinai be treated, spoken to, or spoken about in a demeaning manner. Insulting language or behavior must not be tolerated. Faculty, house staff, and students are encouraged to speak up directly and immediately against unacceptable behavior or speech. If a student feels that it would be unwise to pursue such a matter directly, s/he should discuss the issue promptly with an appropriate academic supervisor, administrative supervisor, or dean.

Following are recommendations regarding the implementation of these principles:

- Chairs of all departments will address these issues at a departmental administrative meeting or grand rounds every year.

- Directors of training and course directors are encouraged to discuss (in a non-threatening format), with faculty and house staff, the etiology of inappropriate behavior and engage their collaboration in developing and implementing improvements.

- Directors of training and course directors will ask for student evaluations of this aspect of their experience as part of their evaluations with every group of students.

- Faculty and house staff will be advised that while appropriate personal behavior is absolutely necessary, it is insufficient. It is also required that inappropriate behavior or language on the part of others must not go without comment.

- The Dean will issue an advisory regarding this policy to all faculty, house staff, and students. New members of the faculty, house staff and student body will be given copies of this advisory.

- The Executive Curriculum Committee will periodically assess students' experiences to gauge the effectiveness of this initiative.

ISMMS Social Media Guideline

Social media are internet-based applications, which support and promote the exchange of user-developed content. Some current examples include Facebook, Twitter, Wikipedia, and YouTube. Posting personal images, experiences and information on these kinds of public sites poses a set of unique challenges for all members of the Mount Sinai community, including employees, faculty, house staff, fellows, volunteers and students (collectively "Personnel"). All personnel have responsibility to the institution regardless of where or when they post something that may reflect poorly on Mount Sinai. Mount Sinai is committed to supporting your right to interact knowledgeably and socially; however, these electronic interactions have a potential impact on patients, colleagues, Mount Sinai, and future employers' opinions of you. The principal aim of this Guideline is to identify your responsibilities to Mount Sinai in relation to social media and to help you represent yourself and Mount Sinai in a responsible and professional manner.

The full Guideline may be found in the Faculty Handbook at the following URL:

http://icahn.mssm.edu/about-us/services-and-resources/faculty-resources/handbooks-and-policies/faculty-handbook/institutional-policies/social-media-guidelines

Acceptable Use of Technology Policy

Acceptable Use of Technology Policy (Updated April 6th, 2015) v.3.5

Overview
ISMMS expects that all persons who use school computing hardware, software, networking services, or any property related or ancillary to the use of these facilities will abide by the following policy statement:

School information technology resources are provided with the expectation that the school community will use them in a spirit of mutual cooperation. Resources are limited and must be shared. Everyone will benefit if users avoid activities that cause problems for others who use the same system.

Any access to or sharing of protected or confidential information must comply with Mount Sinai Health System policies, including HIPAA, the Family Education Rights and Privacy Act, and the appropriate use of technology guidelines defined in this document. Remember that compliance begins by being aware whether your communication could

contain protected or other confidential data and by taking the appropriate steps to secure such content. Your responsibilities within the Mount Sinai Health System extend to a variety of other forms of daily communication, including public areas, telephone use, texting, and social media technologies.

All hardware, software, and related services are supplied by the school for the sole purpose of supplementing and reinforcing the school's educational, research, and clinical goals as set forth in the student and faculty handbooks and other mission statements of the school. These documents may be found elsewhere

Use of Hardware and Software
We expect that all students, faculty, and employees will use only the provided hardware, software, or services which they are authorized to use.

All hardware devices using school or hospital email, file, or collaboration services, including personal laptops, must be encrypted, while AirWatch Mobile Device Management (MDM) must be enabled for personal smartphones. Thumb drives or any storage devices that contain protected health information (PHI) or other confidential information must also be encrypted. For more information or support, please contact the Academic IT Support Center (1.212.241.7091, email: ASCIT@mssm.edu).

♦ Individuals may not extend their use of the resources described for any purpose beyond their intended use or beyond those activities sanctioned in school policy statements.

♦ In particular, no one may use hardware and software:

♦ To acquire personal profit or gain

♦ To harass, threaten, or otherwise invade the privacy of others

♦ To initiate or forward email chain letters

♦ To cause breaches or disruptions of computer, network, or telecommunications systems

♦ To initiate activities which unduly consume computing or network resources

♦ To transmit sensitive or proprietary information to unauthorized persons or parties

It is a specific violation of these guidelines to provide account passwords to individuals who are not the owners of the accounts or to obtain passwords to or use others' accounts.

It is against this policy to copy or reproduce any licensed software or media, except as expressly permitted by the license. Unauthorized use or distribution of software, media, or digital content is a violation of this policy.

Individuals who violate the aims of this policy will be subject to disciplinary action or to referral to law enforcement authorities without prior notification of those who have sent or received such messages. ISMMS IT personnel are authorized to monitor suspected violations and to examine items stored on any school storage medium by individuals suspected of violating this policy.

Web and Data Storage

Access to the Internet is provided as a communications tool and an information resource to facilitate the performance of job- or academic-related functions. This policy applies to any Internet service accessed on or from a Mount Sinai Health System facility, provided by the school, accessed using school-owned equipment, or used in a manner that identifies the individual with the ISMMS or Mount Sinai Health System. The Mount Sinai Health System reserves the right to review any information, files, or communications sent, stored, or received on its computer systems.

Inappropriate use of the Internet may result in loss of access privileges and in disciplinary action up to and including dismissal. Students, faculty, and employees are prohibited from using Mount Sinai Health System-provided Internet services in connection with any of the following activities:

♦ Engaging in illegal, fraudulent, or malicious conduct

♦ Working on behalf of organizations without a professional or business affiliation with the Mount Sinai Health System

♦ Sending, receiving, or storing offensive, obscene, or defamatory materials

♦ Obtaining unauthorized access to any computer system

♦ Using another individual's account or identity without explicit, written authorization

♦ Attempting to test, circumvent, or defeat the security or crediting systems of the Mount Sinai Health System or any other organization without prior authorization from Information Management Systems and Services/Security and Corporate Data Administration (IMSS/SACDA) or ISMMS IT

♦ Any use or activity that impedes Mount Sinai Health System operations

Cloud Storage

Users of school-provided cloud services, such as Google Apps for Education and Box.com, have the ability to share files with colleagues within or outside the Mount Sinai Health System for academic collaboration purposes. Students, faculty, and employees must not, under any circumstances, share unencrypted files containing PHI or other confidential information with colleagues outside the Mount Sinai Health System. As mentioned, compliance begins by being aware of the data that one is generating and by following appropriate steps to secure such content if it contains protected or other confidential information.

Email and Collaboration Technology Usage

Email and collaboration technologies, including Google Apps for Education, are provided to assist and facilitate scholarly communication and collaboration. These technologies are provided for official business and educational use in the course of assigned duties. The school reserves the right to access and disclose all messages sent over its electronic mail systems for the purposes of monitoring security breaches and investigating inappropriate usage as defined in this policy. The Mount Sinai Health System is obligated to comply with legal subpoenas, court orders, and similar lawful requests from external regulators or authorities.

Inappropriate use of email and/or collaboration technology may result in loss of access privileges and disciplinary action up to and including dismissal. Inappropriate use includes but is not limited to:

♦ Unauthorized attempts to access others' email accounts

♦ Transmission of protected and/or confidential information to unauthorized persons or other organizations

♦ Transmission of obscene or harassing messages to any other individual

♦ Transmission of offensive material, solicitations, or proselytization for commercial ventures, religious or political causes, or other non-job-related solicitations

♦ Any illegal, unethical, or other activity that could adversely affect the Mount Sinai Health System

Protected Health Information, FERPA, and Other Confidential Information
All hardware devices, including bring your own devices and personal laptops, on which school email, file, or collaboration

services are used must be encrypted. AirWatch MDM must be enabled for personal smartphones. Thumb drives or any storage devices that contain PHI data must also be encrypted. For more information or support, please contact the Academic IT Support Center (1.212.241.7091, email: ASCIT@mssm.edu). Students, faculty, and employees are responsible for ensuring that their devices are password enabled and encrypted.

The key points of the above policies are as follows:

♦ You may use only your ISMMS email account to communicate protected or confidential information. Emails containing PHI, financial information, or other confidential ISMMS information and/or social security numbers may not be sent or redirected to non-ISMMS email accounts.

♦ The minimum necessary amount of PHI should be disclosed via email. When at all possible, use the Medical Record number, rather than the patient name, as the patient identifier.

♦ Messages that leave the Mount Sinai Health System network and contain PHI or other confidential information must be encrypted using the ISMMS IT-approved solution described as follows.

♦ Messages sent within the Mount Sinai Health System network are automatically encrypted.

♦ Encryption will not prevent misdirection or unintended forwarding of a previous string of emails. Extreme caution must be exercised to prevent such risks. Be aware of the content that you generate.

Secure Messaging and Encryption
In addition to ensuring that your device is encrypted (see above), you must select an email encryption option if you are sending PHI or other confidential information to an external recipient.

Activating the email encryption option:

♦ For Microsoft Exchange users, include the word [secure] within square brackets in the subject line of the message. The recipient will be asked to self-enroll when the message is opened. The secure send mechanism can be used in any email client (e.g., Outlook, Outlook Web Access, smartphone).

♦ For Google Apps users, install the Virtru add-on to the browser and/or device (go to http://www.virtru.com for instructions). When composing a message, select the "Virtru Protection is on" option.

Spam and Inappropriate Use of Messaging Tools
ISMMS systems, including email, are intended for official business use. Inappropriate use may result in disciplinary actions and loss of access privileges. Unsolicited mass emailing of materials not related to school business is considered spam and may result in the loss of access privileges.

Student Privacy, Secure Email, and Phishing
Please remember to take care when opening attachments or following links contained in email messages. Verify with the sender of the message if you receive an unexpected attachment or an email that contains suspicious links. Be especially cautious of emails that have been quarantined. Unless a quarantined message is correspondence that you are expecting, do not release the email.

Please also take care with any messages that ask you to provide private information (e.g., birthdays, social security number, credit card numbers, user account passwords). These messages might actually be phishing attempts by persons pretending to be from legitimate companies or organizations. If you have any doubts, contact the party requesting the information for confirmation. Users should not rely on the contact information contained in the email but use the contact information typically found on the company website or on the back of a bank or credit card.

Attestation
I understand that by receiving ISMMS network and Internet access to email and library resources, I agree to abide by all institutional policies related to use of the ISMMS systems to access the Internet, email, and all other computer and network resources.

I acknowledge receipt of these policies and understand that they might be changed, and I will abide by these changes as reflected on the ISMMS website or received via other forms of communication.

I understand that I am responsible for all actions performed from my computer account. I further understand that, in the course of my work, I may be given or otherwise gain access to confidential or privileged information related to this or other institutions, ISMMS students or employees, or other individuals or groups. I will respect the confidentiality of all information to which I have access and neither divulge information without appropriate consent nor seek to obtain access to confidential information to which I am not entitled.

For more information or support, please contact the Academic IT Support Center (1.212.241.7091, email: ASCIT@mssm.edu)

ISMMS Policy on Business Conflicts of Interest

Mount Sinai Medical Center has an obligation to ensure that its trustees, faculty, employees and other staff and students adhere to the highest standards of ethical conduct free from any improper external influence or any appearance of impropriety. Situations can occur in which an independent observer might reasonably conclude that the potential for individual or institutional conflict could influence the manner in which individuals carry out their responsibilities or the decisions made by the institution. Even in the absence of an actual conflict of interest, such situations may require actions to minimize the appearance of a conflict.

At the same time, Mount Sinai understands that such individuals and their close family members may have relationships that could raise perceived or actual conflicts of interest, but could benefit Mount Sinai if carefully examined and properly managed.

In order to safeguard the integrity of both Mount Sinai and its constituents, Mount Sinai has adopted a rigorous conflicts policy predicated on full disclosure and appropriate management of any possible conflict of interest. This Policy on Business Conflicts of Interest (the "Policy") identifies those persons or entities covered by this Policy, sets out the requirements for disclosing potential business conflicts of interest, and specifies the procedures for reviewing such disclosures and determining what measures, if any, should be instituted to manage the conflict.

This Policy is intended to cover conflicts that arise out of business relationships. Mount Sinai has related policies that cover other types of conflicts, such as Mount Sinai's Policy on Financial Conflicts of Interest in Research and its Policy regarding Financial Relationships with Outside Entities.

https://icahn.mssm.edu/about/faculty-resources/handbook/institutional/financial-coi

Student Intellectual Property

If the intellectual property was developed by an employee of Mount Sinai or invented at Mount Sinai facilities under the supervision of Mount Sinai personnel, the intellectual property is owned by Mount Sinai. Each inventor must assign his or her rights in the intellectual property to Mount Sinai. This includes all faculty, staff, fellows, trainees, post-docs, and graduate students who have an appointment at Mount Sinai. Information on Mount Sinai's IP policy can be found here.

CHAPTER 2 – Introduction to the Programs of Study

The Graduate School of Biomedical Sciences is an integral part of ISMMS. In recent years ISMMS has significantly expanded its clinical and basic science research faculties with concomitant increases in research space and shared research facilities. Coinciding with these exciting changes, we are in a phase of expansion of the Graduate School with increased training areas, degree programs, and student populations. This growth will sustain our continuing mission to discover and apply these new discoveries toward the development of insights into human disease, of new therapies, and preventive strategies.

Towards this mission, we offer degrees in the following programs of study.

PhD Program in Biomedical Sciences or Neuroscience

Our students are at the heart of these investigative activities as partners in the work, whereby they receive the most significant part of their doctoral training in a mentor-student relationship leading to the PhD dissertation. This research centerpiece of their training is preceded by a period of exploration of the Graduate Faculty and Multidisciplinary Training Areas (MTAs) in a year of core courses, special seminars/journal clubs and laboratory rotations. It is further enhanced by an individualized program of advanced coursework within one of eight Multidisciplinary Training Areas, a format that is at the cutting-edge of modern science research training.

Doctoral students may enter the PhD or MD/PhD Programs without a formal commitment to a particular MTA. This allows their initial exploration of potential research mentors and areas of concentration to remain fully open to changes in their interests as they participate in the General Program Requirements and learn about new areas of research through their seminars, journal clubs and laboratory rotations. Students with well-defined interests are encouraged to focus their rotations within the realm of that interest even before any written commitment to a particular dissertation advisor or MTA. (See Chapter 3 for details regarding rotations.)

After the rotation period, students are expected to: 1) formally choose a research mentor; 2) decide on the Multidisciplinary Training Area if he/she has not already done so. The MTA will be the student's area of focus for his/her advanced coursework, journal clubs and seminars; and 3) choose three members for an Advisory Committee with whom they will be meeting at least once each semester to assess progress

All students must be full-time. All students are required to develop a research project, under the supervision of one or more faculty members, which results in a thesis that reports the new findings, and is presented, defended and deposited. The choice of the research laboratory, through a series of laboratory rotations (BSR 1006 and BSR 1007) and academic credit for the thesis project (BSR 8000 and BSR 9000) are part of each student's academic program. The maximum time limit for completing all requirements for the PhD degree is seven years. PhD students must defend and deposit the dissertation by June 30 of the seventh year in the Program. Students who do not deposit by April 15 will not be eligible to receive their degree in the May graduation ceremony. To participate in the graduation ceremony, students will be expected to have successfully defended before the graduation ceremony.

The PhD degree is granted either in Neurosciences or Biomedical Sciences by ISMMS.

MD/PhD Program

The MD/PhD Program is designed for students interested in careers in medical research and academic medicine and offers them the personalized training needed to become successful physician-scientists.

Students entering into the dual degree program take graduate-level Core courses during the first year of their MD/PhD phase. They participate in a special Biomedical Sciences (BMS) for MD/PhD core designed to build upon some themes presented in the medical school curriculum and taught at a graduate school level. First year MD/PhD students also begin other portions of their Graduate Program: Laboratory Rotations and Problem Solving in Biomedical Sciences (PSBS) during the summer. Students are required to participate in the monthly dinnertime Medical Scientist Grand Rounds (MSGR), in which a research presentation by a senior student is supplemented with a related clinical case presentation and a panel discussion of the research and clinical case. MD/PhD students take most other elements of the initial Medical School curriculum and thus forge bonds with their MD program classmates. The Laboratory Rotations (summers before MD1 and MD2, typically 2 or 3 rotations) help guide MD/PhD students toward an optimal choice of dissertation advisor and MTA. Students are expected to formulate a decision on their choice of a dissertation advisor by March 1 of the second year in the program, with the approval of the MD/PhD Program Director. The rotation work is graded Pass/Fail as a 4-credit component of the Graduate School course. First year students are expected to present each of their rotation experiences to their MD/PhD peers and MTA directors at the end of summer. For those rotations, MD/PhD students should utilize the standard Rotation Agreement and Evaluation forms, which are both available on the Registrar's Office forms page. The signature of the MD/PhD Program Director is required for the Rotation Agreement and Dissertation Advisor forms.

MD/PhD students complete a PhD in Biomedical Sciences or in Neuroscience. The PhD work is ordinarily completed during the three to four years after the initial two years of the Medical School and Graduate School coursework. All students must complete the Responsible Conduct of Research (RCR) and Rigor and Reproducibility (R&R) courses and must satisfy the Biostatistics and appropriate Advanced MTA course requirements. The student will complete the final clinical training component of the Medical School curriculum after the doctoral dissertation has been successfully completed. During the PhD phase, students will build upon the pathophysiologic and clinical diagnosis material already mastered through continued clinical exposures. Under special circumstances and with the approval of the MD/PhD Program Director, students may initiate PhD research after the first year of medical school or may elect to complete the first three years of medical school before initiating the PhD phase of their training.

Clinical Research Education Program

The Clinical/Translational Research Training Programs of The Graduate School of Biomedical Sciences are designed to foster the development of future leaders in patient-oriented research. These training opportunities are intended to develop critical thinking necessary to conduct innovative hypothesis driven, independent and collaborative clinical/translational scientific research, in an effort to improve patient care and the wellbeing of society. In particular, we hope to enhance the research opportunities of clinical scientists as well as the ability of basic scientists to better position themselves to translate the promise of their respective discoveries into the clinical arena in a meaningful way with significant impact.

A rigorous curricular foundation designed to promote an in depth understanding of research methodologies and processes essential to translating the promise of scientific discovery into solving problems of disease is central to these educational initiatives, and forms the basis of our Certificate Program, Master of Science in Clinical Research, and PhD in Clinical Research. For complete program description and application materials, please visit the website at: http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/clinical-research-education

Master of Science in Biomedical Informatics

Biomedical informatics uses computer technology to manage biological and clinical information. It combines mathematics, science, and engineering to explore and understand biological data from high-throughput experiments, such as genome sequencing and gene expression chips. ISMMS has long used informatics to improve the quality of patient care in our hospital, advancing our basic science and translational research. Our program is a unique blend of practical computational and data analytic skills applied to real-life biomedical challenges. We offer four areas of concentration: genetics and genomics sciences, structural and chemical biology, systems biology, clinical and translational informatics -- allowing students to develop an advanced understanding of biomedical science.

To graduate, students complete 45 credits. Ten of these credits are earned by working on and completing a capstone project. The capstone project consists of work in a research or clinical field at Mount Sinai or at an industrial partner. The capstone projects and courses are designed to provide our students with a practical approach to education that focuses on tackling biomedical questions with relevant computational and data analytic skills.

Master of Science in Biomedical Sciences

The Master of Science in Biomedical Sciences program takes advantage of the multidisciplinary research education programs on our campus, the commitment to translation of fundamental findings in basic biomedical sciences to applications in the prevention of disease and novel therapies for disease, and the commitment to prepare students to contribute to various aspects of the biomedical enterprise. This program responds to the recognized need for generalist graduate study in the medical sciences to provide students with the background essential to pursue a variety of careers in the health professions, whether in doctoral programs in research and/or clinical medicine or for employment in the pharma/biotech sector.

The MS in Biomedical Sciences is a full-time course of study requiring 45 credits. The first year will ensure mastery of fundamental core concepts in contemporary cellular and molecular biomedical sciences, application of statistical principles to experimental design and data analysis, responsible conduct of research, and critical analysis and presentation of primary research literature in the biomedical sciences. Academic tracks have been defined that allow students to optimize their coursework for their career plans. In addition, a significant amount of time will be spent doing research in a laboratory, which will have been carefully chosen in consultation with the Program Director. Course work in the third term will be devoted to advanced elective study in the student's chosen area of interest as well as continued work on a research project, which will form the basis for a Master's thesis.

Students in this program will be taught together with incoming first-year PhD students in their core courses and will be integrated into the total academic and social environment of the Graduate School of Biomedical Sciences. The program is intended for students who are not ready to make a 5-year commitment to obtain a PhD or who need to bolster their competitiveness for MD or MD/PhD programs and who value structured advanced education and research training in the biomedical sciences. We expect that students will be able to complete degree requirements in 3 terms, with an option to continue their research for a fourth term without additional tuition payments.

Students will pursue research under the tutelage of a mentor. Selection of a research laboratory and mentor occurs during the first month in the program and the choice is finalized no later than October 1.

Master of Science in Biostatistics

The Master of Science in Biostatistics program provides students with the fundamental skills required for conducting high- quality clinical and translational research. The curriculum emphasizes strong quantitative training, critical thinking skills, and practical strategies for addressing complex challenges of clinical research.

The Theory and Methods Track is aimed at students whose goal is to work as biostatisticians or data analysts in a clinical, research, or industry setting. It can also be used as a stepping stone to pursuing a PhD in Biostatistics or Epidemiology. Applicants do not need to have a background related to a health or clinical field, but a strong quantitative background is required.

The Clinical Applications Track is designed for clinical and translational investigators who want to acquire knowledge of quantitative methods in clinical research. A strong quantitative background and a degree in Medical Sciences (MD, DDS, DMD, ND or DO) are required to apply to this track. Each track in the program consists of at least 34 credits and must be completed in one full-time year. There are two parts: a course requirement and a capstone requirement.

Course Requirements

For the Theory and Methods Track, at least one college-level linear algebra course and two semesters of college-level calculus, all with a grade of B or higher, are required. For the Clinical Applications Track, at least one semester of college-level calculus and one college- level linear algebra course, with a grade of B or higher, are required, and applicants must be clinical professionals. If an applicant hasn't yet taken a college-level linear algebra course as an undergraduate, upon acceptance to the program, they will have to successfully complete this course prior to enrollment.

Capstone Overview
The capstone-related lectures and projects will:

Engage students in important discourse surrounding data management and research ethics

Challenge students to turn conceptual research questions into testable hypotheses and to determine the appropriate analytic testing methods

Provide students with the opportunity to shadow Biostatistics faculty mentors in the Center for Biostatistics consultation service

Additionally, students will learn how to create appropriate study design-related and methodological solutions to cutting edge, real-world research questions. Students will conduct advanced preliminary analyses under the guidance and supervision of their mentors. At the end of the Spring II term students will communicate their findings to an institution- wide audience at an MS in Biostatistics Capstone Symposium.

Master of Science in Genetic Counseling

The Master of Science in Genetic Counseling is a 2 year, full-time course of study designed to train future genetic counselors. Genetic counselors help people understand and adapt to the medical, psychological and familial implications of genetic and genomic contributions to disease.

The integration of the academic and clinical disciplines within the Graduate School of Biomedical Sciences, ISMMS, and the Mount Sinai Health System provides our students unparalleled opportunities for didactic and clinical experiences to develop the medical, scientific, and psychosocial skills necessary to practice in this challenging and exciting field. Our graduates are uniquely qualified and highly recruited professionals in one of the fastest growing areas in healthcare.

Genetic Counseling students complete coursework in basic and clinical sciences, medical genetics and genomics, genetic counseling, and bioethics. Students rotate through a variety of clinical settings throughout the life cycle; from prenatal to pediatric to adult genetics/genomics. They also complete a thesis project in the form of an in-depth study of a selected genetic counseling issue or topic.

Our program is accredited by the Accreditation Counsel for Genetic Counseling and upon successful completion of their study, our graduates are eligible to sit for the American Board of Genetic Counseling Certification examination.

Master of Science in Health Care Delivery Leadership

ISMMS developed the MS Program in Health Care Delivery Leadership to help experienced professionals meet new challenges caused by major disruptions in the sector. Unlike other programs that are focused only on the theoretical, this 21-month degree program is being offered at the frontlines of health care delivery innovation. The rigorous curriculum is delivered by our world-class faculty through a combination of online classes, on-site seminar sessions, and projects in which participants apply what they have learned at their own home institution.

Offered by the Department of Population Health Science and Policy in the Graduate School of Biomedical Sciences, the program leverages the vast resources of the Mount Sinai Health System. Students can expect direct access to our faculty experts and senior leaders from Mount Sinai Health System, many of whom are nationally recognized in health care innovation. Participants will receive extensive leadership training and education in areas such as operations management, strategic planning and communications, health policy, data and technology leveraging, clinical innovations, health care economics, and finance. The program stresses the acquisition of strategic knowledge and leadership tools necessary to effectively lead innovation.

Additional program benefits:

♦ Mentoring by Mount Sinai's innovative leadership and faculty in conducting a strategic improvement project

♦ Access and networking with industry experts and Mount Sinai alumni

♦ Personal leadership development experiences including self-assessments

♦ Training and ongoing technical support to fully leverage the online learning experience

♦ A learning management system that affords flexibility and convenience in completing engaging course work

Upon completing the program, you will be better equipped to successfully manage and lead heath care delivery organizations, drive change, solve complex problems, and create dynamic new approaches that will improve the quality, value, and cost of patient care.

Graduate Program in Public Health

The Master of Public Health degree is a two-year program that prepares students for careers in public health. Applicants to the Program must have a Bachelor's Degree from an accredited college or university. For complete program description and application materials please visit the website at: http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/graduate-program-in-public-health/mph-program

CHAPTER 3 – PhD Program Description

Program Description

Program Coordinator

Rewtie Offin

(212) 241-2373

rewtie.offin@mssm.edu

Program Goals/Objectives

Our goal is to prepare students to take creative and sophisticated approaches to new scientific problems in a variety of career settings. Graduating students are awarded the PhD degree in biomedical sciences or in neurosciences by ISMMS in New York City.

Program Website

http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program

Program Description

Our students are at the heart of these investigative activities as partners in the work, whereby they receive the most significant part of their doctoral training in a mentor-student relationship leading to the PhD dissertation. This research centerpiece of their training is preceded by a period of exploration of the Graduate Faculty and Multidisciplinary Training Areas in a year of core courses, special seminars/journal clubs and laboratory rotations. It is further enhanced by an individualized program of advanced coursework within one of eight Multidisciplinary Training Areas, a format that is at the cutting-edge of modern science research training.

PhD Milestones/Deadlines

Completion of Core Curriculum	Middle of 2nd semester after matriculation
Declaration of Dissertation Advisor and MTA	End of 2nd semester after matriculation
Defense of Thesis Proposal	Fourth Semester (June 30th) after matriculation
Successful defense/deposit of Dissertation	Variable: current average is end of 10th semester after matriculation

The maximum time limit for completion of all requirements for the PhD degree is seven years after matriculation in the PhD Program.

Students who do not meet these deadlines will be subject to disciplinary action, up to and including academic probation and expulsion.

Graduation Requirements

♦ Complete a minimum of 72 credits, with an average grade of B or better in all required core courses (i.e., Biostatistics and Core) and a cumulative GPA of 3.0 or higher.

- ◆ Submit and successfully defend a Thesis Proposal

- ◆ Develop new knowledge through original, independent research performed in an ISMMS or affiliated laboratory

- ◆ Produce data equivalent to that needed for a first author publication in a high-quality, peer-reviewed journal. A manuscript need not be submitted or accepted.

- ◆ Write an original dissertation that is accepted by the student's Thesis Committee and is defended orally in front of a panel of experts.

- ◆ Behavior or ethical standards consistent with those of the profession.

PhD Program Requirements

Course Requirements

All PhD and MD/PhD students will be expected to fulfill the following requirements for the PhD degree:

A. *Core Curriculum* – According to MTA requirements.

B. *Laboratory Rotation* – At least one rotation or equivalent (except for transfer/ advanced students) must be completed. See detailed description below.

C. *Introduction to Journal Club* – Two semesters of Introductory Journal Club are required during the core course sequence. Students taking Biomedical Sciences core will register for a separate Journal Club, whereas Systems Biology and Neuroscience cores have incorporated Journal Club directly into the core and therefore student in these cores will not register for a separate Journal Club.

D. *RCR: Responsible Conduct in Research* – Fall semester, first year (except MD/PhD students who take the course during the first year in their PhD phase)

E. *Rigor and Responsibility* – Spring semester, first year (except MD/PhD students who take the course during the first year in their PhD phase).

F. *Biostatistics* – Fall semester, first year (except MD/PhD students who take the course during the first year in their PhD phase)

G. *Advanced Coursework* – Advanced coursework is required as defined by each MTA. See section below for general MTA requirements, including a description of the individual course requirements, typical MTA requirements, and criteria for advancement to candidacy. There is also a section below listing Program Milestones that details the criteria for satisfactory completing of the program. Students should also refer to the section of Chapter 1 entitled Satisfactory Academic Progress.

H. *Transfer Credits* – Students who have successfully completed relevant graduate courses elsewhere will be granted exemption and/or graded credits at the discretion of the Dean, in consultation with the course and MTA Directors. See Academic Policies and the Registrar's Office in Chapter 1 of the Handbook for details of this policy.

After the rotation period, students are expected to: 1) formally choose a research mentor; 2) decide on the Multidisciplinary Training Area if he/she has not already done so. The MTA will be the student's area of focus for

his/her advanced coursework, journal clubs and seminars; and 3) choose three members for an Advisory Committee with whom they will be meeting at least once each semester to assess progress

Advising

Entering students are assigned a graduate faculty advisor who will handle student questions about courses, rotations or problems that surface throughout the first year. This faculty advisor is generally from the first choice MTA on the student's application to the Graduate Program. In cases where the student is unsure about their choice of MTA, a second advisor from another MTA may be assigned. Once a student selects a dissertation advisor and a Multidisciplinary Training Area, with the help of the dissertation advisor, he/she selects an Advisory Committee.

Thesis Advisory Committee:

The Thesis Advisory Committee is typically composed of not more than four members (three voting members, including the committee chair, and the preceptor). Committee members should represent a breadth of scientific interests related to the trainee's specific area of study, and efforts should be made to ensure diverse representation. Members of the trainee's Thesis Advisory Committee typically also serve on the Thesis Proposal Committee and the Thesis Dissertation Committee. In addition, they meet with the trainee at least once per semester between declaration of the dissertation laboratory and the dissertation defense to monitor progress towards the PhD, provide scientific feedback in the development and progress of specific aims, as well as discuss and provide career development advice. On occasions, the advisory committee may suggest or require more frequent meetings.

Additional non-voting committee members are permitted subject to the approval of the MTA Director. The membership of the committee may change as the project evolves to provide the best advisory panel to the student.

Specific criteria for the members of the Thesis Advisory Committee are:

1. **The committee chair**: The chair is a voting member of the committee chosen by the MTA co-directors in consultation with the trainee and their preceptor. This committee member is typically an MTA co-director or a voting committee member delegated by an MTA co-director. The chair must be someone that does not directly collaborate on the student's project, will not co-author papers or abstracts with the student, has no financial conflicts of interest with the student or project, and does not supervise the work.

2. **The preceptor**: the PhD preceptor of the trainee. The PhD preceptor is not a voting member of the committee and is a silent observer at the Thesis Proposal and the Thesis Dissertation. However, after committee meetings the preceptor should discuss the feedback of the committee with the student and advise on how to act on their advice as the project evolves

3. The voting members: There must be two voting members on the committee in addition to the chair. Both these individuals must have no financial conflicts of interest with the student or project and cannot directly supervise the student's work.

4. **The non-voting members**: One or more non-voting members can attend the committee meetings. These might include a clinical/translational (C/T) investigator, who need not be a member of the Graduate Faculty, to provide feedback about C/T impact of the research (encouraged for MD/PhD students) or others with particular expertise of value to the trainee, including collaborators. Individuals other than the preceptor who are directly involved in supervising the work (e.g., a computational mentor or co-advisor) can also attend committee meetings. In addition, experts that are not members of the training faculty of the GSBS may be invited to attend in an ad hoc manner to extend their expertise in one or more meetings.

Due to their importance as critical milestones in the training process, the Thesis Proposal Committee and the Thesis Dissertation Committee have additional requirements for the committee membership.

This Advisory Committee should meet at least once per semester. In some cases, the student may be required by the Graduate School to meet with his/her Advisory Committee more often. Students are encouraged to provide a project summary of progress (in bullet-point style is generally sufficient) prior to each meeting. This often makes the meeting more efficient for everyone. In an effort to streamline the processes even further, it is also suggested that students combine Advisory Committee meetings with a WIP or other formal presentation of their work.

Students and faculty are urged to understand that the advisory system is their strongest ally in identifying and helping to resolve problems, in maintaining a realistic set of expectations for progress, and as a source of extra ideas and new approaches. Students should take the initiative in scheduling meetings. Timely meetings are imperative.

Students should recognize that their thesis advisor is usually their most important mentor; someone who can advise the student on research directions and may also provide career guidance. It is expected that thesis advisors provide opportunities for the student to develop independence, encourage the student to participate in collaborations, presentations, departmental seminars, introduce the student to colleagues, help the student to learn about writing and submitting manuscripts for publication, help the student to identify and work with their strengths and weaknesses and be committed to help the student make the next move in their career development. However, other faculty who take particular interest in the student's growth and development as scientists may often also serve as important mentors. Students are encouraged to develop relationships with those faculty whom they feel can provide significant research, career, and personal guidance.

Formal progress reports must be filed twice annually with the Graduate School Office. To meet this requirement, students are expected to meet each semester with the full Advisory Committee. All students will receive Progress Forms twice each year according to the schedule indicated on the Calendar. The student should review the Progress Form and correct/update as necessary. The Advisory Committee must use the last page of the Progress Form to evaluate the student's progress, clearly identify strengths and weaknesses and indicate plans for development. All members of the Advisory Committee should then sign and date the Progress Form. It should then be returned to the Graduate School Office by the set deadline. Note that Progress Forms are due four weeks after distribution.

When a student fails to demonstrate satisfactory academic progress, the Program Director may mandate more frequent advisory committee meetings.

When a dissertation advisor thinks his/her student is nearing a point of completion, the Advisory Committee should meet with the student and advisor to assess the student's readiness to write a dissertation. This meeting should take place approximately 6 months before the anticipated dissertation defense. Students should update their list of publications and manuscripts in press on the Progress Report form before this meeting. At this meeting, the Advisory Committee will certify that the student is ready to write his/her dissertation and to schedule a defense date. This approval should be given and a date set **only** if the student has at a minimum achieved the following:

♦ met all of the required program milestones,

♦ completed all coursework and met the academic standards of the Graduate School,

♦ mastery of the literature, conceptual skills, analytical skills, writing and presentation skills, experimental skills, record keeping skills and work ethic meets doctoral-level standards,

♦ intellectual contributions as a lead author, or equivalent, to at least one manuscript, published, in review, or ready for submission in a peer-reviewed journal. An exception to this requirement will require the unanimous approval by the Advisory Committee.

When these criteria have been met, the student will be given a green light to enter the dissertation writing phase.

Selecting a Research Mentor

The choice of a dissertation advisor and MTA is a major focus of the first year of the Program. The year culminates with the student being accepted into the laboratory of a Graduate Faculty member for pursuit of the dissertation work. Together with that faculty member, the student decides on the MTA in which the advanced coursework, seminars and journal clubs, will be completed. Students are urged to take full advantage of their rotation experience during the first year. Faculty mentors of rotation students are urged to present a realistic picture of the tone of the laboratory, the nature of the ongoing projects, how work is assigned or monitored, and any general history or policies with respect to meetings, publications/authorship, weekly journal clubs and laboratory meetings, and direct contact to be expected with the laboratory leader. A choice of dissertation advisor is usually, but not always, consonant with the MTA choice.

Before the end of the second semester in the Program, each PhD student should complete the Dissertation Advisor/MTA Declaration Form. MD/PhD students complete this form following the fourth semester in the

Program. At this time, the student must also select at least three members for an Advisory Committee. Committee members should be selected because of their ability to provide scientific and/or technical support for the dissertation project. Advisory Committee members must be members of the Graduate Faculty. Two Advisory Committee members are experts in the area of the student's research; a third member must be from a related field but need not be expert in the student's area of research. MD/PhD students are encouraged to add a clinical/ translational (C/T) investigator, who need not be a member of the Graduate Faculty, to their Advisory Committee to provide feedback about the C/T impact of their research. This Form should be submitted to the Graduate School Office with all the required signatures as soon as possible, *but no later than June 30*.

One indication of satisfactory progress in the Program is the demonstration of the potential for research and the timely selection of a mentor and MTA. PhD students are expected to declare a dissertation advisor and MTA **no later than** 12 months after matriculation. MD/PhD students are expected to declare by the end of the second year in the Program.

The choice of a dissertation advisor by the student and the acceptance of that student by the future dissertation advisor should be considered a commitment on the part of both parties that the student will remain with the chosen dissertation advisor until the thesis is completed. If a student is contemplating a change in dissertation advisor or MTA, or, if the dissertation advisor is unsatisfied with the academic progress of the student, mediation should be sought to remedy this situation by first meeting with the MTA Director and the student's Advisory Committee. If necessary, the Dean of the Graduate School may also meet with the student and their dissertation advisor. Movement between MTAs is permitted if the student is certified, in writing by the MTA Director(s), to be in good academic standing by the original MTA and is accepted, in writing, by the proposed MTA. Students who are contemplating a change must discuss this fully with the current dissertation advisor. These changes invariably involve some loss of time and dislocation to both student and dissertation advisor and possibly extra coursework. Careful guidance by the student's Advisory Committee will reduce the number of such changes and will increase the likelihood that those changes that do occur are productive.

Following are guidelines applicable only to students whose dissertation advisor relocates to another institution:

♦ Students who have successfully completed their thesis proposal with a given dissertation advisor, who subsequently relocates to another institution, will be permitted to pursue their graduate research off-site at their mentor's new institution.

♦ If the student chooses to join his/her dissertation advisor at the new institution to continue his/her thesis research project as an ISMMS student, the student will continue to be a ISMMS matriculated student and will continue to receive student benefits (access to library, housing, health insurance). Any publications resulting from the student's research regardless of the whether the work was performed at ISMMS or not, should list ISMMS as the institutional affiliation of the student.

♦ If the student has not passed his/her thesis proposal exam, the student will be required join a new lab and remain at ISMMS. A student may petition the Dean of the Graduate School to waive this requirement and under exceptional circumstances, this request may be approved.

Vacation Policy

The vacation policy for PhD students in Biomedical Sciences or Neuroscience is clearly stated in Academic Policies section of Chapter 1. Please refer to that section for the complete policy. In brief, PhD students in Biomedical Sciences or Neuroscience receive two weeks of paid vacation each year. Time spent studying for courses, preparing for examinations, etc. is not considered vacation time.

Laboratory Rotations

Laboratory rotations are an important part of the first year of the Graduate Program. They give students the opportunity to experience different research projects, different laboratory and mentoring styles, and allow the faculty to assess the interests and aptitude of the students. All PhD and MD/PhD students must complete at least one laboratory rotations (when multiple rotations are done, they must be in different laboratories) before

declaring a dissertation advisor and a Multidisciplinary Training Area. On a rare occasion, additional rotations may be required by the Graduate School. If incoming students were research technicians in an ISMMS laboratory prior to becoming a graduate student, they may choose their former employer as their dissertation advisor, but only after rotating in at least one other laboratory. The rotation facilitates the choice of dissertation advisor and also offers students an exposure to problems and techniques of interest to them.

THE GOAL OF THE ROTATION IS TO FIND A LAB.

Rotation guidelines are as follows:

A. Students are encouraged to use web resources and the current student body to explore possible labs before and during discussions with their advisors. Student are urged to consult multiple sources included current and previous laboratory members to gain a better idea of the laboratory's approach to science and training and the success of previous trainees.

B. In order to take a rotation student, labs must have sufficient financial and personnel resources to support a PhD student. Labs who cannot support a student and his/her training CANNOT have a rotation student. Rotation students will work with their first-year advisors and/or MTA Directors to select labs that can take rotation students. If a lab cannot support your financial package, you SHOULD NOT rotate in that lab. If there is no chance that they will be able to take you in the lab, no matter how good and interesting the work is, the rotation will be a waste of your time.

C. To facilitate and optimize the rotation experience for both the student and the faculty mentor, it is important that this student-faculty pair meet prior to the start of the rotation to discuss expectations, goals, requirements and laboratory guidelines. The discussion must be recorded on the [Laboratory Rotation Agreement Form](#) so that both the student and the rotation advisor are in agreement about what each expects from the other. The Form must be submitted to the Graduate School at the beginning of the rotation.

D. During the laboratory rotation, the student has to be aware of the balance that needs to be maintained between research and study time for ongoing courses. Students are expected to spend about 50% of their time (about 20 hours/week) on the laboratory rotation. Good time management can optimize the experience in that particular laboratory.

E. A "match" between student and lab is defined as an offer from the PI for the student to join the lab. This may be a hard yes, or could be pursuant to other conditions, such as the outcome of other rotation students in the PI's lab.

F. Students with prior experience at Mount Sinai -

   a. PREP or MSBS students now in a PhD program can use their research time in lieu of a rotation.

   b. Former SURP scholars who have spent two summers at ISMMS and are now in a PhD program, can use that research time in lieu of a rotation.

   c. Staff who become PhD students, and who feel it necessary to do a rotation in their lab of employment before deciding to join that lab, may not do so until after completing a rotation in another lab. If, on the other hand, the student **and** the PI are confident about joining the lab of employment, other rotations are not strictly required.

G. Starting in week 3 of the rotation, the PI and student should review progress and the possibility of joining the lab. This does not have to be a detailed conversation, but can be a simple update, and has three possible outcomes regarding joining the lab: yes, no, or maybe. If either the PI or the student has a firm idea that the lab **is not a good match**, the rotation should be terminated immediately. If the PI **and** the student believe it **is a good match**, it is recommended that the rotation continue for the full 6-8-week duration to ensure the lab continues to be a good fit. At some time during the final weeks of the rotation, terms for joining the lab should be reached, a Laboratory Rotation Evaluation form should be completed and turned in to the Graduate School, a lab Dissertation Advisor - MTA Declaration Form should be completed and turned in to the Graduate School, and the student should cancel other planned rotations. Finally, if either person is **unsure if the lab is a good fit** (and the other is not a "no"), the rotation should be continued with check-ins, as outlined above, occurring every week. The outcome of these discussions should be conveyed by the students to their first-year advisors and/or MTA co-directors.

H. When rotations end, regardless of whether the lab is a match or not, a Laboratory Rotation Evaluation form must be completed by the student and rotation advisor and filed with the Graduate School.

I. When the student is the person deciding the lab is not a match, it is customary for the student to provide the rotation advisor with a brief explanation of the reason why the match does not work. While this is not a strict requirement, it is recommended because it is important to remain in good communication with your faculty.

J. The maximum time for a rotation is typically 6-8 weeks. An extension would be considered if there were circumstances that warrant one. A request for an extension should be made in writing, via email, to the PhD Program Manager.

K. In some cases, rotations will span winter or spring breaks. When this occurs, the time off does not count towards the rotation.

L. The schedule outlined above would permit up to four rotations (if needed) prior to spring break, although three rotations is more typical.

M. Rotation times could be shortened further if the student is not taking classes while rotating because the student can work full time in the lab instead of balancing lab with class time.

N. While it is acceptable to join a lab after one successful rotation, students are encouraged to find two matches before terminating your rotations and joining a lab.

O. Individual MTAs may require rotation presentations. Presentations will not be synchronized with the end of each rotation, so students should be prepared to describe work that they may have concluded weeks earlier.

P. Grading of rotations will be on a Pass/Fail basis**.**

If a student in the PhD in Biomedical Sciences or Neuroscience programs is not accepted into a laboratory by the conclusion of the third semester (fifth semester for MD/PhD students), he/she will be reviewed by the Committee for Academic Review for a failure to make satisfactory academic progress. Dismissal from the program is a possible outcome of this review.

For MD/PhD Students
MD/PhD students complete summer rotations:

- In year 1, MD/PhD students rotate in one lab for ~4-5 weeks.

- Going into year 2, MD/PhD students generally complete 2 more rotations, each of 4-5 weeks. Rotations need not be identical in length.

PhD Program Admissions

ISMMS is widely recognized for its excellence in education, basic and clinical research, patient care and service to our community. ISMMS seeks to attract individuals of diverse backgrounds, who have the ability and potential to become researchers, scholars, and practitioners dedicated to excellence in their chosen career paths. Applicants for admission are considered based on their total qualifications. Factors that are considered include intellectual capability and academic achievement, motivation and potential for a career in the sciences, enthusiasm for shaping one's own learning experience, personal maturity, and conformity to the School's standards of character and health.

Applications are invited from students who have completed their undergraduate degree with a major in the sciences. Applicants should have strong scholastic metrics and some independent research experience. The Program admits only students who wish to pursue the PhD degree on a full-time basis.

All offers of admission to Icahn School of Medicine are provisional, pending receipt and evaluation of final transcripts. Transcripts must be sent directly from the appropriate Registrar's Office to the ISMMS Admissions Office. These and all other materials requested by the Registrar in conjunction with the admissions process must be received to complete a student's enrollment. Submission of false or misleading information in the application materials or in connection with the application process will be considered by the Admissions Committee and/or the Student Committee for Academic Review as grounds for withdrawal of the acceptance offer, dismissal, or rescission of degree.

Students who have, or will have, completed baccalaureate programs and who wish to pursue a doctoral degree in biomedical sciences research should apply online and submit required documents for consideration. Most applicants have completed the following courses: general biology, general chemistry, general physics, organic chemistry (2 semesters), mathematics (through integral calculus), and an introductory course in biochemistry. In special instances, some of these requirements may be waived as a prerequisite for admission. Arrangements will have to be made to take them later, e.g., biochemistry may be taken during the summer before matriculation. In addition, it is desirable for applicants to have taken advanced science courses. It is very important for applicants to have had basic science research experience. Letters from research mentors and written comments from the applicant about prior research experience are major components of the application file.

Students who wish to transfer from another institution to a ISMMS degree-granting program must apply for admission through the regular ISMMS application process. Students who have completed the qualifying exam for their PhD at another institution will be required to pass the thesis proposal exam at ISMMS. Students who have passed their PhD thesis proposal exam at another institution cannot transfer to a ISMMS PhD program. The deadline for receipt of completed application packets is December 1, but early submission is highly recommended for full competition for fellowships. Applicants should indicate their field(s) of greatest interest. In addition to the application form and required fee, the applicant must supply official final transcripts from all institutions attended and three letters of recommendation. International applicants who did not attend college or university in the United States are required to submit official scores of the TOEFL (Test of English as a Foreign Language) or IELTS (International English Language Testing Service) exams and a course-by-course evaluation of their transcripts from the World Education Service (WES). Applicants who, on the basis of their submitted application materials, are being seriously considered for the Program, will be invited for interviews. The requirement for these interviews may be exchanged for a telephone or internet interview, if geographical is a barrier. The Admissions Committee of the Graduate School will consider all the data on each applicant before making its decision.

Important Dates

December 1 – Application deadline

January – Interviews begin

Offers of admissions are made as soon as the admissions process is complete, generally by February 1st.

April 15 – matriculation decision is due.

Multidisciplinary Training Areas
Pharmacology and Therapeutic Discovery (PTD)
Program Directors

Jian Jin, PhD

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Steering Committee

Aneel Aggarwal, PhD

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Lisa Satlin, MD

MTA Web Page
http://icahn.mssm.edu/gradschool/PTD

MTA Faculty
http://icahn.mssm.edu/education/graduate/phd-program/biophysics-and-systems-pharmacology/faculty

Goals/Objectives of the MTA
PTD provides an educational environment in which students receive the training needed to discover and design new drug- like molecules that can modulate the function of biological systems. Trainees gain a thorough understanding of drugs and

drug targets under investigation using a variety of approaches ranging from structural, computational, molecular, and cell biology to biochemistry and synthetic chemistry. Our students also gain a deep understanding of biological systems and disease states through training that emphasizes a quantitative, predictive understanding of physiology, pharmacology, organ-level research, and animal studies.

Brief Description of the MTA

Mount Sinai's multidisciplinary training area in Pharmacology and Therapeutic Discovery (PTD) provides cutting-edge training in molecular Pharmacology and Therapeutic Discovery. Biophysics is an established discipline that uses the principles and methods of physics, chemistry, mathematics, engineering, and computation to address fundamental biological and biomedical questions, such as what are the structural determinants and molecular mechanisms underlying protein function and how this information can be used to design small-molecule modulators with exciting biological or therapeutic properties. Systems Pharmacology is an emerging interdisciplinary field of research that seeks to translate molecular-level information on diseases and drug action into predictions of effects seen at the organismal level and across heterogeneous populations. The integration of these experimental and computational methodologies is an imperative innovation for the discovery of new therapeutics and the development of personalized medicine.

The PTD program welcomes students from both traditional and non-traditional paths into PhD programs in medical schools, including undergraduate degrees in mathematics, physics, computer science, engineering, chemistry, biochemistry, biology, pharmacology, genetics and many more. While students with a more biological background get the opportunity to obtain rigorous training in biophysical, chemical, and computational approaches to biological research, trainees from more technical disciplines get their first sustained exposure to biological research during their PhD training at Mount Sinai.

This is enabled by PTD's personalized curriculum and multidisciplinary research programs, which provide a platform for education at the intersection between computation and experiments for the next generation of physicians and biomedical scientists. In particular, trainees are prepared to apply a thorough understanding of molecular recognition, protein-protein interactions, and networks of molecular interactions within and between cells to the design and synthesis of new molecules with potentially improved therapeutic properties in relevant human disease models. We are extremely proud that many of our graduates find employment opportunities (several in the biotech industry and private sector, but also in academia, government, etc.) before their thesis defenses.

Typical Curriculum for the MTA

We use a personalized curriculum to allow our diverse student body to obtain rigorous training at the intersection between computation and experiments. Depending on their undergrad background, and as early as in the first year, students can choose between different Core Curriculum courses (one in the Fall semester and at least two in the Spring semester). A number of Advanced Electives is offered in the second and third year of the program, although students are welcomed to take advanced electives in other training areas as well.

Year 1 – Fall
Systems Biomedicine (BSR1800) OR Biomedical Science (BSR1012)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct in Research (BSR1003)

Seminars (BSR5802)

Journal Club (BSR4801)

Lab Rotation (BSR1006)

Year 1 – Spring

Two of the following three options:

- ◆ Systems Biology: Biomedical Modeling (BSR1803)

- ◆ Quantitative Graduate Physiology (BSR1802)

- ◆ Structural and Chemical Approaches to Pharmacology and Drug Discovery (BSR 2108)

Journal Club (BSR4801)

Rigor and Reproducibility (BSR1022)

Lab Rotation (BSR1006)

Year 2 – Fall

Minimum of two advanced electives (1-3 credits each)

Seminars (BSR5802)

Journal Club (BSR4801)

Independent Research (BSR8000)

Year 2 – Spring

Minimum of two advanced electives (1-3 credits each)

Seminars (BSR5802)

Journal Club (BSR4801)

Independent Research (BSR8000)

Thesis Proposal

Year 3 and above

Advanced electives (optional)

Seminars (BSR5802)

Journal Club (BSR4801)

Doctoral Dissertation Research (BSR9000)

Cancer Biology (CAB)
Program Directors

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Steering Committee

Stuart Aaronson, MD

Robert Krauss, PhD

Aneel Aggarwal, PhD

MTA Web Page
http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/cancer-biology

MTA Faculty
http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/cancer-biology/faculty

Brief Description of the MTA
This training program combines research in the biology of cancer with a curriculum that challenges trainees to consider how their research may be translated into improvements in the diagnosis and treatment of cancer.

Typical Curriculum for the MTA

Year 1 – Fall
BMS Fall (BSR1012)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct of Research (BSR1003)

Introduction to Journal Club (BSR1004)

Lab Rotation (BSR1006)

Year 1 – Spring
BMS Spring (BSR1013)

Introduction to Journal Club (BSR1005)

Rigor and Reproducibility (BSR1022)

Lab Rotation (BSR1007)

Translating Science (BSR1011)

Lab Rotation (BSR1006)

Year 2 – Fall

Independent Research (BSR8000)

Advanced Topics in Tumor Biology (BSR6202)

Cancer Biology Work in Progress (Cancer Club - BSR5202)

Journal Club in Cancer Biology (BSR4201)

Oncological Sciences Seminar Series (BSR5201)

Year 2 – Spring

Independent Research (BSR8000)

Advanced Topics in Cancer Biology (BSR6201)

Cancer Biology Work in Progress (Cancer Club - BSR5202)

Journal Club in Cancer Biology (BSR4201)

Oncological Sciences Seminar Series (BSR5201)

Development, Regeneration, and Stem Cells (DRS)
Program Directors

Robert Krauss, PhD

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Florence Marlow, PhD

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Steering Committee

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James Bieker, PhD

Robert Krauss, PhD

Marek Mlodzik, PhD

Michael Rendl, MD

Philippe Soriano, PhD

MTA Web Page
http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/developmental-and-stem-cell-biology

MTA Faculty

Goals/Objectives of the MTA
In the DRS multidisciplinary training area (MTA), you will work with model organisms and embryonic and adult stem cells to explore fundamental questions in Development, Regeneration, and Stem Cells and their impact on regenerative medicine.

The goal of this program is to train you as part of our next generation of scientists who will become experts in Development, Regeneration, and Stem Cells, and who are committed to careers that will push the boundaries in regenerative medicine to ultimately help alleviate human disease.

Brief Description of the MTA
Developmental biology addresses a fundamental question: How do organisms develop from zygotes? As a discipline, developmental biology encompasses genetics, cell biology, physiology, and evolution. As an area of current biomedical research, it provides insights into complex processes that, when disrupted, result in disease.

One aspect of developmental biology, the specification and differentiation of distinct cell lineages, has led to the identification and isolation of embryonic, fetal, and adult stem cells. Stem cell biology, an area of intense current interest, holds great promise for the potential treatment of human disease and for understanding basic questions in development.

Mount Sinai's Development, Regeneration, and Stem Cells training area offers basic and advanced coursework, seminars, and journal clubs. Our learning environment includes faculty drawn from the entire ISMMS community, along with their research labs. We provide a comprehensive, multifaceted experience. As developmental and stem cell biologists, our faculty create an atmosphere of exploration, discovery, and advancement in developmental biology and stem cell research.

Typical Curriculum for MTA
Year 1 – Fall
BMS Fall (BSR1012)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct of Research (BSR1003)

Introduction to Journal Club (BSR1004)

Lab Rotation (BSR1006)

Year 1 – Spring
BMS Spring (BSR1013)

Introduction to Journal Club (BSR1005)

Rigor and Reproducibility (BSR1022)

Lab Rotation (BSR1007)

Year 2 – Fall
Independent Research (BSR8000)

Embryos, Genes and Development AND Stem Cells and Regenerative Biology (these courses are offered every other year with one taken in the Fall of Year 2 and the other in the Fall of Year 3)

DRB/BFSCI Seminar series

DRB/BFSCI Work-in-Progress series

DRS Journal Club (BSR4301)

Year 2 – Spring

Independent Research (BSR8000)

3-credit Elective

DRB/BFSCI Seminar series

DRB/BFSCI Work-in-Progress series

DRS Journal Club

Year 3 and beyond

Dissertation Research

DRB/BFSCI Seminar series

DRB/BFSCI Work-in-Progress series

MTA Metrics
Average number of new students each year – 6 PhD; 1 or 2 MD/PhD

Average time to degree – On average, DRS students require about 6 years to complete their degree.

Genetics and Data Science (GDS)
Program Directors

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Bruce D. Gelb, MD

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Ed Schuchman, PhD

MTA Web Page

http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/genetics-and-genomic-sciences

MTA Faculty

http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/genetics-and-genomic-sciences/faculty

Brief Description of the MTA

This program offers students the opportunity to conduct research in the areas of genome organization and evolution, mechanisms of gene regulation, informatics and genome analysis, gene discovery and characterization, the molecular pathology of genetic diseases, and gene therapy. All organisms and genetic mechanisms are included.

Typical Curriculum for the MTA

Year 1 – Fall

BMS Fall (BSR1012)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct of Research (BSR1003)

Introduction to Journal Club (BSR1004)

Lab Rotation (BSR1006)

Year 1 – Spring

BMS Spring (BSR1013)

Advanced Electives

Introduction to Journal Club (BSR1005)

Journal Club in Genetics and Data Science (BSR4401)

Rigor and Reproducibility (BSR1022)

Lab Rotation (BSR1007)

Year 2 – Fall

Independent Research (BSR8000)

At least 3 advanced elective course credits

Seminars in Genetics and Data Science (BSR5401)

Journal Club in Genetics and Data Science (BSR4401)

GDS Work in Progress (BSR5402)

Year 2 – Spring

Independent Research (BSR8000)

At least 3 advanced elective course credits

Seminars in Genetics and Data Science (BSR5401)

Journal Club in Genetics and Data Science (BSR4401)

GDS Work in Progress (WIP) (BSR5402)

The Advisory Committee may recommend additional courses, based on the student's needs and area of interest

Immunology (IMM)
Program Director

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Steering Committee

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Miriam Merad, M.D/PhD

Thomas Moran, PhD

MTA Web Page
http://icahn.mssm.edu/education/phd/biomedical-sciences/immunology

MTA Faculty
http://icahn.mssm.edu/education/phd/biomedical-sciences/immunology/faculty

Goals/Objectives of the MTA
The goal of this training area is to provide students with a rigorous, flexible, and comprehensive education program in Immunology. Students will be trained to develop the conceptual and technical skills required to become outstanding scientists in the field of immunology.

Brief Description of the MTA
Immunology Institute investigators study the physiology and pathophysiology of immune cells with a special emphasis on the mechanisms of disease pathogenesis, and development of therapeutic interventions. Our main programmatic areas are Mucosal Immunology, Immunodeficiencies, Food Allergy, Immunotherapy, and Transplantation Immunology.

Our basic and clinical researchers collaborate extensively. We have unique and large populations of patients with inflammatory bowel disease (IBD), primary

immunodeficiencies, food allergy, malignancies receiving immunotherapy, as well as recipients of solid organ or hematopoietic stem cell transplants who participate in research. Our program thus provides an advantage in terms of translational science. In areas where we do not have direct access to human samples, we create animal models of disease. This melding of patient populations with animal models and multiple approaches to study mechanisms is unique and serves to distinguish our Immunology program from other Immunology programs around the country. In our Immunology institute, faculty with interests in diverse aspects of the immune system work together to achieve excellence in research, mentoring, and training.

Typical Curriculum for the MTA

Year 1 – Fall

BMS Fall (BSR1012)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct of Research (BSR1003)

Introduction to Journal Club (BSR1004)

Lab Rotation (BSR1006)

Year 1 – Spring

BMS Spring (BSR1013)

Introduction to Journal Club (BSR1005)

Rigor and Reproducibility (BSR1022)

Lab Rotation (BSR1007)

Year 2 – Fall

Fundamentals in Immunology (BSR1501)

Journal Club in Immunobiology (BSR4501)

Seminars in Immunology (BSR5501)

Dissertation Research

Year 2 – Spring

3 Credits of Electives

Journal Club in Immunobiology (BSR4501)

Advanced Topics in Immunology (BSR6502)

Seminars in Immunology (BSR5501)

Dissertation Research

Year 3 – Fall

Journal Club in Immunobiology (BSR4501)

Seminars in Immunology (BSR5501)

Dissertation Research

Year 3 – Spring

Journal Club in Immunobiology (BSR4501)

Seminars in Immunology (BSR5501)

Dissertation Research

Microbiology (MIC)
Program Directors

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Steering Committee

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MTA web page
http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/microbiology

MTA Faculty
http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/phd-program/multidisciplinary-training- areas/microbiology/faculty

Goals/Objectives of the MTA
The goals of the MIC MTA are to provide comprehensive training in the field of virology and viral immunology

Brief Description of the MTA
The Microbiology MTA is focused on studying the interaction of viruses and their hosts, and the host factors that may determine susceptibility to infections. We study viruses, such as influenza virus, hepatitis C virus (HCV), dengue virus (DENV), West Nile virus (WNV), Ebola and Marburg viruses, human immunodeficiency virus (HIV), human cytomegalovirus (CMV), Zika virus (ZIKV) as well as genetics/epigenetics of viral infections and other topics related to microbial pathogenesis and viral immunology. Studies are directed at understanding how the innate immune system of the infected host is counteracted by components of these viruses and how the innate immune systems, such as the interferon signaling system, work on a molecular level. Microbiology researchers use this knowledge to develop new vaccines against these viruses and identify small molecular weight

compounds for use as antivirals. This is a great training area for those who would like to obtain a Master's degree or PhD in the field of Virology.

Typical Curriculum for the MTA

Year 1 – Fall

BMS Core I (BSR1012)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct of Research (BSR1003)

Introduction to Journal Club (BSR1004)

Laboratory rotation (BSR1006)

Year 1 – Spring

BMS Spring (BSR1013)

Introduction to Journal Club (BSR1005)

Rigor and Reproducibility (BSR1022)

Laboratory rotation (BSR1007)

Year 2 – Fall

Advanced Virology (offered on alternate years, (BSR6601)

Virus Host Interactions Journal Club (BSR4602)

Student Journal Club in Microbiology (BSR4601)

Seminar in Microbiology (BSR5601)

Year 2 – Spring

Virus Host Interactions Journal Club (BSR4603)

Student Journal Club in Microbiology (BSR4601)

Seminar in Microbiology (BSR5601)

Fundamentals in Immunology (if taken as an advanced course, (BSR1501)

Second advanced course offered by any other MTA (if not taken earlier chosen by student and preceptor from any other MTA)

Year 3 and beyond.

Advanced Virology (if not taken in fall of 2nd year)

Second advanced course offered by any other MTA (if not taken earlier chosen by student and preceptor from any other MTA)

Virus Host Interactions Journal Club (BSR4603)

Student Journal Club in Microbiology (BSR4601) - until students pass their Thesis Proposal

Seminar in Microbiology (BSR5601)

Independent research.

MTA Metrics

Average number of new students each year: 5.8 students

Average time to degree: 5.2 years

Neuroscience (NEU)
Program Director

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Steering Committee

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Deanna L. Benson, PhD

Paul Slesinger, PhD

MTA Web Page
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MTA Faculty
http://icahn.mssm.edu/education/graduate/phd-program/neuroscience/faculty

Goals/Objectives of the MTA
The goal of the Neuroscience (NEU) training program is to provide a broad, integrative background in the neurosciences, covering molecules, cells, circuits, systems and behaviors, while simultaneously enabling students to pursue focused, multidisciplinary research in basic, translational and clinical neuroscience to address developmental, neurological or psychiatric disorders of the nervous system.

Brief Description of the MTA
The doctoral program in the Neurosciences provides students with advanced training at all levels of investigation, from molecules to circuits to behavior. Emphasis is on the basic and translational neurobiology of major developmental, neurological and psychiatric illnesses, and leverages the strong and integrative partnerships between the Hospital and the School of Medicine. Laboratory opportunities at Icahn School of Medicine take advantage of particular strengths in translational neuroscience, developmental neurobiology, aging and neurodegeneration, mechanisms of

addiction, depression and other neuropsychiatric diseases, neurochemistry, neuroanatomy, cognitive neuroscience, memory, computational neuroscience, neuroimaging, vision, vestibular function, neuropathology, sensory signal transduction, neural and neuroendocrine receptor signaling, and synaptic and behavioral plasticity. The function of the nervous system is studied in diverse model systems, from 'simple' invertebrates such as the sea snail *Aplysia*, the fruit fly, or the worm *C. elegans*, all the way to complex vertebrates including nonhuman primates and humans.

Students are exposed to an exciting curriculum taught by a nationally and internationally recognized faculty. Required Core coursework is completed in the first year and includes a

course with direct patient contact. Laboratory experience builds on expertise in basic neurobiology, translational neuroscience and clinical neurology and psychiatry, all uniquely integrated with one another due to close apposition of clinical and basic research at The Mount Sinai Hospital and the ISMMS. By this interdisciplinary approach, the PhD program in the Neurosciences provides trainees with the essential tools to assume productive, independent careers in research, education, industry, and/or clinical settings.

Typical Curriculum for the MTA

Year 1 – Fall

Principles of Neural Science, Behavior and Brain Pathophysiology (Unit 1, Systems Neurosci; BSR 1706)

Biostatistics (BIO6400 or MPH0300)

Responsible Conduct in Research (BSR1003)

Neuroscience Journal Club (Selected Topics in Neuroscience - BSR4701)

Translational Neuroscience Seminar (BSR5701)

Lab Rotation (BSR1006)

Year 1 – Spring 1

Principles of Neural Science, Behavior and Brain Pathophysiology (Unit 2, Cellular/Molecular Neurosci; BSR 1705)

Neuroscience Journal Club (Selected Topics in Neuroscience - BSR4701)

Translational Neuroscience Seminar (BSR 5701)

Rigor and Reproducibility (BSR1022)

Lab Rotation (BSR1007)

Year 1 – Spring 2

Principles of Neural Science, Behavior and Brain Pathophysiology (Unit 3, Behav/Cognitive Neurosci; BSR 1707)

Principles of Neural Science, Behavior and Brain Pathophysiology (Unit 4, Mol Pathogenesis; BSR 1708)

Topics in Clinical Neuroscience (includes direct patient contact; BSR 6705)

Neuroscience Journal Club (Selected Topics in Neuroscience - BSR4701)

Translational Neuroscience Seminar (BSR 5701)

Other Course Requirements

Minimum of two additional advanced electives (1-3 credits each) taken at any time during Years 1-4

Neuroscience Journal Club (Works in Progress): Attendance required for Year 1 and Year 2 students; presentations required for Year 2, Year 3, and Year 4 students. All students should register for JC Years 1-4.

Translational Neuroscience Seminar: All students should register each semester and attend as many seminars as possible.

Program Curriculum

Core Curricula

All PhD students must complete a Core Curriculum. The Core Curriculum will vary depending on the training area and the specific PhD degree (Biomedical Sciences or Neuroscience). The Core Curriculum provides the students with a strong set of general concepts and vocabulary that underpins so much of cutting-edge biomedical research in their area of interest.

All MD/PhD take Biomedical Sciences for the MD/PhD Student as their Core Curriculum. This Core has been developed with the unique training needs of the dual MD and PhD degree students.

The majority of students in the PhD in Biomedical Sciences program will complete Biomedical Sciences Core, a yearlong course that consists of six units. They are: (Fall: Enzymes and Metabolism; Genetics and Genomics and Gene Expression and Biological Chemistry); (Spring: Cell Biology; Development and Regeneration and Mechanisms of Disease).

Some students may choose to enroll in the Pharmacology and Therapeutic Discovery (PTD) training area Core course, instead of the BMS Core and some training areas will accept PTD Core as a substitute for BMS Core. This will be decided on an individual basis and will depend on the student's prior course work. It is possible that some training areas will require that the student take all or part of BMS Core in their second year, if they took the PTD Core in their first year. In such a case, the PTD Core may be counted as elective credit.

Students in the Neuroscience PhD program must complete the Neuroscience Core curriculum. See the Neuroscience MTA section of this Handbook for details of that curriculum.

In exceptional cases, students who have had prior graduate level coursework relevant to a Core Curriculum may seek exemption from a core course. Refer to Chapter 1: Policies, Procedures, and Services for information about course waivers and transfer credits.

Seminars and Journal Clubs

Seminars and journal clubs are central to the educational program. The opportunities to regularly encounter scientists and build critical analysis and presentation skills are of major importance. All students are required to participate in seminars and journal club activities during the entire duration of their Program.

First-year students will fulfill the journal club requirement with Introduction to Journal Club (fall and spring semesters) or Neuroscience Journal Club (NEU students) and will generally fulfill the seminar requirement with the Dean's Seminar (fall and spring semesters). They are encouraged to attend additional seminars and journal clubs in areas of their particular interest or in areas that they wish to explore.

Advanced students are expected to participate in the journal club and seminar activities of their MTAs and to participate in laboratory journal clubs and departmental seminars that are recommended by their dissertation advisor.

Teaching

There is no program-wide teaching requirement, but many students seek to take advantage of the opportunities to teach in a variety of modes and settings either because it enforces the mastery of core material, is intrinsically rewarding or because it is a major part of their career plans. Teaching opportunities include: teaching assistantships for the Core courses; teaching assistantships for additional Medical and Graduate School courses; one-on-one tutoring opportunities for graduate or medical courses; tutoring and special teaching programs at the Life Sciences Secondary School with which ISMMS has a special relationship; student mentorships in the RCR course; and student mentorships in the Introduction to Journal Club course.

Advancement to Candidacy

Students will automatically be advanced to candidacy after all the General Program Requirements, the Advanced Coursework for the MTA, and the Thesis Proposal Exam have been successfully completed.

PhD to Master of Philosophy or Master of Science in Biomedical Sciences Transfers

Students who leave the program may be eligible for transfer to the Masters of Philosophy (MPhil) or the Master of Science in Biomedical Sciences (MSBS). degree programs.

Transfer to MPhil

To be eligible for transfer to the MPhil degree, a student must:

◆ be in good academic standing with a cumulative GPA of 3.0 or higher

◆ have successfully submitted and defended the PhD Thesis Proposal, and

◆ completed the form "Request for Transfer from PhD to Master of Philosophy" with all of the required approvals.

If a student has met all of these requirement, he/she will be awarded an MPhil degree. It is important to note that the student's transcript will reflect a withdrawal from the PhD Program and matriculation to the MPhil Program.

Transfer to MSBS

Students leaving the PhD program may be eligible to earn an MSBS. To be eligible for this exit pathway, students should have fulfilled the following criteria:

◆ be in good academic standing with a cumulative GPA of 3.0 or higher

◆ complete the coursework and credits necessary to fulfill all requirements of the MSBS degree

◆ demonstrate mastery of the literature in their field commensurate with a Master's-level student

◆ produce a substantial research portfolio consisting of independently conducted experiments, yielding results, analysis, and conclusions equivalent to a Master's-level thesis

If these criteria are fulfilled prior to the PhD thesis proposal, the student is not required to take and passed the thesis proposal exam

In order to initiate the PhD to MSBS transfer pathway, the student's PhD Advisory Committee must consent to this plan. Consent from the dissertation advisor is not a requirement but should be obtained when strained relations between the PI and student is not a reason for the transfer.

The student must complete Page 1 of the form "Request for Transfer from PhD to Master of Science in Biomedical Sciences" (Page 2 will be completed after the MSBS Thesis is deposited as part of the program checkout process). It is important to note that the student's transcript will reflect a withdrawal from the PhD Program and matriculation to the MSBS Program.

The PI and student, in conjunction with PhD Advisory Committee, will agree on a length of time, not to exceed 60 days, that the student will remain in the lab to finish up experiments and write the MSBS Thesis. During this time the student will continue to receive a stipend. The PI must committee to covering the student's stipend, presumably via the same mechanism that had been supporting him/her prior to the transfer, for the duration of this period.

The student will write and defend an MSBS thesis within the time frame defined in the previous paragraph. The exam committee will consist of the existing PhD advisory committee plus one of the student's MTA Co-directors (if he/she is not already a member of the committee), with the specific Co-Director to be chosen by the student. The student must deposit the thesis within one week of completing the thesis defense

The effective date of withdrawal from the PhD Program and Matriculation to the MSBS program will be the date of the defense, as defined in the above paragraphs. This will allow the student to: 1) receive a stipend; 2) remain in student housing; and 3) receive health insurance.

Once the MSBS Thesis is deposited, the student should complete Page 2 of the form "Request for Transfer from PhD to Master of Science in Biomedical Sciences". Deposition of the thesis also initiates the process of terminating the student's stipend, health insurance coverage and housing. These terminations will proceed as per Graduate School and Real Estate Office policies, which are detailed in other sections of this handbook.

Thesis Proposal and Dissertation Defense/Seminar

Registration/Scheduling

Successful passage of the Thesis Proposal should be completed by the end of the fourth semester (June 30th) for PhD students, and by the end of the sixth semester (June 30th) for MD/PhD students. To schedule the Thesis Proposal (or re-examination), or the Dissertation Defense and Seminar, the dissertation advisor and the student should check the proposed date and time with the Examination Committee members before submitting the appropriate Registration Form to the Registrar's Office. **The student needs to submit an official Registration Form, with the appropriate signatures, to the Graduate School for approval, at least 4 weeks before the scheduled dates of these Examinations**. Failure to register in a timely manner may result in the cancellation of the Examination. If a student does not register for an Examination that is conducted, the Graduate School reserves the right to require a re-examination or to require a notarized statement from the student and the Examination Committee certifying the number of times the student has been examined. The Registrar's Office will forward the appropriate official Voting Form to the Chair of the Examination Committee. This Form has to be signed and returned immediately following the Thesis Proposal (or re-examination), or Dissertation Defense to the Graduate School Office. If the Committee determines that a re-examination must occur, or that revisions must be made to the Thesis Proposal, the details, including a deadline within the allowable time, must be attached to the Voting Form. This information should also be communicated to the student, in writing. In the case of the Defense, if there are revisions to be made, the Graduate School Office will forward the appropriate Revisions Form to the Chair of the Committee.

No extensions will be granted except under extenuating circumstances. Requests for extensions of established Examination deadlines should be made at least one month prior to that deadline. Request for an extension should be made by completing the [Thesis Proposal - Request for Extension](#) form and turning it in to the Senior Associate Dean for Student Affairs; final decision are made by the Dean of the Graduate School. Students who fail to meet the Examination deadlines will be placed on academic probation.

Thesis Proposal

The Thesis Proposal consists of the presentation, written and oral, of a research proposal that is based on the thesis work already begun by the candidate.

The Research Proposal
A. Is based on the student's own work, not that of the dissertation advisor

B. Should allow the student to organize his/her thoughts and plans and place them in perspective

C. Should allow the dissertation advisor and the student's Advisory Committee to assess the level of scientific sophistication of the student

D. Should provide both the student and the Committee a measure against which to determine subsequent progress.

E. The Committee should evaluate the student's ability to:

   a. evaluate and synthesize relevant literature

   b. articulate and elaborate on the aims

   c. show and evaluate preliminary data

   d. discuss experimental design as it applies to work planned.

The Written Document
The written document must be in the format of an NIH F30/31. As such, the document should not exceed 7 pages, excluding references. The Thesis Proposal must be submitted to the Thesis Proposal Review Committee at least two weeks in advance of the Oral Presentation. When writing your Thesis Proposal, it should contain:

A. Specific Aims (1 page): Describe the hypothesis(es) you are testing. What are your research objectives? What conclusions could be made from your findings? Be concise, clear and logical. Provide an approximate timetable for accomplishing these aims. Your aims are the test of your hypothesis

B. Research Proposal (7 pages): The research proposal portion typically includes the following sections -

   a. The research plan should begin with a clear statement of the scientific premise. The purpose of this will be covered in the Rigor and Reproducibility course in Year 1.

   b. Background/Significance: Provide a critical review – evaluate, don't just cite! – of the most pertinent work that raised the question you are answering, spawned the idea for your plans, made your approach feasible, etc. Critically evaluate what others have done. How does your dissertation relate to other problems or areas of biomedical sciences and/or contemporary biology? Identify those concerns. Explain how your hypothesis and planned accomplishment fit. This is an opportunity to relate your plans to the ongoing tradition in science and explain why your work is important.

   c. Preliminary Studies: Describe what you have already accomplished. Where appropriate, provide data, even if preliminary. You do not need an enormous amount of preliminary data; it is far better to take this Examination near the beginning of the project. Explain how these results fit in with your plans.

   d. Research Design and Methods: Describe the primary techniques you will use. Critique them - exactly what will they show? With how much assurance? How will you evaluate them? What kinds of artifacts have been observed or could be expected? Are the methods adequate to test your hypothesis(es)? Can other procedures be applied to achieve the same goals? Why are yours better?

   e. Literature Cited: Not included in the page limit.

C. Formatting Instructions:

   a. Font: Use single-spaced, 11-point Arial font. (A Symbol font may be used to insert Greek letters or special characters; the font size requirement still applies.)

   b. Page Margins: Use at least one-half inch margins (top, bottom, left, and right) for all pages.

D. Figures, Graphs, Diagrams, Charts, Tables, Figure Legends, and Footnotes: You may use a smaller type size but it must be in a black font color, readily legible, and follow the font typeface requirement. Color can be used in figures; however, all text must be in a black font color, clear and legible.

The Oral Presentation
The written proposal must be submitted to the examining committee at least 2 weeks prior to the defense. Since the Committee members will have read the written document before this presentation, the student should use this opportunity to give a brief summary of the particulars of the research and the proposal. This presentation should not be a reiteration of the written proposal and should be limited to 20 minutes, a time limit that should be enforced by the Chair of the Committee. Prior to the presentation, the student

should discuss, with the Chair of the Committee, whether s/he would prefer uninterrupted presentation vs. one in which questions will be asked as they arise during the presentation. If the latter is chosen, the 20-minute time limit does not apply. If the former format is chosen, there will be a questioning period following the presentation.

In either case, the student should be able to answer questions about the specifics of the proposal as well as general knowledge of the field as related to the proposal. The student should be able to defend the rationale for the particular approach(es) being used and explain how this will answer the questions being asked. Potential problems should also be anticipated with alternative approaches that could be used. Students will not be expected to defend these alternatives in great detail.

N.B.

♦ The proposal should be written by the student, not the dissertation advisor. It is the role of the dissertation advisor to guide the student in preparing a coherent, intelligible document to be distributed to the members of the Thesis Proposal Committee. However, the dissertation advisor should also ensure, to the best of her/his ability, that the proposal is an original document and that the language of the proposal is that of the student. Ultimately, it is the responsibility of the student to provide an acceptable document.

♦ The whole proposal should be in the best traditions of scholarship, e.g., identify sources, balance your presentation by including conflicting data and counter arguments, etc. The proposal should convince the Committee that the dissertation project is reasonably important and practicable.

♦ A student should not present tables that are not entirely his/her own work, unless this is unavoidable because the data are necessary to develop the story. In that case, the precise contribution of the student must be made clear and appropriate attribution should be made.

♦ Detailed methods should not be presented for work not actually conducted by the student, including work done by the Core Facilities or other colleagues; such presentations convey the impression that the student actually carried out the procedures.

The Thesis Proposal Committee
The Thesis Proposal Committee is composed of the Thesis Advisory Committee with the possible addition of an MTA co-director or another senior MTA faculty member who will serve as chair of the committee for the Thesis Proposal exam. If an MTA co-director or other senior MTA faculty member are already a member of the Thesis Advisory Committee, no additional members are needed for the Thesis Proposal Committee. If the chair of the Thesis Advisory Committee does not have extensive experience with Thesis Proposal Exams, an MTA co-Director or a senior MTA faculty member (delegated by the MTA co-Directors in consultation with the trainee and their preceptor) will be added to the committee to serve in this role. The chair of the Proposal Committee must meet the same criteria as the chair of the advisory committee. Participation of non-voting members of the advisory committee in the Thesis Proposal exam is optional; if they are present, they must remain silent

The Chair of the Committee must enforce all rules of the Examination, including those pertaining to the role of the dissertation advisor, as outlined below.

In addition, each student is strongly encouraged to discuss the expectations of the Thesis Proposal Committee Chair as they develop their Thesis Proposal. When the student has written the Thesis Proposal, it should be submitted to each member of the Committee at least two weeks before the scheduled presentation. Committee members may reschedule the Examination if not given the appropriate amount of time to prepare. The Chair of the Committee should poll the Committee members prior to the presentation to determine if there are major concerns with the written proposal that would warrant a postponement of the presentation. In the event of a postponement, the Graduate School must receive written notification from the Chair of the Committee of the postponement at least two days prior to the scheduled presentation, with a new scheduled date. A presentation will be recorded as "Unsatisfactory" if the Graduate School does not receive this notification in time (see further details under 'deadline' section).

The meeting should be structured as follows:

1. The thesis adviser should give a summary of the student's progress at the beginning. All committee members should be present for this summary, and the student should not be present.

2. The student should return to the room and the presentation and defense should proceed.

3. Following the defense, the student and thesis adviser should leave the room to allow the committee to discuss the exam results and vote in their absence.

4. The student should then re-enter the exam room WITHOUT the adviser for a private conversation with the committee.

5. The student will then be asked to leave and the advisor will be invited to have a private conversation with the committee as well.

6. Finally, the student and advisor will meet with the committee together for a discussion of the student's performance and the Chair of the Committee will discuss the Committee's decision at that time.

If the Committee determines further work necessary, the Chair will provide this information, in writing, to the student. A copy of this memo, detailing conditions and deadline, must accompany the Voting Form, which should be returned to the Graduate School Office within two days of the proposal presentation. The Chair of the Committee will report the discussion to the dissertation advisor.

It is possible for a Committee to consider a student's performance satisfactory for the oral presentation of the work achieved and work planned, but still consider the written proposal to be inadequate (in detail, style, citation quality, figure/table/legend presentation, etc.). The student may only be permitted one re-take the oral presentation, but the Committee may ask for as many revisions of the written proposal as are necessary to achieve a satisfactory proposal. This process can occur under the supervision of a subcommittee and must be completed before the student can be advanced to Candidacy.

Deadline

All PhD students must complete the Thesis Proposal by the end of their fourth semester in the Program. MD/PhD students must present the Thesis Proposal by the end of the sixth semester in the Program. **If a student fails to meet this deadline, he/she will automatically be placed on Academic Probation**. If Academic Probation is not removed by the end of the next semesters, the student will be dismissed from the program. Under extenuating circumstances, students may request an extension of this deadline by submitting the appropriate form to the Dean of the Graduate School prior to the deadline for successful completion of the Thesis Proposal.

The student whose Thesis Proposal is deemed unsatisfactory will usually be given one opportunity to address the particular area(s) of weakness. The conditions and timing for a re-presentation must be established at the time of the initial presentation. However, it must occur within 4 months of the initial presentation. The information concerning a re-presentation should be communicated to the student and the Graduate School Office, in writing, within two days of the initial presentation. If the student (with support of the mentor) wishes to change the membership of the Re-Examination Committee from that of the Examination Committee, s/he should discuss this with the MTA co-directors and/or the Dean of the Graduate School, prior to registration for the Re-Examination. In rare instances, the Committee may refuse the student the opportunity to redress the Proposal where students who have failed to show sufficient research progress and ability.

Dissertation

Copies of earlier successfully completed Program Dissertations are available for review in the Levy Library. Guidelines for the dissertation deposit can be found on Graduate School Forms website or at the [Levy Library website](#).

Content

A student should not present tables or figures that are not entirely his/her own work unless this is unavoidable because the data are necessary to develop the story; in that case the precise contribution of the student must be made clear. Detailed methods should not be presented for work not actually conducted by the student, including work done by the Core Facilities or other colleagues; such presentations convey the impression that the student actually carried out the procedures.

Students who wish to use published manuscripts in their dissertation must comply with the following standards regarding inclusion of their published work:

A. When a student is first (or co-first) author on a publication he/she can include the entire manuscript as a dissertation chapter. There is no need to rewrite it.

   a. The manuscript must be converted into the proper thesis format - typeset pdfs cannot be included in the dissertation.

   b. Students must obtain copyright permission from the journal if necessary and follow all journal rules regarding inclusion in a dissertation.

   c. When the work represents collaborative research, each chapter should include a page of attributions where the contribution of others are explicitly stated.

B. If a student is a middle author on a published manuscript, the dissertation cannot include the text of the full manuscript. Instead, the student should write a new description of the work that includes only his/her data.

C. A paper that has been submitted, but not yet accepted, can also be used as long as the above guidelines are followed. In addition, the following text should be added to the acknowledgements section of the manuscript: "The data in this paper were used in a dissertation as partial fulfillment of the requirements for a PhD degree at the Graduate School of Biomedical Sciences at Mount Sinai".

The thesis must contain a Statement of Authorship page which is available on the forms website.

The Thesis Dissertation Committee
The Thesis Dissertation Committee is composed of the Thesis Advisory Committee with the addition of an external committee member. The external committee member must be a faculty member at another accredited PhD-granting institution, must not be a faculty member of ISMMS, and must have demonstrable expertise in the area of the student's thesis. Like the committee chair, this member must be someone that does/has not directly collaborated on the project of the student, has no co-authored papers or abstracts with the student, has no financial conflicts of interest with the student or project, and has not supervised any aspect of the work. The external committee member is a voting member of the committee. Participation of non-voting members of the advisory committee in the Thesis Dissertation exam is optional; if they are present, they must remain silent.

When the student has completed the written dissertation document, it must be read and approved by the Dissertation Committee. The student should submit the Dissertation to each member of the Committee as early as possible, but no later than two weeks before the Defense. Committee members may reschedule the Examination if not given the appropriate amount of time to prepare for it. The Committee shall meet with the student for an oral Defense of the Dissertation. Before the final scheduling of the Defense, it is wise to obtain the Committee's approval that the work is complete and appropriately presented. The student must register for the defense with the Registrar using the Dissertation Defense and Seminar Registration form. Once the defense has been registered, the Registrar will provide the Dissertation Defense Voting form. The student must include a Statement of Authorship page with the written document.

Revisions and additional experimental work might be requested by the Dissertation Committee. In either event, the Committee will decide and indicate in writing whether the whole Committee needs to be reconvened to consider the new draft or whether a subcommittee (or just the chair of the Committee) may approve the revised draft.

The mentor may apply to the Graduate School for reimbursement (up to $450) to defray travel expenses for the "outside" examiner. A letter of request, from the dissertation advisor, for the honorarium should be submitted to the Graduate School Office. The letter should include the name of the examiner, his/her social security number and mailing address. If the funds are being used to defray the cost of travel, original receipts should be sent with the letter of request. We will prepare and submit the check request. Unless otherwise instructed, the check will be sent directly to the examiner. If the dissertation advisor/department is covering a portion of the travel expenses, the letter of request should be sent with a check request (and original receipts), prepared by the dissertation

advisor/department, indicating the amount and fund number (with appropriate signature) for the portion covered by the dissertation advisor/department. The Graduate School will complete the request and forward it to Accounts Payable. Unless otherwise instructed, the check will be sent directly to the examiner.

The Defense and Seminar
In addition to the closed session for the oral Defense, each student must present a 45-60 minute seminar on his/her work, open to the ISMMS scientific community. It is the student's and dissertation advisor's responsibility to appropriately announce the seminar to the "public", e.g., via email, at least four weeks prior to the seminar. If the seminar is presented before the oral defense, the examiners should be invited to the seminar, but should be asked to refrain from asking questions, except those that will lead to making the seminar more interactive with the rest of the audience. More intensive questions will be asked in the actual private defense. Note: It is the student's responsibility to check with the particular MTA for the scheduling format of the Defense and Seminar.

Dissertation Deposit
Students should read the Doctoral Thesis Deposit Instructions which can be found on the Graduate School Forms website.

Once a student has successfully defended the dissertation, makes all relevant revisions, and is ready to deposit the Dissertation, s/he should deposit the dissertation electronically according to the instructions in Doctoral Thesis Deposit Instructions document, available from the Library or on the web. Students should submit the Dissertation Defense – Student Checkout form before depositing the dissertation. Failure to do this can result in a delay of the student's graduation.

Students who leave the programs with a Master of Philosophy degree are not required to deposit their thesis with the Levy Library.

The dissertation may be deposited at any time during the year, but the following deposit deadlines and enrollment requirements determine the date of the degree.

For the degree to be awarded:	You must deposit by:	And be enrolled during the:
September 30	September 15	Preceding Spring semester
January 31	January 15	Preceding Fall semester
May (ISMMS graduation date)	April 15	Current spring semester

The degree is awarded on September 30, January 31, or the date of ISMMS's annual Commencement in May. Students depositing by the January or April deadline will receive their diploma at Commencement. Those students who have a dissertation or thesis defense scheduled between April 16th and June 15th MAY be eligible to participate in the spring Commencement ceremony even though they have not met the April 15th thesis/dissertation deposit deadline. In cases where a student is allowed to participate, he/she will not receive a diploma at graduation. Instead, a diploma will be awarded on the conferral date (September 30th, of January 31) following the successful defense. Only students in good academic standing will be offered this courtesy. In this case, good academic standing

means that all coursework has been completed with passing grades and the student's mentor/committee fully expect the student will successfully defend his/her thesis/ dissertation prior to June 15th. If either of these criteria is not met, the student will not be allowed to participate in the spring graduation ceremony.

Additionally, any student whose written document or oral defense was not acceptable to their committee will not be allowed to participate in Commencement until after successfully defending and depositing.

By March 1, students must notify the Registrar of their intent to deposit their thesis on or before the April or September deposit deadlines in order to be included in the Commencement exercises of that year. Commencement information will be sent during the spring semester to the student's ISMMS email address recorded with the Graduate School Office.

If a student fails to deposit their thesis by the end of their seventh year in the PhD program (6th PhD year for MD/PhD students), their dissertation advisor must petition the Dean of the Graduate School in writing for permission to extend their student status. The petition must include a timetable for completing the dissertation and must also be signed by the student.

It is the dissertation advisor's responsibility to inform the Graduate School Office, in a timely manner, the expected date that financial support will be terminated.

PhD students can maintain student status, with the stipend and health benefits covered by the dissertation advisor, after the defense, according to the following timetable:

Defense result	Student status can be maintained up to
No revisions	5 weeks
Minor revisions	5 weeks
Major revisions	8 weeks

Exceptions to this schedule will only be considered under extenuating circumstances. The dissertation advisor must request this in writing to the Dean of the Graduate School.

Program Alumni

ISMMS is proud of its alumni. Most of the students who complete the PhD program pursue a postdoctoral research- training period before entering a more permanent position and most of the MD/PhD graduates complete a residency and/or fellowship. The faculty of the program actively assists and guides the students in identifying an optimal position.

After the immediate postdoctoral work, our graduates have gone on to a gratifying array of research positions in academic, medical, and industrial settings. Alumni of ISMMS's Graduate School, both PhD and MD/PhD, hold faculty positions at colleges and universities around the country, including Barnard, City University of New York, Columbia University, Cornell Medical School, Duke University, Einstein College of Medicine, Harvard, McGill University, Medical College of Virginia, ISMMS, New York Medical College, New York University, New York University College of Medicine, Northwestern, Ponce School of Medicine (Puerto Rico), Rutgers University, St. Joseph College, SUNY Upstate, Tuskegee Institute, UC Davis, UCLA, University of Colorado Medical Center, University of Connecticut, University of Indiana, University of Massachusetts, University of Medicine and Dentistry

of New Jersey, University of Minnesota, University of North Carolina, University of Pennsylvania, University of Pittsburgh, University of Texas, University of Washington, Williams College, and Yale University. Several of our alumni are working in distinguished research institutes such as the National Institutes of Health and Fox Chase. Our alumni are similarly well represented in research laboratories of major pharmaceutical and other industrial firms, such as Advanced Tissue Sciences, Alliance Pharm, Amgen, Astra, Bristol-Myers Squibb, Dupont-Merck, Eli Lilly, Enzon, Inc., Genetix Pharm, Hewlett-Packard, Immunomedia, Incstar, Metpath, Novartis, Oncogene Science Inc., OrthoBiotech, OrthoLogic, Otsuka-America Pharm, Proctor & Gamble, Schering-Plough, Sephcor, Smith-Kline Beecham Pharm, Trophix Pharm and Wyeth-Lederle. In addition, ISMMS graduates have gravitated towards science writing, patent law, business aspects of science, and public policy areas. Some of the students who complete the PhD program at ISMMS find that their interests have become clinically oriented. For such students, the natural next step is sometimes medical school. A number of our PhD alumni have accordingly gone on to excellent medical schools, including ISMMS, ultimately pursuing careers in academic medicine.

The Graduate School maintains a close relationship with its graduates. Periodically, alumni return to participate in teaching or seminar activities. They join us during site visits and retreats and report on their activities with enjoyable regularity. The Graduate School alumni are invited to join the Associated Alumni of the Mount Sinai Medical Center, and they receive a quarterly bulletin that includes alumni and institutional news. The Graduate School alumni helped establish an emergency fund to help current students in the event of an emergency financial need. They have also been helpful in bringing job opportunities at their current institutions to the attention of our students and more recent graduates.

The Graduate School has developed an online alumni database for its PhD and MD/PhD graduates. Alumni can view their information and update it as often as it is needed.

Alumni Association Membership

The ISMMS Alumni encompasses graduates of the Medical School and the Graduate School of Biomedical Sciences, former interns, residents and fellows, as well as past and active members of the basic science and clinical faculty. The association is dedicated to promoting enduring relationships among members, furthering ISMMS's educational and charitable endeavors, and promoting scholarship for students and physicians-in-training. Senior students will be asked to enroll in the association upon graduation, and will receive all benefits of membership, but will not be expected to become dues-paying members of the Alumni Association until postgraduate training is completed. The Student Council selects a member to serve as student liaison to the Alumni Executive Board; however, student input and participation in alumni-sponsored programs and activities is always encouraged. The Alumni Office is located in the plaza of the Annenberg Building. Students are welcome to visit the office at any time to speak with staff.

General PhD Program Requirements

The maximum time limit for the completion of all requirements for the PhD degree – The maximum registered time by which a PhD student must complete all doctoral requirements is 7 years. By the end of their 6th year in the PhD programs, students must have successfully held an advisory committee meeting at which the committee has signed the Progress Form indicating that the student is planning to defend his/her dissertation in the next 3-6 months. If this step does not occur by the end of the 6th year, the student's dissertation mentor must petition the Dean in writing for permission to extend the student's status. The petition must include a written certification of progress from the student's advisory committee that must be signed by the student. The petition must include a timetable for completing the dissertation and must also be signed by the student.

Upon entry into the 6th year of a PhD program a student can no longer switch labs. If at end of the 6th year, the PI, advisory committee, and CAR do not think sufficient progress has been achieved, and the PI won't continue supporting the student, the student will be dismissed from the program.

Students who do not deposit by April 15 will participate in the graduation ceremony of the following year.

All students must be full-time.

All students are required to develop a research project, under the supervision of one or more faculty members, which results in a thesis that reports the new findings, and is presented, defended and deposited. All students must successfully complete all other degree requirements that are part of the training program. The choice of the research laboratory, through a series of laboratory rotations (BSR1006 and BSR1007) and academic credit for the thesis project (BSR8000 and BSR9000) are part of each student's academic program.

First Year

Satisfactory completion of the initial General Program Requirements (i.e., excluding advanced coursework and seminars) will be evaluated at the end of the first year in the Program:

General Core-Curriculum Requirements

	Core Tracks	Course Title	Comment
Select one of three Core Tracks	**Biomedical Sciences Core**	BMS-1 (Fall)	
		BMS-2 (Spring)	
	Systems Biomedicine Core	Systems Biomedicine (Fall)	
		Quantitative Graduate Physiology (Spring)	Select two of the three Spring courses
		Structural and Chemical Approaches to Pharmacology and Drug Discovery (Spring)	
		Systems Biology: Biomedical Modeling (Spring)	
	Neuroscience Core	Unit 1: Systems Neuroscience	
		Unit 2: Cellular and Molecular Neuroscience	
		Unit 3: Behavioral and Cognitive Neuroscience	
		Unit 4: Pathophysiology of Neurological and Psychiatric	
Other Required Courses		Biostatistics for the Biomedical Researcher (either BIO6400 or MPH0301)	
		Responsible Conduct of Research	Attendance and participation in all sessions is required
		Rigor and Reproducibility	Attendance and participation in all sessions is required
		Laboratory Rotation	

Academic Standard for the Core Curriculum
In order to successfully complete the Core Curriculum, the student must achieve an average grade of at least B (3.0) in the Core course(s). Details about calculating GPA are provided in Chapter 1, section entitled "Academic Policies and the Registrar's Office".

NB The GPA is computed to two decimal points and is not rounded off.

Some MTAs require their students to take a Core III course. In such cases, Core III will then be weighted equally with the Biomedical Sciences course to determine if the student has achieved the required B (3.0).

Any student who fails to meet this requirement will be reviewed by the Graduate School's Committee for Academic Review. Dismissal from the program is a possible consequence of this review.

CHAPTER 4 – MD/PhD Program

MD/PhD Program Description
Program Director

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Program Manager

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Program Goals/Objectives

The mission of the MD/PhD program is to train future altruistic and ethical leaders in science and medicine who are committed to making translational and transformative biomedical discoveries.

Program Website

http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/md-phd-program

Program Description

The MD/PhD Program at ISMMS offers a select group of students the training required to pursue leadership opportunities in academic investigative medicine. The program offers each student diverse opportunities in an outstanding research environment that is integrated with a well-rounded, nationally acclaimed medical education. Our program has been continuously funded by the NIH's Medical Scientist Training Program (MSTP) since 1977.

MD/PhD Program Requirements

Course Requirements

Medical School Year 1 (MD1)

Graduate School Courses:

A. Problem Solving in Biomedical Sciences (PSBS) – an MD/PhD Program-specific course taken during the summer preceding MD1.

B. *Core Curriculum* – All students must complete an MD/PhD Program-specific core curriculum concurrent with the first year of medical school. In the fall semester, the MD/PhD specific Biomedical Sciences for MD/PhDs - Fall is taken along with the medical school course Molecular, Cellular and Genomic Foundations (MCG). Graduate school credit will be for the MCG as part of the BMS for MD/PhD course. In the spring semester, students take Biomedical Sciences for MD/PhDs.

C. Medical Scientist Grand Rounds (MSGR)

D. Responsible Conduct of Research (RCR) for MD/PhDs (alternatively can be taken in MP1, first year of the PhD phase)

E. Rigor and Reproducibility (alternatively can be taken in MP1, first year of the PhD phase)

Medical School Courses:

A. Register for all medical school year-1 courses.

Medical School Year 2 (MD2)

Graduate School Courses:

A. Medical Scientist Grand Rounds (MSGR)

Medical School Courses:

A. Register for all medical school year-2 courses.

Graduate School Year 1 (MP1)

Graduate School Courses:

A. MTA-specific Seminar Series

B. MTA-specific Journal Club

C. Biostatistics –All student are required to take a biostatistics placement test prior to the start of the first semester of MP1. Those students with high enough scores, will be eligible to take Advanced Biostatistics (BIO6400). All others will take MPH0300 and BSR1025.

D. Medical Scientist Grand Rounds (MSGR)

E. Advanced electives as per MTA requirements

F. Independent research

G. Thesis Proposal Exam - must be completed by June 30 of the sixth semester (year MP1).

Medical School Courses:

No medical school courses are taken at this time

Graduate School Year 2 and beyond (MP2+)
Graduate School Courses:

A. MTA-specific Seminar Series

B. MTA-specific Journal Club

C. Advanced electives as per MTA requirements

D. Independent research or, once a student has passed the Thesis Proposal Exam, he/she will register for Doctoral Dissertation Research instead of Independent Research.

E. Medical Scientist Grand Rounds (MSGR) – required through the PhD years. Students writing their PhD dissertation may apply to the Director to be excused from this course

Medical School Courses:
No medical school courses are taken at this time.

The PhD work is usually completed during the three to four years after the initial two years of the Medical School and Graduate School coursework. The student will complete the final clinical training component of the Medical School curriculum after the doctoral dissertation has been successfully completed. During the PhD phase, students are encouraged to build upon the pathophysiologic and clinical diagnosis material already mastered through continued clinical exposures, through participation in EHHOP and other activities.

Prior to Reentering Medical School Curriculum
During the final year of PhD phase, students will participate in an intensive Clinical Refresher Course. This will involve both inpatient and outpatient exposure with specially chosen clinical mentors. Students can take maximal advantage of the flexibility of timing for entry into the clinical clerkships to complete the total Program without "down time" and also position the major clinical work in closest juxtaposition to the postgraduate residency training that most MD/PhD students elect after graduation.

MD/PhD students will not be permitted to begin the third year of the Medical School curriculum after the PhD period of work unless the dissertation is **both defended and deposited**. Rare exemptions could be granted based on approval by the MD/PhD Program Director. The responsibility for open, realistic and careful planning is shared by the student and dissertation advisor.

Medical School Years 3 and 4 (MD3 & MD4)
MD/PhD students who return to the third year of medical school must complete the same clinical requirements as other medical students during a period of two years that includes a significant amount of elective time. The clinical clerkships take advantage of ISMMS's superb facility and the diversity of experience provided by our affiliated hospitals -- e.g. Elmhurst, Bronx VA, North General, Queens General, St. Barnabas-NJ, Englewood, Cabrini, etc. -- as well as in the community settings, physicians' practice groups, and ISMMS's own outpatient settings. That assignment is usually by lottery, but MD/PhD students who have a Program-related reason to request a specific rotation will be accommodated. Careful

planning, in consultation with the clinical advisors and MD/PhD leadership, will afford students the smoothest transition back to clinical medicine. Some flexibility also exists so that elective time may be shifted to the beginning of an academic year to allow an MD/PhD student to finish up experimental or dissertation work. Thus, students may enter clerkships at various times until October. Many students will have completed the requirements without loss of any or a substantial amount of clinical elective time. They may, and often do, choose to spend some of that elective time in the laboratory, continuing offshoots of their projects. Other students have used a portion of their elective time during the final phase of the MSTP to explore research programs elsewhere, e.g., at the NIH. Students entering the fourth MD year should investigate the USMLE time limit set by some states for taking Step II. Students should check the USMLE website (www.usmle.org) for further details. MD/PhD students should refer to the Medical Student Handbook for further details on the USMLE, information on clinical career choices and residency programs.

Annual MD/PhD Retreat

Each year, the MD/PhD Program sponsors a Retreat. The retreat is planned by a committee led by students and MD/PhD Program leadership. The annual MD/PhD Retreat is held off site during a weekend in the fall. Activities include a keynote address by an internationally prominent scientist, a State of the Program presentation by the MD/PhD Program Director, an alumni discussion panel, a poster and oral platform session, and small group breakout sessions focused on issues relevant to specific stages of training (preclinical, graduate, clinical). Time is set aside for recreational activities such as hiking, bike riding or swimming. Attendees at the Retreat typically include the Program Directors, faculty involved in MD/PhD education, alumni and students.

Milestones
MSTP milestones by year

Summer before Year 1

Milestone	Deadline
❑ **Identify first laboratory rotation before arrival (Director's approval required) and complete laboratory rotation agreement**	June 15 (before matriculation)
❑ **Assignment of pre-clinical advisors**	By end of Summer
❑ **Laboratory Rotation Presentation; complete lab rotation evaluation with summer mentor**	Early Aug (date varies)
❑ **Meet with MTA director**	August 1
❑ **Meet with Faculty Advisor**	September
NOTE: Vacation is taken before starting in program • **Problem Solving in Biomedical Science (PSBS) course (summer)** • **First laboratory rotation (summer)**	

YEAR 1 – MD1

Milestone	Deadline
❑ **InFocus 1 First Year MD/PhD summer rotation planning meeting**	October (date varies)
❑ **Meet with Director to discuss progress and rotation choices for upcoming summer (Dec 1 – Jan 31)**	Feb 1
❑ **Identify second/third rotations (Director's approval required) and complete laboratory rotation agreement**	March 1
❑ **Complete Individual Development Plan for MD/PhDs (IDP for MD/PhD)**	May 1
Required Courses and Events • **Annual MSTP Retreat** • **Medical school courses** • **Biomedical Sciences (BMS) for MD/PhD Fall/Spring Courses** • **Responsible Conduct in Research (RCR) (can also be taken in MD2, MP1)** • **Rigor and Reproducibility (R&R) (can also be taken in MD2, MP1)** • **Medical Scientist Grand Rounds (MSGR) ~8 sessions per year**	

Milestone	Deadline
❑ **InFocus 1 First Year MD/PhD summer rotation**	

YEAR 2 – MD2

Milestone	Deadline
❑ **Complete Second and Third Laboratory Rotations/ Laboratory Rotation Presentation**	Early Aug
❑ **Fall Preclinical Advisor meeting**	November 1
❑ **Dinner meeting with Director and PhD phase students to discuss preparation for USMLE Step 1**	Mid-Feb (date varies)
❑ **Meet with Director to discuss selection of PhD mentor (Sept – Feb)**	Feb 15
❑ **Submit form to Declare MTA / mentor (Director's approval required)**	March 1
❑ **Complete Individual Development Plan for MD/PhDs (IDP for MD/PhD)**	May 1
❑ **Take USMLE Step 1**	June 30
Required Courses and Events • **Complete second/third rotations (summer between first and second year)** • **Summer vacation: 2 weeks after Rotation Presentation day (end of rotations)** • **Medical school courses** • **Annual MSTP Retreat** • **Biostatistics (can also be taken in MP1); waiver Exam optional (grade 85 or above = pass)** • **RCR (might have been taken in MD1)** • **MSGR ~ 8 sessions per year**	

YEAR 3 – MP1

Milestone	Deadline
❑ **Start in lab**	July 15
❑ **With PhD mentor, identify and invite Advisory Committee members (check with MTA Co-Directors for guidelines) by end of summer**	Aug 30
❑ **Annual MSTP Retreat – abstract, poster presentation** *encouraged*	Sept
❑ **Lab Coat Ceremony for those entering the lab**	Sept
❑ **Organize and meet with thesis committee *at least once* prior to thesis proposal exam.**	Oct - Mar
❑ **Review and Revise Individual Development Plan for MD/PhDs (IDP for MD/PhDs) – complete online, discuss and have signed by advisor, and submit to Graduate School office**	May 1
❑ **Thesis Proposal Exam**	June 30
❑ **Thesis Advisory Committee Meetings: 1 per semester following thesis proposal exam**	Fall-Spring
Required Courses and Events • **Summer vacation: 2 weeks following STEP I (mentor begins to pay stipend after the 2 week vacation)** • **MTA-specific courses** • **MSGR ~8 sessions per year** • **RCR (if not already taken)** • **Thesis Advisory Committee Meeting (twice per year)** • **Thesis Proposal Registration (at least 4 weeks prior to Thesis Proposal Exam)** • **Thesis Proposal Exam by June 30 (extension requires MSTP Director approval)** • **If applying for F30/F31: request Program Description letter from MSTP Director** • **Submission of F30/F31 application (strongly recommended)**	

YEAR 4 – MP2

Milestone	Deadline
❑ **Annual MSTP Retreat – abstract, poster presentation required**	Sept 1 (abstract due in mid Aug)
❑ **Lab Coat Ceremony – presentation of a plaque for students who've defended their thesis proposal**	Sept (date varies)
❑ **Review and Revise Individual Development Plan for MD/PhDs (IDP for MD/PhDs) – complete online, discuss and have signed by advisor, and submit to Graduate School office**	May 1
❑ **Thesis Advisory Committee Meetings 1 per semester**	Fall-Spring
Required Coursework and Events • **Advanced MTA coursework** • **Thesis Advisory Committee Meeting (twice per year)** • **MSGR ~8 sessions per year** • **If applying for or resubmitting F30/F31: request Program Description letter from MSTP Director** • **Submit F30/F31 application (new or resubmission, strongly recommended)** • **2 weeks of vacation to be arranged with mentor**	

YEAR 5 – MP3

Milestone	Deadline
❑ **Planning Meeting for MD3 Re-entry (for MP3 and MP4 students and mentors)**	Early Sept
❑ **Annual MSTP Retreat – abstract, poster presentation required**	Sept (abstract due in mid Aug)
❑ **Review and Revise Individual Development Plan for MD/PhDs (IDP for MD/PhDs) – complete online, discuss with and have signed by advisor, and submit to Graduate School Office**	May 1
❑ **Planning Meeting for MD3 Re-entry (for MP3 and MP4 students and mentors**	September 15
❑ **Thesis Advisory Committee Meetings 1 per semester**	Fall-Spring
Required Coursework and Events • **Clinical Refresher is required for all students planning to return to MD3 (April – May)** • **Advanced MTA coursework** • **Thesis Advisory Committee Meeting (twice per year)** • **MSGR ~8 sessions per year** • **Possible early PhD Thesis defense (if so, refer to MP4 instructions)** • **2 weeks of vacation to be arranged with mentor**	

YEAR 6 – MP4

Milestone	Deadline
❑ **Annual MSTP Retreat – abstract, poster presentation required; oral presentation by ~4 students (invited)**	Sept (abstract due in mid Aug)
❑ **Planning Meeting for MD3 Re-entry (for MP3 and MP4 students and mentors**	Sept
❑ **Thesis Committee Meeting to discuss thesis defense**	Dec 15
❑ **January Re-entry Planning Meeting**	End of Jan (date varies)
❑ **Meeting Faculty Advisor for Re-entry planning**	During month of Feb
❑ **Lottery Planning Meeting**	End of Feb (date varies)
❑ **Enter lottery**	
❑ **Elective registration**	tba
❑ **Register for Clinical Refresher Course**	End of Feb (date varies)
❑ **Review and Revise Individual Development Plan for MD/PhDs (IDP for MD/PhDs) – complete online, discuss and have signed by advisor, and submit to Graduate School office**	May 1
❑ **Schedule PhD Thesis defense (strongly encouraged that the defense take place prior to April 1)**	May 1
❑ **Deposit Dissertation**	June 15
❑ **InFocus6 (formally known as Clinical Skills Week) - full time re-entry into MD3**	Last week of June (date varies)
Required Courses and Events • **Advanced MTA coursework** • **Thesis Advisory Committee Meeting (twice per year)** • **MSGR ~8 sessions per year** • **Prepare for reentry to medical school** • **PhD Thesis defense** • **Clinical Refresher Course (April through first week of June)** • **Note: please schedule 2 weeks of vacation mid-June (between end of Clinical Refresher and start of InFocus6)**	

YEAR 7 – MD3

Milestone	Deadline
❑ **Review and revise [IDP for MD/PhDs](#) with MSPE meetings (no signature required)**	May 1
Required Courses and Events • **MD3 clerkships** • **Collect letters for Residency Applications** • **Spring: meet with Faculty Advisor re: MSPE and MD4 planning** • **Compile materials for MSTP Director letter meeting (CV/biosketch, IDP, description of research, optional: mentor letter)** • **MD4 Schedule Planning** • **Elective planning and registration** • **Registration for USMLE Step 2** **Note: in order for your MSPE to indicate your name as Dr., you need to have deposited your thesis by June 15 of the summer prior to MSPE release.**	

❑ **Review and revise [IDP for MD/PhDs](#) with MSPE meetings (no signature required)**

YEAR 8 – MD4

Milestone	Deadline
❑ **Meet with MSTP Director for Research letter component of MSPE (May-July)**	July 15
❑ **Review and revise [IDP for MD/PhDs](#) (no signature required) / Exit Survey**	May 1

Required Courses and Events
- **USMLE Step 2 CS and CK (summer between year 7 and 8)**
- **Meet with faculty advisor re: MSPE (Spring/Summer)**
- **Collect letters for Residency applications (if applying)**
- **Meet with MSTP Director to discuss content of MSTP Research letter for MSPE**
- **Write personal statement for Residency applications**
- **Assemble and submit residency applications**
- **MD4 clerkships and electives**
- **Residency Interviews**
- **Match (March)**
- **Reception for graduating MSTP students**
- **Participate in panel discussion "Residency and Beyond" at MSGR (April)**
- **Commencement (mid-May)**

Maximum Time to Degree

The maximum time limit for completion of all requirements for the PhD and MD degrees is ten years after matriculation into the MD/PhD Program.

Students who do not meet these deadlines will be subject to disciplinary action, up to and including academic probation and expulsion.

Graduation Requirements

♦ Complete a minimum of 72 graduate credits

♦ Maintain a minimum cumulative GPA of 3.0 and achieve a cumulative GPA of 3.0 for all of the Core Curricula. Complete all medical school courses and clerkships with a passing grade.

♦ Complete a written dissertation.

♦ Successfully defend the dissertation orally

MD/PhD Program Admissions

ISMMS is widely recognized for its excellence in education, basic and clinical research, patient care and service to our community. ISMMS Medical Scientist Training Program (MSTP; MD/PhD Program) is an NIH-funded program that attracts individuals of diverse backgrounds who have the ability and potential to become researchers, scholars, and medical practitioners dedicated to excellence in their chosen career paths. Applicants for admission are considered based on their total qualifications. Factors considered include intellectual capability, academic achievement, motivation and potential for a career in the sciences, enthusiasm for shaping self-directed learning, personal maturity, and conformity to the School's standards of character. All decisions are made on the basis of merit and without discrimination.

All offers of admission to ISMMS are provisional, pending receipt and evaluation of final transcripts. Transcripts must be sent directly from the appropriate Registrar's Office to the ISMMS Admissions Office. These and all other materials requested by the Registrar in conjunction with the admissions process must be received to complete a student's enrollment. Submission of false or misleading information in the application materials or in connection with the application process will be considered by the Admissions Committee and/or the Committee for Academic Review as grounds for withdrawal of the acceptance offer, dismissal, or rescission of degree.

Extramural applicants who have decided to pursue studies towards both degrees first apply to the ISMMS through the AMCAS application. They elaborate on their interest in the MD/PhD program on a supplemental application form and by submitting the research-oriented MD/PhD online application form as part of the Medical School application packet. In addition to the minimum subject requirements for admission to the Medical School, the applicant must have research experience and should have taken advanced courses in science (e.g., physical chemistry, genetics, biochemistry). The MD/PhD application form is the only written material that must be submitted in addition to the application materials to the Medical School. We require letters from research mentors in addition to the 3 letters required by the medical school (that may include a committee letter) and MCAT scores.

Based on the application materials, a group of highly qualified applicants will be selected for interview. Admission to the MD/PhD program requires acceptance by the MD/PhD Admissions Committee. An applicant may be admitted to the Medical School without being admitted to the MD/PhD Program.

Medical School students who are considering adding a PhD to their studies, but who are not yet sure about matriculation into the MD/PhD program, may consider applying to the dual program during the first or second year in the medical school. Such students should identify themselves to the MD/PhD Program Director as early as possible. However, in making decisions about acceptance into the MD/PhD Program, preference is given to students who have not yet matriculated into medical school.

Applicants must be citizens of the United States or must hold a Green Card to be considered for the MD/PhD Program.

The deadline for receipt of completed application packets is November 1 but early submission is highly recommended.

Important Dates

- June 1 – AMCAS application opens

- October 15 – AMCAS primary application deadline

- November 1 – MD/PhD supplemental application deadline

- October through mid-December – Candidate interviews

- Mid-January – Admissions decisions are made

- April 30 – Final matriculation decisions due

- End of June/Early July – Matriculation into the MD/PhD Program

MD/PhD Program Details

For programmatic details pertaining to the PhD training phase of the MD/PhD program, refer to "Chapter 3 – PhD Program". For details regarding the MD phase of training, refer to the Medical Student Handbook.

CHAPTER 5 – Clinical Research Education Programs

Clinical Research Education Program (CLR) Leadership and Administration

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Section 1: Clinical Research Education Program Description

The Clinical/Translational Research Training Programs (CLR programs) of The Mount Sinai Graduate School of Biomedical Sciences are designed to foster the development of future leaders in patient oriented research. These training opportunities are intended to encourage the development of critical thinking necessary to conduct innovative hypothesis driven, independent and collaborative clinical/translational scientific research, in an effort to improve patient care and the wellbeing of society. In particular, we hope to enhance the research opportunities of clinical scientists as well as enhance the ability of basic scientists to better position themselves to translate the promise of their respective discoveries into the clinical arena, in a meaningful way with significant impact.

A rigorous curricular foundation designed to promote an in depth understanding of research methodologies and processes essential to translating the promise of scientific discovery into solving problems of disease is central to these educational initiatives, and forms the basis of our Certificate Program, Master of Science in Clinical Research, and PhD in Clinical Research.

The Clinical Research Training Program (CRTP) is an introductory, 1 year, part-time certificate version of the MSCR program which includes the core coursework without a Master's Thesis requirement or 2nd year research seminars and journal club.

The Masters of Science in Clinical Research (MSCR) is a 2 year program that provides an exceptional educational experience to outstanding candidates interested or already working in the health care professions. The MSCR program instills the knowledge, skills, and experience to successfully launch clinical and/or translational research-intensive careers. The MSCR has two main components: 1) graduate courses including biostatistics, epidemiology, research design, data analysis, informatics, bioethics and grant writing; and 2) a mentored clinical research project leading to a Master's thesis. The program is designed to be completed in 2 years

Our students also have the option to specialize in our Translational Oncology track which is offered within the MSCR program and consists of the core MSCR classes in addition to specific courses in Translational Oncology

The PhD in Clinical Research (PhDCR) is designed for outstanding candidates interested in or actively pursuing a health profession who desire a more intense educational experience to prepare for a career in clinical or translational research. The program provides a strong didactic foundation combined with a mentored clinical research experience leading to a doctoral degree in Clinical Research. Candidates for the PhD program must already possess an advanced degree (masters or equivalent) to be considered for the program

Three tracks/training areas are offered within the PhD in Clinical Research Program:

A. Translational Research: Bench to Bedside

B. Clinical Trials Research

C. Population, Outcomes and Implementation Research

Within the context of these specific tracks, students may choose to develop an area of concentration or focus, developing specific expertise in:

- ◆ General Clinical Research

- ◆ Health Services Research & Health Policy Research Behavioral Research & Cognitive Tools Biostatistics: Quantitative and Qualitative Methods Epidemiology: Basic, Molecular and Clinical Informatics & Bioinformatics

- ◆ Outcomes Research Ethics

- ◆ Genomics & Personalized Medicine Drug Development

- ◆ Clinical Trials Research Translational Science

These areas of special focus build upon strengths reflective of the ISMMS, Graduate School of Biomedical Sciences, and Mount Sinai's Institutes and Departments.

Mission Statement

The mission of the Clinical Research Education Program is to:

1) Provide rigorous training and mentorship in patient-oriented clinical and translational research for outstanding candidates

2) Facilitate the development of critical thinking and analytical acumen

3) Stimulate the acquisition of knowledge regarding specific research methodologies, to position one to better translate the promise of discovery science to solve problems of disease

4) Prepare graduates to be informed participants in impactful collaborative Team Science to improve human health

Statement of Values

The Clinical Research Education Program, of ISMMS and Graduate School of Biomedical Sciences, is dedicated to improving the health of individuals and communities. The Program is based on the following core values:

Sound Science: We value the use of the scientific method to solve problems of disease and improve the health of individuals and the society at large.

Community: We aspire to create a community of practice among our trainees at different stages of development, who in partnership with a range of stakeholders, are committed   to harnessing discovery science to improve human health

Diversity: We strive to instill appreciation and regard for our differences and incorporate dedicated curriculum to assure our trainees achieve the cultural competencies necessary to understand and respect diverse populations.

Social Justice: We cultivate a training environment that encourages investigative efforts to reduce health disparities

Teamwork: We value working with others through cooperation and collaboration using interdisciplinary, multidisciplinary and trans-disciplinary teams in education and research.

Professionalism & Responsible Conduct: The Clinical Research Education Program adheres to the medical educator code of conduct and the (medicinal & graduate) Code of Conduct outlined in the ISMMS Medical Student Handbook, which applies to all students at ISMMS and Mount Sinai Graduate School of Biomedical Sciences.

Responsible Conduct of Research

Requirements for Coursework on Responsible Conduct in Research (RCR)

The requirement by NIH, for investigators to have "face to face" training in Responsible Conduct of Research (RCR) can currently be met by completing the following core courses. These courses are part of the MSCR and PhD curriculum and utilize case based

discussions which is strongly encouraged by the NIH. The courses should be taken in the appropriate sequence as outlined in the degree program checklists.:

A. CLR0016 – Spectrum of Methods in Clinical Research II

B. CLR0017, CLR0018, and CLR0019 – Clinical and Translational Research Journal Club and Seminar series

C. CLR0700 – Professionalism and Ethical Issues in Clinical Research

Program Competencies

The Clinical Research Education Program supports the advancement of integrated and interdisciplinary education, training, and career development in Clinical and Translational Science. NCRR, in collaboration with the CTSA Education and Career Development Key Function Committee, formed the Education Core Competency Work Group to define the training standards for core competencies in clinical and translational research. The work group's final recommendations for core competencies include 14 thematic areas that should shape the training experiences of junior investigators by defining the skills, attributes, and knowledge that can be shared across multidisciplinary teams of clinician-scientist. The Clinical Research Education Program has recently adopted these program competencies for all students.

The Program uses these thematic competencies to guide overall program learning objectives, overall curriculum development, and course specific learning objectives. Students will be expected to achieve proficiency in these thematic areas in the course of class work, the, seminars, journal club, independent study and through the Master's Thesis and/or PhD dissertation. Attainment of these respective competencies will be assessed through the satisfactory completion of course work

Core Competencies in Clinical and Translational Research Core Thematic Areas Competencies are outlined as follows:

A. CLINICAL AND TRANSLATIONAL RESEARCH QUESTIONS

♦ Identify basic and preclinical studies that are potential testable clinical research hypotheses.

♦ Identify research observations that could be the bases of large clinical trials.

♦ Define the data that formulate research hypotheses.

♦ Derive translational questions from clinical research data.

♦ Prepare the background and significance sections of a research proposal.

♦ Critique clinical and translational research questions using data-based literature searches.

♦ Extract information from the scientific literature that yields scientific insight for research innovation.

B. LITERATURE CRITIQUE

♦ Conduct a comprehensive and systematic search of the literature using informatics techniques.

♦ Summarize evidence from the literature on a clinical problem.

♦ Describe the mechanism of a clinical problem reviewed in a manuscript.

- Use evidence as the basis of the critique and interpretation of results of published studies.

- Identify potential sources of bias and variations in published studies.

- Interpret published literature in a causal framework.

- Identify gaps in knowledge within a research problem.

C. STUDY DESIGN

- Formulate a well-defined clinical or translational research question to be studied in human or animal models.

- Propose study designs for addressing a clinical or translational research question.

- Assess the strengths and weaknesses of possible study designs for a given clinical or translational research question.

- Design a research study protocol.

- Identify a target population for a clinical or translational research project.

- Identify measures to be applied to a clinical or translational research project.

- Design a research data analysis plan.

- Determine resources needed to implement a clinical or translational research plan.

- Prepare an application to an IRB.

D. RESEARCH IMPLEMENTATION

- Compare the feasibility, efficiency, and ability to derive unbiased inferences from different clinical and translational research study designs.

- Assess threats to internal validity in any planned or completed clinical or translational study, including selection bias, misclassification, and confounding.

- Incorporate regulatory precepts into the design of any clinical or translational study.

- Integrate elements of translational research into given study designs that could provide the bases for future research, such as the collection of Biomedical specimens nested studies and the development of community-based interventions.

E. SOURCES OF ERROR

- Describe the concepts and implications of reliability and validity of study measurements.

- Evaluate the reliability and validity of measures.

- Assess threats to study validity (bias) including problems with sampling, recruitment, randomization, and comparability of study groups.

- Differentiate between the analytic problems that can be addressed with standard methods and those requiring input from biostatisticians and other scientific experts.

- Implement quality assurance systems with control procedures for data intake, management, and monitoring for different study designs.

- Assess data sources and data quality to answer specific clinical or translational research questions.

- Implement quality assurance and control procedures for different study designs and analysis.

F. STATISTICAL APPROACHES

- Describe the role that biostatistics serves in biomedical and public health research.

- Describe the basic principles and practical importance of random variation, systematic error, sampling error, measurement error, hypothesis testing, type I and type II errors, and confidence limits.

- Scrutinize the assumptions behind different statistical methods and their corresponding limitations.

- Generate simple descriptive and inferential statistics that fit the study design chosen and answer research question.

- Compute sample size, power, and precision for comparisons of two independent samples with respect to continuous and binary outcomes.

- Describe the uses of meta-analytic methods.

- Defend the significance of data and safety monitoring plans.

- Collaborate with biostatisticians in the design, conduct, and analyses of clinical and translational research.

- Evaluate computer output containing the results of statistical procedures and graphics.

- Explain the uses, importance, and limitations of early stopping rules in clinical trials.

G. BIOMEDICAL INFORMATICS

- Describe trends and best practices in informatics for the organization of biomedical and health information.

- Develop protocols utilizing management of information using computer technology.

- Describe the effects of technology on medical research, education, and patient care.

- Describe the essential functions of the electronic health record (EHR) and the barriers to its use.

- Explain the role that health information technology standards have on the interoperability of clinical systems, including health IT messaging.

- Access patient information using quality checks via electronic health record systems.

- Retrieve medical knowledge through literature searches using advanced electronic techniques.

- Discuss the role of bioinformatics in the study design and analyses of high dimensional data in areas, such as genotypic and phenotypic genomics.

- Collaborate with bioinformatics specialists in the design, development, and implementation of research projects.

H. RESPONSIBLE CONDUCT OF RESEARCH

a. Clinical Research Ethics Competencies

- Summarize the history of research abuses and the rationale for creating codes, regulations, and systems for protecting participants in clinical research that requires community input.

- Critique a clinical or translational research proposal for risks to human subjects.

- Explain the special issues that arise in research with vulnerable participants and the need for additional safeguards.

- Determine the need for a risk-benefit ratio that is in balance with the outcomes in clinical and translational research.

- Describe the elements of voluntary informed consent, including increasing knowledge about research, avoiding undue influence or coercion, and assuring the decision-making capacity of participants.

- Assure the need for privacy protection throughout all phases of a study.

- Assure the need for fairness in recruiting participants and in distributing the benefits and burdens of clinical research.

- Adhere to IRB application procedures.

- Explain how the structural arrangement of science and the research industry may influence the behavior of scientists and the production of scientific knowledge.

b. Responsible Conduct of Research Competencies

- Apply the main rules, guidelines, codes, and professional standards for the conduct of clinical and translational research.

- Adhere to the procedures to report unprofessional behavior by colleagues who engage in misconduct in research.

- Implement procedures for the identification, prevention, and management of financial, intellectual, and employment conflicts of interests.

- Apply the rules and professional standards that govern the data collection, sharing, and protection throughout all phases of clinical and translational research.

- Apply elements of voluntary informed consent, of fostering understanding of information about clinical research, and for avoiding undue influence or coercion, and taking into consideration the decision-making capacity of participants.

- Explain the need for privacy protection and best practices for protecting privacy throughout all phases of a study.

- ♦ Explain the need for fairness in recruiting participants and in distributing the benefits and burdens of clinical research.

- ♦ Explain the function of the IRB.

I. SCIENTIFIC COMMUNICATION

- ♦ Communicate clinical and translational research findings to different groups of individuals, including colleagues, students, the lay public, and the media.

- ♦ Translate the implications of clinical and translational research findings for clinical practice, advocacy, and governmental groups.

- ♦ Write summaries of scientific information for use in the development of clinical health care policy.

- ♦ Translate clinical and translational research findings into national health strategies or guidelines for use by the general public.

- ♦ Explain the utility and mechanism of commercialization for clinical and translational research findings, the patent process, and technology transfer.

J. CULTURAL DIVERSITY

- ♦ Differentiate between cultural competency and cultural sensitivity principles.

- ♦ Recognize the demographic, geographic, and ethnographic features within communities and populations when designing a clinical study.

- ♦ Describe the relevance of cultural and population diversity in clinical research design.

- ♦ Describe cultural and social variation in standards of research integrity.

- ♦ Critique studies for evidence of health disparities, such as disproportional health effects on select populations (e.g., gender, age, ethnicity, race).

K. TRANSLATIONAL TEAMWORK

- ♦ Build an interdisciplinary/intradisciplinary/multidisciplinary team that matches the objectives of the research problem.

- ♦ Manage an interdisciplinary team of scientists.

- ♦ Advocate for multiple points of view.

- ♦ Clarify language differences across disciplines.

- ♦ Demonstrate group decision-making techniques. Manage conflict.

- ♦ Manage a clinical and/or translational research study.

L. LEADERSHIP

- ♦ Work as a leader of a multidisciplinary research team.

- ♦ Manage a multidisciplinary team across its fiscal, personnel, regulatory compliance and problem-solving requirements.

- ◆ Maintain skills as mentor and mentee.

- ◆ Validate others as a mentor.

- ◆ Foster innovation and creativity.

M. CROSS DISCIPLINARY TRAINING

- ◆ Apply principles of adult learning and competency-based instruction to educational activities.

- ◆ Provide clinical and translational science instruction to beginning scientists.

- ◆ Incorporate adult learning principles and mentoring strategies into interactions with beginning scientists and scholars in order to engage them in clinical and translational research.

- ◆ Develop strategies for overcoming the unique curricular challenges associated with merging scholars from diverse backgrounds.

N. COMMUNITY ENGAGEMENT

- ◆ Examine the characteristics that bind people together as a community, including social ties, common perspectives or interests, and geography.

- ◆ Appraise the role of community engagement as a strategy for identifying community health issues, translating health research to communities and reducing health disparities.

- ◆ Summarize the principles and practices of the spectrum of community-engaged research.

- ◆ Analyze the ethical complexities of conducting community-engaged research.

- ◆ Specify how cultural and linguistic competence and health literacy have an impact on the conduct of community engaged research.

Section 2: CLR Program Admissions

Our Program presumes that students enter with a working knowledge of basic medical terminology and major concepts of health and illness. Applicants must possess a Bachelor's Degree from an accredited college or university. While there are no specific prerequisites, an applicant's transcript will be reviewed for demonstration of satisfactory performance in quantitative and qualitative methods and in social and Biomedical sciences. Students are selected on the basis of demonstrated past academic achievement.

Individuals with undergraduate degrees in STEM are ideal for the CRTP and MSCR program as well as those with degrees in medicine, nursing, or the allied health professions looking to improve their research skills to support new or ongoing research interest.

Individuals applying to our PhD program are required to possess a Master's degree or equivalent in order to be considered for admission into the program. The Admissions Committee will carefully review the applications from those without an advanced degree and may consider them for admissions to the MSCR degree. Once the student has completed the MSCR degree, he/she may seek entry in the PhDCR program. Most or all credits earned in the MSCR degree will be applied towards the PhD degree requirements with minimum loss of time.

Application Process

Matriculating Students (Students for consideration for CRTP, MSCR & PhD in clinical Research)

Applications and supporting documentation are reviewed throughout the year for admission to the upcoming Fall Term. In addition, the program accepts applications for matriculation during the Spring I and Spring II term. The Admissions Committee of the Graduate School will consider all the data on each applicant before making its decision. Applicants should submit all materials in the checklist below. The Application Process should be completed online at the Programs Website as follows:

♦ Completed online Application Form:

♦ Official transcripts from all institutions of higher learning attended.

♦ CV or resume

♦ Personal Statement

♦ Two letters of recommendation

♦ GRE scores are required for the CRTP and MSCR program but not required for the PhD in Clinical Research. However, for PhD applicants where assessing sufficiency of specific course work, training, and existing proficiencies does not clearly match our admission criteria, the admission committee may, on a case-by-case basis, require additional evidence of preparedness for advance graduate study in the field, including standardized assessments.

♦ A non-refundable $80 application fee

International Students

Graduates of foreign colleges or universities who have completed an academic program equivalent to an American bachelor's degree are eligible to apply for admission. International applicants are required to have their foreign transcripts translated into English by a certified foreign credential translation service (ex. WES, ECE, FIS).

In addition, the TOEFL is required of all applicants (1) whose native language is not English and/or (2) whose education was not conducted in English. A computer test score of 250 or higher is expected. Applicants who received their first university degree in an English-speaking country may request an exemption from TOEFL.

All international students must contact the International Personnel Office after they have been accepted in the program to get information on getting appropriate visa. They can be reached at 212-731-7744.

Non-matriculating students (Non-degree students)

Non-matriculating students may take up to 12 credits without matriculating for the full degree. If you are interested in taking courses in the Clinical Research Education Program as a non-matriculating student, please do the following:

♦ All Non-Matriculating Students must first apply to the program online.

♦ A completed application will include aresume, personal statement, one letter of recommendation and official transcripts from all institutions of higher learning attended

$80 non-refundable application fee. Contact the Program Director to verify that your background and skills assure eligibility for the course and to receive permission to enroll. Please note: Courses may require that students have fulfilled certain pre-requisites. **Students will not be eligible to take a course if they lack the required pre-requisites**.

Non-matriculating students wishing to pursue one of our degree programs (CRTP, MSCR, or PhD) must apply to the Clinical Research Education Program and will undergo the same admission process and be evaluated based on the same criteria used for all applicants. Eligible courses taken on a non-matriculated basis may be transferred and used towards the attainment of one of our degrees.

Section 3: Registration Process for Courses, Independent Study and Electives

Registration Process for Courses

Please refer to Chapter 1, section on Policies and the Registrar's office

Independent Study

Three credits are the maximum number of credits that may be awarded per Independent Study. Each Independent Study credit requires 15 hours of face time with the Independent Study mentor and 30 hours of non-face time. Please note that while the total hours committed to the pursuit of the Independent Study may be sufficient for more than three credits or more than one elective, students will not receive any more than three credits for one project/course of study. Each student may complete no more than two independent study projects.

An Independent Study must be a unique experience. Material covered during an independent study project should be highly targeted and not simply a review of the regularly offered coursework. It is important to note that generally speaking independent study projects should not be attempts to take CLR courses that are offered routinely during the academic year at times that are more convenient for the student. Students should not expect independent study projects to exempt them from core course requirements without approval by the Track Academic Advisor and the Program Director.

Steps towards formalizing an Independent Study:

A. Meet with the Program Director and the faculty sponsoring your independent study to discuss your plans for your Independent Study at least 6 weeks prior to the start of the Independent Study

B. Complete the [Independent Study Proposal Form](#) and submit it to the Program Office with the appropriate signatures at least 3 weeks before the start of the independent study. See Appendix C

C. Register for the Independent Study credits through the registration system before starting the Independent Study.

D. Complete the project/course of study once approved.

E. Complete the [Independent Study Postscript Report](#) and submit to the Program Office with appropriate signatures no later than 3 weeks after your project has been completed. See Appendix C

F. Request that your Faculty Sponsor complete the Independent Study Faculty Sponsor Form and submit it to the Program Office no later than 3 weeks after the study has been completed, [Independent Study Faculty Sponsor Form](). See Appendix C

G. Review Postscript Report and Evaluation with your faculty sponsor.

H. Complete the [Independent Study Student Evaluation of Faculty Form]() no later than 3 weeks after the study has been completed. See Appendix C

Electives Offered in Other Programs or at Other Institutions

Students are permitted to take any course listed in the CLR Curriculum Guide as an elective. Only courses listed in the Curriculum guide are approved for CLR credit.

If a student wishes to take a course in the Graduate School at ISMMS, he/she must request approval from the Program Director prior to registering for the class.

If a student wishes to take an elective course offered at a different institution, the student will need to submit a course description and a syllabus from the Institution offering the elective course, together with a completed [Elective Approval]() [Form]() (see Appendix C), to the Clinical Research Education office. **Approval must be given from the Clinical Research Education Program Director prior to enrolling in the course**.

Upon completion of the elective course, the student will need to complete the [Evaluation Form for Transfer of Credit]() (see Appendix C) and submit it to the Program Office along with an official transcript from the institution where the course was taken. The form and transcript must be submitted in order for the elective to appear on a student's CLR transcript.

Section 4: Satisfactory Progress and Advising

Satisfactory Progress Policy (PhD, MSCR, CRTP)

It is crucial that students along with the program administration monitor the students' progress throughout the duration of their academic training. Failure to achieve and maintain satisfactory progress can result in academic probation and ultimately, dismissal from the Program. Students are required to meet with the program administration at the start of Spring II yearly to review their progress and address any issues. In addition, the program will meet with s student anytime during the year to address immediate and time sensitive concerns.

PhD in Clinical Research students maintain satisfactory progress by :

♦ earning a minimum of a B in each of the required core courses*

♦ maintaining a minimum cumulative GPA of 3.0 throughout the program*

♦ Successfully completing all required coursework within the first 2 years of the PhD program as outlined in each PhD track checklist

♦ Taking the comprehensive qualifying exam in June of Year 2

♦ Forming a Multidisciplinary Advisory Committee (MAC) and submitting the Declaration form by December 15 of Year 2

♦ Completing the written Thesis Proposal and oral thesis exam by December 31 of year 3

- meeting with the MAC at least once per year starting in the Fall of Year 3 and submitting a progress report form following each meeting

- successfully reaching and passing each of the PhD milestones by the required deadlines and submitting registration forms and other required documentation on time (please refer to PhD Degree Requirement section for specific timeline and forms)

- completing all requirements for the PhD degree, including defense and deposit of the Dissertation, within the time limits of the Program - defend and deposit by June 1 of the Fifth year in the Program

* If a PhD student earns less than a B in a required core course, he/she can re-take the course and must earn a B or better. However, if the student does not retake the course or retakes the course and earns less than a B, the CLR Program can withdraw the student from the PhDCR program. Additionally, anytime a student's GPA falls below 3.0 the Academic Advisory Committee will be consulted and a plan for remediation developed. In most cases the student will meet with the Program Director or another member of the Academic Advisory Committee, develop an individual plan of remediation, and sign a statement of understanding that he/she is on academic probation. If the student's GPA has not reached 3.0 within two terms of having been placed on probation, the student will be asked to withdraw from the program. Notices of withdrawal are sent by certified mail.

MSCR students maintain satisfactory progress by:

- maintaining a minimum cumulative GPA of 3.0 throughout the program*

- successful and timely completion of all coursework and milestones as outlined in the MSCR coursework checklist

- successfully reaching and passing each of the MSCR milestones by the required deadlines and submitting forms and other required documentation on time (please refer to MSCR Degree Requirement section for specific timeline and forms)

- Identifying a research mentor, developing a research project and submitting the Research Agreement form by first Friday in October of Year 2

- Meeting with research mentor at least once each term to review progress of thesis project

- Submitting the first draft of the thesis by March 1 of Year 2 and final draft by May 1 of year 2

- completing all requirements for the MSCR degree, including completion and deposit of thesis by end of year 2

*Anytime a student's GPA falls below 3.0 the Academic Advisory Committee will be consulted and a plan for remediation developed. In most cases the student will meet with the Program Director or another member of the Academic Advisory Committee, develop an individual plan of remediation, and sign a statement of understanding that he/she is on academic probation. If the student's GPA has not reached 3.0 within two terms of having been placed on probation, the student will be asked to withdraw from the program. Notices of withdrawal are sent by certified mail.

CRTP students maintain satisfactory progress in the program by:

- maintaining a minimum cumulative GPA of 3.0 throughout the program*

- ◆ successful and timely completion of all coursework and milestones as outlined in the CRTP coursework checklist

- ◆ completing all requirements for the CRTP within one year

Advising

There are several formal advising processes for MSCR and PhD students. These are:

- ◆ academic advisors

- ◆ thesis advisors, also knows as research mentors

- ◆ Multidisciplinary Advisory committee (for PhD students only, please refer to PhD section)

- ◆ near peer mentoring program

Academic Advisors:

Entering MSCR and PhD students are assigned a faculty advisor from the CLR core faculty. The goal of the academic advisor is to help students monitor their academic progress in the clinical research education program. The Core Academic faculty will serve as individual advisors to the students in our MSCR (excluding PORTAL students), and to PhD candidates. Each student will be assigned 1 academic advisor by the Program Directors at the start of their first year based upon their initial specified area of research interest, articulated in the initial application to the program. The role of the advisor will be distinct from that of research mentor. Specifically, they will:

A. provide advice on elective coursework relevant to the area of research focus

B. assist in finding potential thesis advisors/research mentors related to possible research topics and projects of interest

C. provide assistance with challenges that arise with regard to courses and/or research

D. provide advice on funding opportunities

The student is required to meet with their assigned advisor at the end of Spring 1 of each year in the program. Students are asked to notify the program office of their scheduled appointment with their advisor. The Program Office will then forward the appropriate material for the advisor to review with the student. Notes of the meeting will be put into the student's file for review by the Program Directors. In addition, the student is also required to meet with the Program administration before the start of the Spring 2 term each year.

Thesis Advisors:

The role of the thesis advisor is to guide the student's research progress, provide professional and personal development and uphold high academic and research standards. MSCR students and PhD students must identify a thesis advisor (also known as research mentors) by the Fall of their second year (please refer to MSCR and PhD thesis sections of the handbook for more details on timeline and forms required for this process). The student selects a thesis advisor with the help of the program leadership and their academic advisor. Once selected, the thesis advisor and student should discuss the expectations and goals of the project and commit to working together until the completion of the thesis project. This process is formalized by signing and submitting the MSCR Research Agreement form for students in the MSCR program or by submitting the Declaration form for the PhD students.

Near Peer Mentoring Program:

The goal of the Near-Peer Mentoring program is to increase access to resources for a successful graduate school experience and to build an active and supportive community by providing students with support from other graduate students, alumni or faculty who are active in the clinical research field. The near peer mentor will serve as a sounding board, share their experience as a member of the Clinical Research Education Program, help the mentee overcome current challenges and provide advice when appropriate. Each student in the program will be assigned a near-peer mentor based on their research interest and will meet in an informal setting (over coffee etc.) quarterly or more frequently if needed.

Section 5: Degree Requirements (, MSCR, PORTAL, CRTP, and PhD)

Master of Science in Clinical Research (MSCR)

The Masters of Science in Clinical Research (MSCR) is a 38 credit program designed to be completed in 2 years. In certain cases, coursework can be taken over the course of 3 years with approval from the program. The MSCR has two main components: 1) graduate courses including biostatistics, epidemiology, research design, data analysis, informatics, bioethics and grant writing (for the complete breakdown & sequence of required courses please see the MSCR checklist) ; and 2) a mentored clinical research project leading to a Master's thesis.. Students must make satisfactory progress in the program in order to remain matriculated in the degree. Please refer to Section of 4 for details regarding the program's satisfactory progress policy. Failure to achieve and maintain satisfactory progress can result in academic probation and ultimately, dismissal from the Program.

The attainment of a MSCR in Clinical Research requires

A. Successful completion of coursework

B. Satisfactory completion and deposit of thesis

Master's Thesis

Experience researching and writing a Thesis provides the student with an opportunity to explore and further develop ideas from lessons learned in the classroom, apply them to a specific research endeavor and demonstrate the student's mastery of the essence of clinical/translational research within a particular area of interest.

Students should work early on with their academic advisors and the program administration to identify an appropriate thesis advisor for their masters thesis project. The student together with their thesis advisor should complete the [Research Agreement form,](#) see Appendix A, indicating willingness to serve as a Master's Thesis Advisor. This form should be submitted by the student to the Program office by the first Friday in October of year 2. The student is required to submit an outline (maximum of 3 pages) of the proposed thesis along with the Research Agreement form. The outline needs to be approved by the thesis mentor before submitting to the program and should include the following sections:

♦ Statement of purpose

♦ Background

♦ Hypothesis

♦ Specific Aims

♦ Research Design

♦ Methods

Master's Thesis

Once the form and 3 page outline is submitted to the program, the Director and Co-director will review and decide if the proposed project is approved or needs to be further refined or revised. Students need approval from the program before moving forward with their proposed research.

Please note that a student may submit, for their Master's Thesis, a first author manuscript either submitted for publication, accepted for publication or published during their training which is reflective of their Master's Thesis work. In this instance, a statement of purpose, introduction, and discussion regarding the findings and impact of the work needs to be added.

Timelines for the Master's Thesis and Forms

Students in the MSCR program must follow the timeline below in order to complete their degree by June 30 of Year 2. Students who do not follow the timeline below will not be making satisfactory progress in the program which can result in academic probation and eventually dismissal from the program. Students who are accepted in the program in Spring I or Spring II should consult with the program administration to review their specific timeline and expectations

MSCR timeline for Year 2	Deadline
❏ Identifying a research mentor, develop a research project and submit the Research Agreement form	First Friday in October
❏ Submit Graduation Application Form	February 1
❏ Submit Masters Thesis First Draft along with Master's Thesis First Draft Approval Form	March 1
❏ Meet with Program Administration to review progress and graduation requirements	End of Spring I term
❏ Submit Masters Thesis Final Draft with Master's Thesis Approval Form	May 1
❏ Submit Masters Thesis Evaluation Report Form	June 1
❏ Submit Masters Thesis Deposit Form	June 1
❏ Deposit Masters Thesis in the Library	June 1

All students are required to register for 5Master's thesis credits (course number CLR0001). Students must register for the Master's thesis credits prior to graduation. They can register for these 5 credits during the Fall, Spring I or Spring II terms. When the final draft of the thesis is approved by the program, a Thesis Deposit form must be completed. The Thesis Advisor and Student will complete the Master's Thesis Deposit Form and allocate a total of $2,000 to faculty who significantly contribute to the Student's thesis project (e.g., Thesis Advisor, Second Reader, Consultant (biostatistician)). Once the student has submitted all of the appropriate forms, he/she must deposit the Master's Thesis by the date outlined in the table above. Please see Depositing your Master's thesis guide for complete details on how to deposit your thesis

Students have 2 years to finish the MSCR degree; if it is not finished within that timeframe the student will be withdrawn from the Program unless they have prior approval for an extension to complete the program. Student should refer to the section on "Graduation Procedures and Degree Conferral" for more information about Graduation.

Annual Best MSCR Thesis Prize

Each year, prior to graduation, the best MSCR thesis will be selected by the program leadership and awarded a prize for the best thesis, to be presented at the annual graduation achievement awards ceremony.The awardees are selected based on the first draft of their thesis.

Dual MD-MSCR Student/Portal Program

Program Overview

PORTAL is a strongly mentored, 5-year program for medical students designed accelerate the process through which discoveries made in the laboratory are brought to the patient's bedside. The program offers a multidisciplinary approach to clinical investigation training in order to introduce students to the field of clinical/translational research and how it drives the practice of clinical medicine. Participants will be part of a select group of scholars that integrate learning clinical medicine with how to establish a career in clinical investigation from the very start of their medical education. Teaching medical students how to conduct high quality clinical research studies may produce better, more successful, and more satisfied clinical investigators to the benefit of both the students and society. Students who successfully complete the program will be awarded an MD and a Masters in Clinical Research (MSCR).

Program Structure

PORTAL students start training during year 1 of medical school and continue their development through their careers. Course work is taken during years 1 and 2, the Scholarly Year, and the final year of medical school. Most of the thesis work is done during the Scholarly Year. Information on coursework for PORTAL can be found at the program [website](). Please refer to the Curriculum Guide for descriptive information on individual courses offered during a specific term. The curriculum offers rigorous didactic and hands on research training in clinical research methodology, including clinical trial and experimental design, data management, data analysis, research communication skills, e.g., abstract, manuscript, and grant writing, along with oral presentation skills, and how to navigate regulatory requirements. Regular, informal sessions will also be scheduled to allow PORTAL students to meet successful clinical researchers in order to learn about their career paths, as well as to permit students to discuss issues of common interest with each other.

Research and Mentoring

The multiyear commitment to excellence by the student is made possible by strong faculty support, as well as institutional resources. Outstanding faculty members from diverse departments serve as mentors. Students will identify their area of research interest and be matched with an experienced, supportive clinical research mentor. In many cases, students will choose two mentors who represent different, though complementary disciplines, enabling them to have a more interdisciplinary experience.

During the course of the PORTAL program, students will have the opportunity to participate in an ongoing research project, as well as carry out an original research project in an area of their choice. Their original research will form the basis for a thesis. Thesis work will be guided by the faculty mentor and the program directors. Time for research is built into the program during the following periods and include, minimally:

♦ 8 weeks during the summer following the first year

- ♦ An 11-month Scholarly Year, following year 3 of medical school

- ♦ The 12 weeks INSPIRE program, during the final year of medical school

- ♦ Additional time may be arranged during elective periods on an individual basis

Financing
Students selected for PORTAL will receive full scholarships to cover the tuition of the MSCR degree. Participants also will receive a stipend during their Scholarly Year to cover living expenses, including health insurance. There is no medical school tuition during the Scholarly Year.

Applying to the PORTAL Program
Students apply to PORTAL at the same time they apply to the MD program. They will submit a brief supplemental application form that allows them to more fully describe their specific reasons for applying to the Mount Sinai MD/MSCR program. In addition to meeting the requirements for admission to the MD program, the applicant must have had research experience, preferably clinical research. Selected applicants will be interviewed.

PORTAL Thesis Procedure
Successful completion of the MSCR program involves submission of a thesis that is approved by the student's thesis committee. It is expected that the bulk of the thesis work will be done during the student's Scholarly Year. Thesis research will earn 8 credits.

Oversight of the student's progress and thesis research will be the responsibility of the thesis committee consisting of the student's mentor plus two additional faculty members. The latter will serve as advisors, as well as have the responsibility of approving the thesis. The student may suggest the names of faculty members they think would qualify as committee members, based upon their area of expertise, but the ultimate decision will be that of the MSCR Program Directors.

PORTAL students must complete the existing MSCR approval process, although the timetable, reflected below, is modified. In order for the student to receive his/her degree along with the MD at the May graduation, please submit the following documentation:

A. The Research Agreement Form, see Appendix A, including an outline of the proposed thesis topic (maximum of 3 pages), by September 15th of Scholarly year.

B. The first draft of thesis by January 15th of M4*. The thesis must adhere to the guidelines outlined in the Depositing Your Master's Thesis form. The student's thesis committee will review the draft and return to the student with any comments and recommendations no later than 4 weeks after receipt of the draft.

a. Please note that a student may submit, for their Master's Thesis, a first author manuscript either submitted for publication, accepted for publication or published during their training which is reflective of their Master's Thesis work. In this instance, a statement of purpose, introduction, and discussion regarding the findings and impact of the work needs to be added.

C. The **final thesis for review** by March 15th of M4.

D. The [Master's Thesis Approval Form](), See Appendix A. Once a student has completed the Master's Thesis, he/she must complete a Master's Thesis Approval form, which is signed by the thesis advisor and Program Director and submitted to the Program office.

E. The [Master's Thesis Evaluation report](), see Appendix A, by March 15th of M4.

F. The **thesis to the library** by April 15th of M4.

*M4 refers to the final year of medical school and follows the Scholarly Year.

PhD in Clinical Research

Overview

The PhD in Clinical Research is a 66 credit program designed to be completed in 4-5 years. The program provides a strong didactic foundation during the first 2 years followed by a mentored clinical research experience leading to a doctoral degree in Clinical Research.

Three tracks/training areas are offered within the PhD in Clinical Research Program:

A. Translational Research: Bench to Bedside

B. Clinical Trials Research

C. Population, Outcomes and Implementation Research

Within the context of these specific tracks, students may choose to develop an area of concentration or focus, developing specific expertise in:

- General Clinical Research

- Outcomes Research

- Health Services Research & Health Policy Research

- Ethics

- Behavioral Research & Cognitive Tools

- Genomics & Personalized Medicine

- Biostatistics: Quantitative and Qualitative Methods

- Drug Development

- Epidemiology: Basic, Molecular and Clinical

- Clinical Trials Research

- Informatics & Bioinformatics

- Translational Science

These areas of special focus build upon strengths reflective of the ISMMS, Graduate School of Biomedical Sciences, and Mount Sinai's Institutes and Departments.

The attainment of a PhD in Clinical Research

Earning a PhD in Clinical Research requires:

A. Successful completion of coursework

B. Satisfactory completion of Written Comprehensive Qualifying Exam

C. Satisfactory completion of the Thesis Proposal Oral Presentation and approval of proposed thesis by Multidisciplinary Advisory Committee (MAC) to allow a student to proceed with their dissertation research

D. Successful dissertation defense as deemed by the student's MAC/Doctoral Committee

Thesis advising/mentorship

Students in the PhD program are expected to select a thesis advisor (also known as research mentor), with the help of the PhD oversight committee and their academic advisor by the beginning of their second year in the program. Effective mentor-mentee relationship is crucial to PhD students as they begin their scientific careers. The role of the research mentor is to guide the student's research progress, provide professional and personal development and uphold high academic and research standards. Faculty mentors must commit to the following when agreeing to mentor a student in the PhD program:

- Meet with the student on a regular basis
- Regularly review the student's progress and provide timely feedback and goal setting advice
- commit to the student's research project, work with the student to help plan and guide the research project, set reasonable and attainable goals, and establish a timeline for completion of the dissertation
- help the student select a Multidisciplinary Advisory committee and assure that the student meets with the committee annually
- encourage the graduate student to attend and present their research at scientific/professional
  meetings
- create an environment in which the student can discuss and explore career opportunities and
  paths that match their skills, values, and interests and be supportive of their career path choices.

Multidisciplinary Advisory Committee (MAC) :

PhD candidates will form a Multidisciplinary Advisory Committee (MAC), which will also serve as the dissertation committee, no later than December 15th of Year 2 but preferably before that to allow conversation about the student's research to take place well in advance. With the help of the PhD oversight committee and their research mentors, the student will identify 5 members to make up their MAC. The MAC will consist of the following 5 individuals, which does not include mentor(s):

A. at least one member of the Clinical Research Education Program core faculty

B. a biostatistician. If you choose a member of the core faculty as your biostatistician, you do not need another member of the core faculty in your committee. However, if that is the case, you will still need to fill that slot to make up a committee of 5 members.

C. two faculty with expertise in the area of research and or discipline of the trainee one faculty member from a complementary discipline.

D. from the 5 required MAC members above, one member (a senior member of the committee), will be selected to serve as the Chair of the Committee by the student with the approval of the Program Leadership (see below for additional details)

Not more than two members of the above committee may be from a comparable academic setting, other than Mount Sinai. The majority of the dissertation committee, including the committee chair must be members of the Graduate School Faculty. Additional faculty, such as collaborators of the mentor, may be included as non-voting members on the committee. Non-voting committee members including faculty from Mount Sinai are those who have:

A. directly collaborated on the project

B. co-authored papers or abstracts with the student on any project and/or working on projects that will lead to future publications

C. been substantially involved in supervising the work or advising for the thesis work

At the time of the dissertation, the student will need to have identified an outside reviewer (preferably not from the institution) with knowledge related to the student's field of study. Please read section 4. C. for more detailed information about this requirement. If the student wishes to identify the outside examiner at the time that they submit their declaration form, they may do so by including the name of the individual in "Adviser 6" box. Otherwise, the name should be included in the [Dissertation Defense and Seminar Registration form](#)

The Director, Co-Director or the PhD Track leader for the Clinical Research Education Program, and the Graduate School Dean for Translational Biomedical Sciences must each approve the Committee roster and the chair of the committee and will outline the duties of the reviewers and of the Committee. A copy of the [Declaration for PhD in Clinical Research Form](#) (see Appendix B) which includes the name of the dissertation mentor(s) and the MAC members must be provided to the Clinical Research Education Program Office by December 15th of year 2. The student will be responsible for obtaining signatures from their MAC members and the Program Office will assist the student in obtaining signatures from the program leadership (Director, Co-Director, and Graduate School Dean).

The doctoral committee has the responsibility to advise the student during the progress of the candidate's research and has the authority to require that the research and dissertation meet a high-quality standard, including the authority to require a rewrite of the thesis proposal and/or the written dissertation, in whole or in part. The student must meet with their MAC yearly and complete the Progress report form after each meeting (see Appendix B) along with the MAC. The form must be submitted to the CLR program office every year and before the defense.

The committee conducts the final oral examination and determines whether the dissertation meets the acceptable standards. *It will be up to the committee as to when the student is ready to defend their dissertation. The student must submit the progress report form to the CLR program office as proof that the committee has met and decided that the student is ready to defend.*

PhD Qualifying Exam and Dissertation
Written Comprehensive Qualifying Exam and Thesis Proposal Oral Presentation
Students should confer with the Program Director or Co-Director as well as with their MAC as to their suitability and readiness for the written comprehensive qualifying exam and the Thesis Proposal Oral Presentation. For KL2 scholars, the written proposal and oral presentation can be done in parallel with the qualifying exam. For all others, 1) the qualifying exam must be done first (by the end of the student's second year in the program and after they have completed the "Integrative Problem Solving in Clinical and Translational Research" course) 2) followed by the written thesis proposal, and 3) the oral presentation of the proposed thesis.

A. Written Comprehensive Qualifying Examination and Submission of Thesis Prospectus

    a. *Written Comprehensive Qualifying examination* - The written comprehensive qualifying examination will include pre-selected questions provided at the time of the examination. This exam will be administered twice a year at pre-selected times (January and June). Students must register for and attend the "Integrative Problem Solving in Clinical and Translational Research" course during their second year, prior to taking the exam. Students must submit a Written Comprehensive Qualifying Exam Registration form to the CLR program office at least 4 weeks prior to the scheduled exam. The CLR PhD oversight committee will be required to sign the form indicating whether the student is ready to take the exam or not. Specific instructions regarding the exam will be emailed to students after the form is submitted and approved by the program. The examination will be assessed by the Core Faculty of the Clinical Research Education Program. The exam is worth a total of 100 points and students will have to score a total of 65 points and above in order to pass the qualifying exam. **Students will only be permitted to retake the qualifying exam once. If an individual fails the exam twice, he/she will be dismissed from the program.** This policy is consistent with the Icahn School of Biomedical Sciences policy.

    b. *Submission of Thesis Prospectus -* **This document must be submitted to the Committee at least four weeks in advance of the oral presentation.** Once the document is submitted to the MAC, students must meet with their committee members individually or as a group to receive preliminary feedback, address necessary changes, and get final approval to move forward with the Thesis Proposal Oral Presentation. The format of the document should follow an NIH proposal but reduced in size (6 pages in total with no more than 1.5 pages for Specific Aims, Background & Significance/Rationale). Hypothesis to be tested, null hypothesis and question to be asked need to be clearly articulated. Major emphasis should be on Methodology to be employed including Study Design and Statistical Analysis. Reasons for the approaches you chose should be articulated and potential pitfalls and alternative approaches highlighted. Preliminary Data can be included as well. Bibliography, survey &/or other validated or to be developed instruments, questionnaires, tables and figures that may be needed, will not count toward the page limit for the proposal. The format of this proposal shall be as follows:

        Font: Use Arial, Helvetica, Palatino Linotype or Georgia typeface, a black font color and font size of 11 points or larger (A Symbol font may be used to insert

Greek letters of special characters; the font size requirement still applies). Type may be no more than 6 lines per inch.

Page Margins: Use at least one-half inch margins (top, bottom, left and right) for all pages.

Figures, Graphs, Tables, Charts, Figure Legends, Footnotes: You may use a smaller type size (no smaller than 10 size font) but it must be in a black color, readily legible and follow the font typeface requirement. Color can be used in figures; however, all text must be in black font color, clear and legible.

Questionnaires, surveys, other validated or to be validated instruments: The same font size as outlined for the proposal document should be employed.

B. Thesis Proposal Oral Presentation

The Thesis Proposal Oral Presentation must be completed no later than six months after the successful completion of the written comprehensive qualifying examination (see 1a and 1b above). For KL2 Scholars, the Thesis Proposal Oral Presentation can be done in parallel with the written qualifying exam and written thesis prospectus. All students should submit a [Thesis Proposal Oral Presentation Registration Form](#) at least 4 weeks prior to the Thesis Proposal Oral Presentation, (see appendix B). The following suggestions are made regarding the format of the oral presentation:

The Thesis Proposal Oral Presentation will be conducted by members of the students MAC and will be led by the chair of that committee. The chair of the committee must enforce all rules of the Examination, including those pertaining to the role of the mentor. In addition, the Director or Co-Director of the Clinical Research Education Program or the PhD track leader must be present during the Thesis Proposal Oral Presentation.

The student's mentor should be present during the Thesis Proposal Oral Presentation. However, the mentor must remain silent throughout the entire process including the questioning phase of the presentation. The purpose for the mentor's presence is to allow him/her to assess first-hand the student's performance in order to subsequently assist them in addressing the observed deficiencies. If the mentor fails to remain silent, he/she may be asked by the chair of the committee to leave the room. Before the Thesis Oral Presentation begins, the student and mentor will be asked to leave the room for a few minutes so the committee can discuss the student's performance to date, the structure of the exam, the written thesis proposal and raise any specific points that would be important to discuss during the presentation. Once this review is completed, the student and mentor will be called into the room and the presentation will commence. The student should present their work using power point slides. Copies of the slides should be provided to the MAC on the day of the presentation. The student's portion of the presentation should be approximately 30 minutes long.

The purpose of the Thesis Proposal Oral presentation is to assess the working knowledge of the student's respective field of inquiry and the ability to demonstrate

critical thinking and sufficient acumen regarding clinical research design, and analytical methods as they relate to their chosen field of inquiry. The committee should evaluate the student's ability to:

♦ evaluate and synthesize relevant literature

♦ articulate and elaborate on specific aims

♦ evaluate any preliminary data of relevance to the project, that might already be available

♦ discuss experimental designs, qualitative &/or quantitative methods, and alternative strategies and methods for analysis, as it applies to the work planned

Once the committee is finished asking questions, the student and mentor will be asked to leave the room. At this point the MAC will take into account both the written thesis proposal and the Thesis Proposal Oral Presentation and vote on whether the proposal is accepted or not and if accepted, will it be with minor, major or no revisions. Following this discussion, the student and mentor will be asked to re-enter the room and the chair of the committee will discuss the committee's decision. All members of the MAC should sign the Thesis Proposal Oral Presentation Voting form (see appendix B) at the end of the presentation and the form must be returned by the Chair of the committee to the CLR program office immediately following the presentation. In addition, if the committee determines that further work is necessary, the Chair will provide this information in writing to the student, mentor and the CLR program within 2 days of the presentation.

No extensions will be granted for the thesis proposal oral presentation except under extenuating circumstances. Requests for extensions of established examination deadlines should be made at least 4 months prior to the deadline. Students who fail to meet the examinations deadlines will be placed on academic probation.

C. Outcome of the Thesis Proposal Oral Presentation

The following voting options are available to the *MAC:*

♦ -Satisfactory without revisions

♦ -Satisfactory with minor revisions (no re-presentation to the committee required)

♦ -Satisfactory with major revisions (re-presentation to the committee required)

♦ -Unsatisfactory

The student whose Thesis Proposal Oral Presentation is deemed unsatisfactory or with major revisions will be given one opportunity to address the particular area(s) of weakness. Students will need to submit a Thesis Proposal Oral Re- Presentation Registration form, (see Appendix B) to the Clinical Research Education Program Office formalizing this request. The conditions and timing for a re-presentation must be established at the time of the initial presentation.

However, the re-presentation must occur within 6 months of the initial presentation if the initial outcome was "Unsatisfactory" or within 4 months if the outcome was "Satisfactory with Major Revisions". The information concerning a re-presentation

should be communicated to the student and the CLR program by the MAC, in writing, within two days of the initial presentation. A student (with support of the mentor) may request to change the membership of an individual(s) in the Re-Examination MAC from that of the MAC Examination Committee. However, the student can request a change only if 1) there are major changes to the proposal and the existing committee members do not appropriately represent the expertise necessary, given the changes to the project 2) or if there is a major conflict identified by the student and mentor. The student must receive approval from the CLR program leadership, prior to registration for the Re-Examination in order to proceed with a change in committee member. In rare instances, the Committee may refuse the student the opportunity to redress the Proposal where students who have failed to show sufficient research progress and ability.

D. Registration for the Written Comprehensive Qualifying Exam and the Thesis Proposal Oral Presentation

Students must fill out the Written Comprehensive Qualifying Exam Registration Form (see appendix B) and submit the form with the appropriate signatures to the program office 4 weeks before the scheduled exam.

To schedule the Thesis Proposal Oral Presentation inclusive of thesis proposal (or re-presentation), the dissertation mentor and the student should check the proposed date with the MAC members and communicate the proposed date with the CLR Program office to find out which member of the CLR Program (the Director or Co-Director of the Clinical Research Education Program or the PhD track leader) will be available to attend the presentation. Once a date has been established the student will need to submit a copy of the Thesis Proposal Oral Presentation Registration form (or Re-Presentation form) (see appendix B) with the appropriate signatures to the Clinical Research Education Program Office at least 4 weeks prior to the presentation. The student is responsible for scheduling the presentation and should communicate with the Program Administrative Assistant to find a room for the presentation if needed. The student is responsible for communicating the final date, time and location to the individuals involved in the presentation and to the program office. The student should also email their written thesis prospectus to their committee members, the member of the CLR program attending the presentation and to the Program Administrator at least 4 weeks prior to the oral presentation to give everyone enough time to review the written thesis. Failure to register and provide the appropriate information to the committee members and program office in a timely manner may result in a cancellation of the presentation. If a student does not register for a presentation that is conducted, the Clinical Research Education Program Office reserves the right to require a re-presentation or to require a notarized statement from the student and the Committee certifying the number of times the student has presented.

Admission to Candidacy

Admission to candidacy for the PhD degree in Clinical Research constitutes a promotion of the student to the most advanced stage of graduate study and provides formal approval to the candidate to devote essentially exclusive attention to the research and the writing of the dissertation.

To qualify for admission to candidacy, students must:

1. Be a student in good standing

2. Have completed required core coursework with a minimum of a B in each core course and have an overall grade point average (GPA) of 3.0

3. Have passed the Written Comprehensive Qualifying Exam and the Thesis Proposal Written and Oral Presentation

4. Have received approval of the proposed subject and plan of the dissertation from the dissertation committee following a prospectus meeting of the committee, to be held in conjunction with the Thesis Proposal Oral Presentation.

Doctoral Dissertation

For the dissertation, the student along with their mentor must extend an invitation to an outside individual who is an acknowledged expert in the field to serve as an examiner during the dissertation defense. This person will be a voting member. Therefore, the dissertation committee will consist of the 5 MAC members chosen for the Thesis Proposal Oral Presentation, plus the additional outside examiner.

A. Written Document Format Options

   a. **First Option:** The first option is to submit three first authored manuscripts that have been accepted for publication in peer reviewed journals. **The three manuscripts must be thematically related to one another and to the dissertation proposal that was approved by the student's MAC and represent an original new body of work. In addition, each manuscript must be individually approved by the MAC in order to ensure that the above conditions are met.** The manuscripts must be accompanied by an introductory chapter that discusses the implications of the research findings and provides a description of plans for future research.

   b. **Second Option:** The second option is to submit a more traditional dissertation that includes, at a minimum, chapters describing background, methods, analyses/ results and conclusions of the dissertation project.

Either option must involve a substantive piece of original and independent research grounded in an appropriate body of literature and theory. High priority – both during the process of selection of the dissertation research topic and in the evaluation of the product of the dissertation research will be placed on the extent to which the project is innovative and advances the field in which the student is working.

The written work must conform to the Mount Sinai Graduate School of Biomedical Sciences format, as outlined in the Graduate School of Biomedical Sciences handbook.

When the student has completed the written dissertation document, it must be read and approved by the Dissertation Committee. The student should submit the Dissertation to each member of the committee as early as possible, but no later than 4 weeks before the Defense. Committee members may reschedule the Examination if not given the appropriate amount of time to prepare for it. **Before the final scheduling of the Defense, the student must meet with their committee to get approval from the committee to defend their thesis. The student must once again complete the Progress report form (see Appendix B) and obtain signatures from**

the entire MAC and submit the form to the program office no later than 4 weeks prior to the defense to indicate that this process has taken place and that the student has been given permission to defend their thesis.

Students and the Dissertation Mentor (s) should have been made aware that revisions and even additional work/analysis may be requested by the Dissertation Committee. In either event, the Committee should decide and indicate in writing whether the whole committee needs to be reconvened to consider the new draft or whether a subcommittee (or just the Chair of the Committee) may approve the revised draft.

B. Registration for the Dissertation

To schedule the Dissertation Defense and Seminar, the dissertation advisor/mentor and the student should check the proposed date with the Committee members before submitting the appropriate Registration Form. The student will need to submit a [Dissertation Defense and Seminar Registration form](#) and [Progress Report form](#) (see appendix B), with the appropriate signatures, to the Clinical Research Education Program Office at least 4 weeks prior to the Defense. The student is responsible for scheduling the Defense and should communicate with the Program Administrative Assistant to find a room for the exam. The student is also responsible for communicating the final date and time to the individuals involved. Failure to register in a timely manner may result in a cancellation of the Defense. If a student does not register for a Dissertation Defense that is conducted, the Clinical Research Education Program Office reserves the right to require a re-examination or to require a notarized statement from the student and the Committee certifying the number of times the student has been examined. The student is expected to bring the [Report of Dissertation Defense form](#) (see appendix B) on the day of the Dissertation Defense. This Form needs to be signed and returned immediately following the completion of the Dissertation Defense to the Clinical Research Education Program Office. If the Committee determines that there are revisions to be made, the information will be communicated to the student in writing. The student will need to submit an [Approval of Revised Dissertation form](#) (see Appendix B)once the revisions have been made.

C. The Defense and Seminar

The thesis defense is comprised of two parts, the public seminar and the closed session. Both parts must take place on the same day with the public seminar preceding the closed session. The public seminar will consist of a 45-60 minute power point presentation on the student's work, open to the Mount Sinai scientific community, and will serve as the presentation to the MAC. Therefore, the committee chair must make sure that all members of the MAC, the outside examiner, the mentor(s) and a member of the CLR leadership be present for the public seminar since the student will not repeat the power point presentation during the closed session. The MAC and mentor(s) will be asked to remain silent during the public seminar and will reserve their questions for the private closed session. It is the student's and dissertation mentor's responsibility to appropriately announce the seminar to the public e.g. via email, and to the program at least 4 weeks prior to the Seminar. Once the student notifies the CLR program office of the date and location of the public seminar, the program office will communicate the information to the

Graduate School in Biomedical Sciences office which will in turn send a school wide email to announce the seminar.

The closed session of the thesis defense, will take place after the public seminar. Once again, the committee chair must make sure that all members of the MAC, the outside examiner, the mentor(s) and a member of the CLR leadership be present for the defense. Only the MAC and the outside examiner are considered voting members. The Defense should take roughly 2 hours. Student's mentors must attend the defense but must remain silent throughout the entire process. The purpose for the mentor's presence is to allow him/her to assess first-hand the student's performance in order to subsequently assist them in addressing the observed deficiencies. If the mentor fails to remain silent, he/she may be asked by the chair of the committee to leave the room. Copies of the power point slides used during the public seminar must be provided to the MAC during the closed session. There is no limit to the number of questions the MAC might ask or how long it might take. Once the committee has finished asking their questions, the student and the mentor will be asked to leave the room so that the committee members can discuss the outcome of the defense. The student is then asked back into the room and the decision and comments are shared with the student.

The student is expected to bring the Report of Dissertation Defense form (see attached) on the day of the Dissertation Defense. This Form needs to be signed and returned immediately following the completion of the Dissertation Defense to the Clinical Research Education Program Office by the student. If the Committee determines that there are revisions to be made, the information will be communicated to the student in writing. The student will need to submit an Approval of Revised Dissertation form (see attached) once the revisions have been made.

D. Dissertation Deposit:

Once the student has successfully defended their dissertation, they will have *a maximum of three months to deposit their written dissertation in the library. Students who have not deposited their thesis within three months after their successful defense will be administratively withdrawn from the program.* In the event that a student decides at a later date to either deposit or obtain a transcript they will need to pay a required fee.

Once a student has successfully defended the dissertation, made all of the revisions and is ready to deposit the Dissertation, she/he should deposit the dissertation electronically according to the instructions in The Graduate School of Biomedical Sciences Depositing your Doctoral Instructions document. Students should submit the Student Checkout Form, the Clearance from the Real Estate Division for Deposit Form , and The Graduating Student Exit Survey Form to the Clinical Research Education Program Office before depositing their dissertation. Failure to do this can result in a delay of the student's graduation. Please refer to the section on "Graduation Application Form" and "Other Requirements Preceding Conferral of Degree" on page 41 for more information about Graduation.

The dissertation may be deposited at any time during the year, but the following deposit deadlines and enrollment requirements determine the date of the degree. *No*

degree will be awarded unless the thesis is deposited in the library by one of the required due dates listed below.

The degree is awarded on September 30, January 31, June 30 or the date of the ISMMS annual Commencement in May. Students depositing by January or April deadline, will receive their diploma at Commencement. Students depositing by the September deadline or the June deadline, may at the discretion of the Dean for Translational Science (or Associate Dean for clinical/Translational Research Education), participate in the prior May Commencement exercise, but will not receive their diploma until after September or June. By March 1, students must notify the Registrar of their intent to deposit their thesis on or before the April, September, or June deposit deadline in order to be included in the Commencement exercises of that year. Commencement information will be sent during the spring semester to the student's last email address recorded with the Graduate School Office/Clinical Research Education Program. If the student fails to deposit their thesis by the end of their 7th year in the PhD program, their dissertation mentor must petition the Dean in writing for permission to extend the students status. The petition must include a timetable for completing the dissertation and must also be signed by the student.

Section 6: Graduation Procedures and Degree Conferral

Overview of Graduation Procedures

To ensure that all academic requirements are met in time for participation in the May graduation ceremony (for PhD degree) and June Graduation ceremony (for MSCR degree), students will meet with the program administration to at the end of the Spring 1 term of the Academic Year of the year they expect to graduate. Students who do not expect to make the May or June graduation deadline should speak to the Program Administrator and Program Director as soon as possible to make plans to finish the degree requirements in a timely fashion.

It is important to note that Diplomas are produced only once per year by ISMMS and students who do not meet deadlines for a May or June graduation will not receive a diploma until the *following* May after they have completed all degree requirements. The Master of Science in Clinical Research and the PhD in Clinical Research itself can be conferred on 2 other occasions, September 30th and January 30st following completion of all degree requirements. If necessary, prior to receipt of the actual diploma, students can request a letter from ISMMS Registrar's office verifying that they have completed the degree requirements and confirming that the degree has been conferred.

Graduation Application Form

Any student (whether MSCR, PhD in CR or Dual Degree student) intending to graduate in May must submit a Graduation Application Form no later than February 1st of the year that corresponds to their intended graduation. This form ensures that students have adequate time to attend to any outstanding issues. Additionally, it ensures that the Clinical Research Education Program has a record of how many students wish to participate in the Graduation ceremonies diploma.

Other requirements preceding conferral of degree

The Master of Science in Clinical Research or the PhD in Clinical Research cannot be awarded until all of the student's outstanding accounts have been cleared. These may include the Library, Real Estate Office (for students living in Mount Sinai housing), Student Health Services, the Financial Aid Office, Registrar's Office and any other service provided or account outstanding at Mount Sinai.

Upon satisfactory completion of the above-mentioned requirements, payment of all outstanding fees, and submission of the Student Exit Form (MSCR and CRTP students only (see Appendix D)), Graduating Student Exit Survey (all students (see Appendix D)), and Student Check out form (PhD students only (see Appendix B)) the degree is awarded on the conferral date following the final Thesis deposit.

Students will also be asked to meet with the Program Director or Co-Director for an Exit Interview prior to graduation.

Section 7: Clinical Research Education Program Forms

All forms referred to in the Clinical Research Education Program section of this Handbook can be found on Blackboard, under the "CLR Program" organization in the "Handbooks and Forms" section: https://learn.mssm.edu

Please be sure to use the appropriate forms for your program of study.

All other forms referred to in the Graduate School of Biomedical Sciences Handbook can be found on the ISMMS Website: http://www.mssm.edu/education/student-resources/registrar/graduate-school-forms

CHAPTER 6 – MS in Biomedical Informatics

MS-BMI Program Description

Program Directors

Patricia Kovatch

Associate Dean for Scientific Computing

Associate Professor, Department of Genetics and Genomic Sciences

212-659-8531

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Jason Shapiro, MA, MD

Associate Professor, Department of Emergency Medicine (212) 824-8058

jason.shapiro@mountsinai.org

Program Coordinator

Roland Pinzon

212-659-1659

roland.pinzon@mssm.edu

Program Goals/Objectives

The Master of Science in Biomedical Informatics will empower graduates to accelerate biomedical scientific discovery and healthcare translation through teaching and applying informatics approaches and methods. The Mount Sinai program will offer a unique, practical approach focused on tackling biomedical questions with relevant computational and data analytic skills. Our goal is to train individuals with Computer Science and/or Bioscience backgrounds to be immediately productive in biomedical research and clinical teams by teaching practical computational and data science skills. The program has been designed to interact with academic, non-profit and industrial partners to enable students to get real-life experience to accelerate job search and placement.

Program Website

http://icahn.mssm.edu/education/masters/biomedical-informatics

Program Description

Our program is a unique blend of practical computational and data analytic skills applied to real-life biomedical challenges. We endeavor to recruit a mix of students with computer science, engineering, and biomedical backgrounds by offering a dual program track that will provide a basic foundation in both computer science and biomedical science for all students.

The program offers a dual track customized for students with backgrounds in computer science or the biological sciences. The first year is comprised of biological sciences courses for computer scientists and computing courses for biological science majors. The second year allows students to concentrate in one of five areas of expertise: (1) genetics and genomic sciences, (2) structural and chemical biology, (3) systems biology, (4) clinical and translational informatics, or (5) design, technology and entrepreneurship. The program consists of 45 credits including 10 credits for a capstone project in a research or clinical field at Mount Sinai or at an industrial partner.

Our diverse mix of students, each with his or her own problem-solving techniques and domain expertise, will benefit from this interdisciplinary environment. Through its capstone project, our program makes students valuable to health care employers, by pairing students with clinicians or researchers at Mount Sinai or with one of our industry partners.

The ability to transform raw data into actionable knowledge is one of the most exciting, powerful, and sought-after skills today.

MS-BMI Program Requirements

Course Requirements

Curriculum

Track One – For Students with a Strong Computing Background

Year One – Required Courses

Class	Course #	Credits
Biomedical Science 1 and Introduction to Journal Club	BSR1012 BSR1004	5 1
Biomedical Science 2 and Introduction to Journal Club II	BSR1013 BSR1005	5 1
Introduction to Scientific Computing	BSR1015	1
Biostatistics	BSR6400	3
Introduction to Biomedical and Translational Informatics	TBD	1
Introduction to Health Care Systems	TBD	1
Introduction to Clinical Information Systems	TBD	1
Responsible Conduct in Research	BSR1003	1
Introduction to SAS Systems	MPH0802	1
Introduction to R	TBD	1
Introduction to Scientific Programming in Python	BSR2109	1
Optional Courses or Elective(s)		1
TOTAL CREDITS		**24**

Year Two – Concentration in an Elected Specialty Plus Capstone Project

Class	Course #	Credits
Introduction to Algorithms: Application to Biology	BSR3400	2
Concentration in Elected Specialty	Various	9
Capstone Project	TBD	10
TOTAL CREDITS		**21**

Please visit our course catalog for course descriptions.

Track Two – For Students with a Bioscience Background

Year One – Required Courses

Class	Course #	Credits
First Semester Core (either Biomedical Science, Systems Biomedicine or Cellular and Molecular Neurobiology)	BSR1012 + BSR1014 or BSR1800 or BSR1702	6
Introduction to Scientific Computing	BSR1015	1
Biostatistics	BSR6400	3
Introduction to Scientific Programming in Python	BSR2109	1
Introduction to Biomedical and Translational Informatics	TBD	1
Introduction to Health Care Systems	TBD	1
Introduction to Clinical Information Systems	TBD	1
Responsible Conduct in Research	BSR1003	1
Introduction to SAS Systems	MPH0802	2
Introduction to R	TBD	1
Optional Courses (#2) and Other Electives		6
TOTAL CREDITS		**24**
Optional courses		
Biomedical Science 2	BSR1013	5

Year Two – Concentration in an Elected Specialty Plus Capstone Project

Class	Course #	Credits

Introduction to Algorithms - Applications to Biology	BSR3400	2
Concentration in elected specialty		9
Capstone Project	TBD	10
TOTAL CREDITS		21

Areas of Concentration

We offer five areas of concentration: 1) genetics and genomics sciences, 2) structural and chemical biology, 3) systems biology, 4) clinical and translational informatics, and 5) design, technology and entrepreneurship.

Capstone Project

10 credits will be given for the MS-BMI Capstone Project. These credits will be given during the final semester of the second year, once the student has submitted his/her project.

Milestones

♦ **Select a Track** – this must be completed prior to the beginning of courses in August of the first year in the program.

♦ **Declare an Area of Concentration** – this must be done prior to registering for credit for the second year of the program.

♦ **Select a Capstone Project and Capstone Project Advisor – this must be done** by the end of the first year in the program; however, we encourage students to identify a project and advisor as early as possible.

♦ Develop the project proposal – the student will need to prepare a written proposal detailing what is the focus and how it will be completed

♦ Develop an outline for review by the advisor

♦ Meet at least monthly with advisor for mentoring on project

Graduation Requirements

♦ Complete a minimum of 45 graduate credits

♦ Complete the Core Curriculum with an average grade of B (3.0) or higher

♦ Must achieve an average GPA of at least a 3.0.

♦ Complete a Capstone Project

♦ Fill out the graduation form following the instructions provided by the Registrar.

Advising

There are several formal advising processes for MS-BMI students. These are:

- Academic Advisors – Upon matriculation, each student is assigned an academic advisor. The role of this advisor is to help students navigate the process of selecting a capstone project and capstone project advisor. Once a project is selected, the Capstone Project Advisor will become the student's primary mentor. When the Capstone Project is completed at a partner company, and the capstone project advisor is not a Mount Sinai faculty member, the will continue a formal mentoring relationship with both the Capstone Project Advisor and the Mount Sinai Academic Advisor.

- Capstone Project Advisor – Students should select a capstone project advisor by the end of their first year. The student should discuss with their capstone project advisor the expectations and goals for the project. The [Masters in](#) [Biomedical Informatics Capstone Project Agreement](#) form should be filled out, signed by both the faculty member and the student, and returned to the MS-BMI Program Coordinator for review and signature by the MS-BMI Program Director(s).

- Program Director and Program Coordinator– The MS-BMI Program Directors and Program Coordinator are an important part of the advising team. The Program Directors will schedule periodic meetings with the MS-BMI students. Additional one-on-one meetings are available as needed and can be scheduled by appointment

Selection of a Capstone Project

Students should select a Capstone Project Advisor for their research prior to registering for credit for the second year of the program. The Capstone Project Advisor must be a faculty advisor, a faculty member in the MS-BMI program or a designated mentor at a partner company.

MS-BMI Program Admissions

All offers of admission to Icahn School of Medicine are provisional, pending receipt and evaluation of final transcripts. Transcripts must be sent directly from the appropriate Registrar's Office to the ISMMS Admissions Office. These and all other materials requested by the Registrar in conjunction with the admissions process must be received to complete a student's enrollment. Submission of false or misleading information in the application materials or in connection with the application process will be considered by the Admissions Committee and/or the Committee for Academic Review as grounds for withdrawal of the acceptance offer, dismissal, or rescission of degree.

Applications are invited from students who have completed their undergraduate degree with a major in the sciences (including computer science), engineering or related disciplines. Applicants should have a minimum GPA of 3.0.

Admission is based on the applicant's academic records, prior MCAT or GRE scores, past research experience, letters of recommendation, and personal statement regarding ultimate career plans. In some cases, where the applicant completed their previous degree more than 5 years ago, the program directors, at their discretion, may waive the MCAT or GRE requirement.

Important Dates

- **January 15** – Priority application deadline

- **April 15** – Application review begins for priority applications

- **June 1** – Final application deadline. Students should have all required documents submitted by this deadline

- Offers of admissions are made on a rolling basis and are generally completed by **August 1st**.

◆ Students are given 4 weeks from the date of their offer of admission to accept our offer.

Deadlines

◆ Completion of the Capstone Project - The capstone project can be completed at any time during the second year, but in order to participate in the May commencement ceremony, students must complete their capstone project by April 15th and be on track to complete all coursework with passing grades by the end of the semester.

◆ Notification of Registrar - By March 1, students must notify the Registrar of their intent to complete their capstone project before the April deadline in order to be included in the Commencement exercises of that year. Commencement information will be sent during the spring semester to the student's last email address recorded with the Graduate School Office.

◆ Special consideration – Those students who scheduled to complete their capstone project between April 16th and June 15th MAY, at the discretion of the Dean of the Graduate School of Biomedical Sciences, will be eligible to participate in the spring Commencement ceremony even though they have not met the April 15th deadline. In cases where a student is allowed to participate, he/she will not receive a diploma at graduation. After a successful completion of the capstone project, a diploma will be awarded on the next date that degrees are conferred (September 30th). Only students in good academic standing will be offered this courtesy. In this case, good academic standing means that all coursework has been completed with passing grades and the student's mentor/committee fully expect the student will successfully complete his/her project prior to June 15th. If either of these criteria is not met, the student will not be allowed to participate in the spring graduation ceremony. Additionally, any student whose capstone project was not acceptable will not be allowed to participate in Commencement until it has been accepted.

CHAPTER 7 – MS in Biomedical Sciences

MSBS Program Description

Program Director

Basil Hanss, PhD

212-241-5353

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Associate Program Director

Elvera Baron, MD/PhD

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Elvera.baron@mountsinai.org

Program Manager

Rewtie Offin

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rewtie.offin@mssm.edu

Program Goals/Objectives

The MSBS program aims to train students in a broad spectrum of the biomedical sciences to provide them with the background essential for the pursuit of a variety of careers in the health professions, whether in doctoral programs in research and/or clinical medicine or for employment in the pharma/biotech sector.

Program Website

http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/ms-in-biomedical-sciences

Program Description

The MS in Biomedical Sciences is a full-time course of study requiring 45 credits. The first year will ensure mastery of fundamental core concepts in contemporary cellular and molecular biomedical sciences, application of statistical principles to experimental design and data analysis, responsible conduct of research, and critical analysis and presentation of primary research literature in the biomedical sciences. Academic tracks have been defined that allow students to optimize their coursework for their career plans. In addition, a significant amount of time will be spent doing research in a laboratory, which will have been carefully chosen in consultation with the Program Director. Course work in the third term will be devoted to advanced elective study in the student's

chosen area of interest as well as continued work on a research project, which will form the basis for a Master's thesis.

MSBS Program Requirements

Course Requirements

First Year

♦ *Core Curriculum* – All students must complete a core curriculum. Core curricula are typically 4-6 credits each semester. Students can select one of the following core curricula. Please note that these are the core courses as of the writing of this document, but they are subject to change on occasion.

   m. Biomedical Sciences (BMS) Core: Fall Semester:

      i. Fall Semester: Biomedical Sciences Core 1 (5 credits) Introduction to Journal Club 1 (1 credit)

      ii. Spring Semesters Biomedical Sciences Core 2 (5 credits) Introduction to Journal Club II (1 credit)

   n. Systems Biomedicine Core:

      i. Fall Semester: Systems Biomedicine (8.5 credits)

      ii. Spring Semester: Two of the following:

         1. Quantitative Graduate Physiology (3 credits)

         2. Structural and Chemical Approaches to Pharmacology and Drug Discovery (3 credits)

         3. Systems Biology: Biomedical Modeling (3 credits)

   o. Neuroscience Core:

      i. Fall Semester

         1. Unit 1: Systems Neuroscience (4 credits)

         2. Unit 2: Cellular and Molecular Neuroscience (4 credits)

      ii. Spring Semester

         1. Unit 3: Behavioral and Cognitive Neuroscience (3 credits)

         2. Unit 4: Pathophysiology of Neurological and Psychiatric (3 credits) OPTIONAL

♦ *Biostatistics for the Biomedical Researcher* (3 credits) (fall semester)

♦ *Responsible Conduct of Research* (0.5 credit) (fall semester)

♦ *Rigor and Reproducibility (0.5 credits) (spring semester)*

♦ *Research Credits* – Students should register for Independent Biomedical Sciences Master's Research. Students receive 8 credits for the research performed during their

first year of study (4 credits for each semester). Credits appear on the spring semester transcript. These credits are graded on a scale of A through F. The grade is derived from a combination of an assessment from the thesis advisor (75%) and a year-end research progress report (25%). The year-end research progress report is in the form of a brief (10 minute) PowerPoint talk to be presented at an end of the year Laboratory Presentations mini-symposium. Prior to the presentation, students should fill out the [Masters in Biomedical Sciences](#) [Laboratory Research Evaluation](#) form with their thesis advisor and return it by July 1 to the Graduate School Office. This form determines the grade for research credits in the first year.

♦ *Electives* – Students complete their credit requirements with electives. Typically, during the first year, student do not take electives in the first semester and are limited to a small number of elective credits in the spring semester, depending on their individual schedules. The bulk of the elective credits are taken during the second year. Elective credits may be satisfied with:

  p. Courses from any of the PhD multi-disciplinary training areas, including seminars and journal clubs

  q. Selected courses from MD program, subject to space availability and by permission of the MSBS Program Director. All medical school courses are graded P/F.

  r. Course from the MPH or MS in Clinical Research programs. Requires permission of the relevant course directors.

Second Year
♦ *Electives* – See above.

♦ *Thesis credit* – Three credits will be given for the MS Thesis in Biomedical Sciences in the final semester of the program. Thesis credits are assigned automatically when a student deposits his/her thesis.

♦ *Research credits* – Students should sign up for Independent Biomedical Sciences Master's Research. Each student will receive 8 credits for research conducted during the fall of the second year.

♦ *Three Semesters or Four*? – While the MSBS Program is designed to be completed in 3 semesters, many students choose to spread their research and/or courses over 4 semesters. There are many advantages to utilizing the full 4 semesters to complete the degree and, as an added bonus, there are no additional tuition costs or student fees for this extra time. During the fourth semester, students will register for the course(s) they need and for research credits.

Milestones

♦ **Select a laboratory** – this must be completed by October 1st of the first year. See below for a description of the laboratory selection process.

♦ **Form a thesis committee** – this must be done by January 1st of the first year. See below for the composition of your thesis committee.

♦ **First committee meeting** – Master's students must hold their first committee meeting by the end of the spring semester of the first year of study.

- **Research Update Presentation** - Master's students are required to prepare a brief PowerPoint talk on their research to be presented at the Laboratory Presentations mini-symposium, which is typically held in early June. 25% of the first-year research grade is from the evaluation of the Laboratory Presentation.

- [Masters in Biomedical Sciences Laboratory Research Evaluation](#) **form** – Must be completed by the end of the spring semester. It is completed with the thesis advisor and must be returned by June 15 to the Graduate School Office. This form is used, in part, to determine the grade for research credits in the first year. 75% of the grade is determined by this form.

- **Second committee meeting** – By November 1st, the student should have a second committee meeting. At this meeting, the student will present his/her research progress and discuss timing for the thesis defense

- **Thesis document** – Prior to graduating, each student must submit a thesis document that describes the student's work in detail. See below for a full description of this document and its requirements.

- **Oral defense of the thesis** – as a final milestone, each MSBS student must defend his/her thesis orally. The presentation and defense, described below, is made to the thesis/ advisory committee.

Graduation Requirements

- Complete a minimum of 45 graduate credits

- Complete the Core Curriculum with an average grade of B (3.0) or higher Must achieve an average GPA of at least a 3.0.

- Complete a written thesis

- Successfully defend the thesis orally to the thesis committee

Advising

There are several formal advising processes for MSBS students. These are:

- Academic Advisors – Upon matriculation, each student is assigned an academic advisor. The role of this advisor is to help students navigate the process of selecting a laboratory and Thesis Advisor. Once a lab is selected, the thesis advisor will become the student's primary mentor. In many cases, students choose to continue a mentoring relationship with their Academic Advisor.

- Thesis Advisor – Students should select a thesis advisor for their research by October 1 of the first semester. Master's degree students do not do laboratory rotations. The student should discuss with their thesis advisor the expectations and goals for the research project. The [Masters in Biomedical Sciences Research Agreement](#) form should be filled out, signed by both the faculty member and the student, and returned to the Graduate School Office.

  If a student realizes that the selected laboratory is not a good match, a switch to another laboratory should be discussed with the Program Director.

- Thesis Committee – The Thesis Committee, as described below, will be an important part of a student's advisory team. The student is required to have at least two meetings with his/her advisory committee prior to defending the thesis. It is to the student's advantage to populate this committee with members who can help guide the research project technically and/or intellectually.

- Program Director and Program Coordinator – The MSBS Program Director and Program Coordinator are an important part of the advising team. The Program Director will schedule periodic meetings with the MSBS students. Additional one-on-one meetings are available as needed and can be scheduled by appointment

Selection of a Research Mentor

Students should select a thesis advisor for their research by October 1 of the first semester. Master's students do not do laboratory rotations. The student should discuss with their thesis advisor the expectations and goals for the research project. The [Masters in Biomedical Sciences Research Agreement](#) form should be filled out, signed by both the faculty member and the student, and returned to the Graduate School Office. If the student realizes that the selected laboratory is not a good match between the student and the thesis advisor, a switch to another laboratory should be discussed with the Program Director.

MSBS Program Admissions

All offers of admission to Icahn School of Medicine are provisional, pending receipt and evaluation of final transcripts. Transcripts must be sent directly from the appropriate Registrar's Office to the ISMMS Admissions Office. These and all other materials requested by the Registrar in conjunction with the admissions process must be received to complete a student's enrollment. Submission of false or misleading information in the application materials or in connection with the application process will be considered by the Admissions Committee and/or the Committee for Academic Review as grounds for withdrawal of the acceptance offer, dismissal, or rescission of degree.

Applications are invited from students who have completed their undergraduate degree with a major in the sciences. Applicants should have a minimum GPA of 3.0 and some prior independent research experience. The Program admits only students who wish to pursue the MS degree on a full-time basis.

Admission is based on the applicant's academic records, prior MCAT or GRE scores, past research experience, letters of recommendation, and personal statement regarding ultimate career plans.

Important Dates
- January 15 –Priority application deadline

- February 15 –Rolling addmissions starts

- June 1 – Application deadline

- July 1 – Offers of admissions are made on a rolling basis and are generally completed by the beginning of August.

- Students are given 2 weeks from the date of their offer of admission to accept our offer.

Guidelines for Preparation of the Master's Thesis in Biomedical Sciences

The Master's Thesis should be based on the student's own work and should provide a critical review of the relevant literature and describe the student's research project in detail. The description of the research should be organized in sections similar to those in a journal article.

♦ The Written Document - The following structure and guidelines are suggested.

Title

Acknowledgements

Abstract: Should be 150 words or less

Introduction: Provide a critical review of the literature that is most pertinent to the work performed. It is important in this section to develop the rationale for the work performed. It should make obvious the basis of the questions addressed by the work. It should describe the basis for the approach taken to answer these questions. It should also provide insight into the relation of the thesis to the current state of knowledge in the field. Critical evaluation of the literature is a necessity.

Finally, the introduction should clearly state a hypothesis that will be tested by the studies.

Methods: Describe the primary techniques you have used. Do not repeat details of published methods. This is not intended to be a recipe book of the methods used. Instead it is a general overview of the procedures used and details of elements that are specific to the work Detailed methods should not be presented for work not actually conducted by the student, including work done by the Core Facilities or other colleagues; such presentations convey the impression that the student actually carried out the procedures.

Results: Describe what you have accomplished, accompanied by appropriate figures and tables.

Discussion: Examine the results, explain their significance and answer the question posed in the Introduction. Place the findings in the context of what is currently known in the field, demonstrating how the understanding of the field is extended by the work.

Conclusion/Summary: Summarize and state the significance of the results.

References: In the text, cite all references in the name-and-year system (e.g. Strong and Jones, 1991). The reference list should be arranged alphabetically by the last name of the first author in a standard format with titles. The student should consult standard reference publications for appropriate citation styles.

NB: The thesis should be written by the student, not by the thesis advisor. It is the role of the thesis advisor to guide the student in preparing a coherent, intelligible document to be distributed to the members of the Committee. However, the thesis advisor should also ensure, to the best of her/his ability, that the proposal is an original document and that the language of the proposal is that of the student. Ultimately, it is the responsibility of the student to provide an acceptable document.

The thesis should be in the best traditions of scholarship, e.g., identify sources, balance presentation by including conflicting data and counter arguments, etc.

A student should not present tables or figures that are not entirely his/her own work, unless this is unavoidable because the data are necessary to develop the story. In that case, the precise contribution of the student must be made clear.

Students who wish to use published manuscripts as the backbone of their thesis text may do so under the following circumstances:

a. A general introduction, literature review, and summary are written for the thesis.

b. Permission to use the published paper as part of the thesis is obtained from the relevant publisher A note should be made in the thesis indicating that copyright approval was granted.

c. The publication represents both the scientific work and writing of the student.

d. The student must be the first author on papers used.

e. Multi-author publications must be accompanied by a precise list of all work not actually performed by the student. Even better, those experiments not conducted by the student should be edited out of the thesis and just cited.

f. The student must have had a major role in writing the manuscripts (this should be certified by the thesis advisor). If the student did not do the earlier writing, the work should be rewritten by the student for the thesis.

g. A paper that has been submitted, but not yet accepted, can be used. But a note should be made on the paper that it was used in a Master's thesis as partial requirement for the fulfillment of the MS degree.

♦ Thesis Formatting – Because your thesis will be deposited and copyrighted through UMI Dissertation Publishing, please refer to detailed formatting instructions in "Depositing Your Master's Thesis" which is part of the Master's Thesis Deposit packet, available from the Registrar's Office Forms Page.

♦ Depositing One's Thesis – Instructions for preparing the MS thesis deposit can be found in MS Thesis Deposit Instructions on the Registrar's Office Forms website. When the student is ready to deposit the Master's Thesis, s/he should deposit the thesis electronically according to the instructions in the Deposit Instructions document within three calendar years of the date of initial matriculation in the Graduate School. After depositing the thesis, the student can request an interim confirmation testifying to the completion of the degree requirements.

♦ The Oral Presentation/Defense – When the student is ready to defend his/her thesis, the MS Thesis Defense Registration form must be filled out and returned to the Graduate School Office. The student should bring the MS Thesis Approval form to the oral presentation/defense.

Since the Master's Thesis Review Committee members will have read the written document before this presentation, the student should use this opportunity to give a summary of the particulars of the research and the proposal. This should be in the form of a well-rounded seminar-style talk, but does not need to be a full 50-minute seminar. Summary lengths are typically no less than 15 minutes. Power point slides are encouraged.

Prior to the presentation, the student should decide with the Chair of the Committee whether or not the questions will be asked throughout the presentation or if they will be held until the end. This decision is fully at the discretion of the student and Committee Chair.

In preparing for the defense, the student should plan to:

s. Defend the rationale for the approach(es) used;

t. Explain how this will answer the questions being asked.

u. Describe potential problems associated with the methodology and should also consider alternative approaches that could be used.

v. Describe in detail every figure presented.

w. Detail the strengths and weaknesses of the data.

x. Defend your interpretation(s) of each figure and be able to discuss alternative interpretations.

y. Coherently describe the integration of all studies described into an overall set of conclusions. This description should include placing the work into the conceptual framework of the field.

z. Rigorously defend the conclusions drawn

♦ The Master's Thesis Review Committee – The Master's Thesis Review Committee is composed of at least 3 members. The student's thesis advisor will chair the committee. Other members of the Committee should include faculty knowledgeable in the field of the thesis research. One member should have an appointment outside the thesis advisor's Department and the other member may be from the thesis advisor's Department. These three members, as well as any additional members the student and his/her thesis advisor may want to add, will be appointed by the Program Director. At its discretion alone, the Graduate School may choose to have a representative present for the defense. This representative would be in addition to the three appointed committee members, but would not vote on the outcome of the defense.

♦ The Master's Thesis should be submitted to each member of the Committee at least ten days before the scheduled oral presentation.

♦ The Committee should evaluate the student's ability to:

aa. evaluate and synthesize relevant literature defend the methods used

bb. articulate and elaborate on the experiments described

cc. discuss the significance of the work and potential future research directions

dd. justify conclusions

Revisions recommended by the Committee must be completed in a timely fashion. The student's thesis advisor should approve the revised thesis before it is deposited. The student should make note of the deadlines described below for final deposit of the thesis and dates that the MS degree will be awarded. The thesis must be deposited by the end of the semester in which the thesis defense takes place. The student will maintain student status until the thesis is deposited.

♦ Deadlines –

Thesis deposit - The thesis may be deposited at any time during the year, but the following deposit deadlines determine the date of the degree.

For the degree to be awarded:	You must deposit by:
September 30	September 15
January 31	January 15
May (ISMMS graduation date)	April 15

The degree is awarded on September 30, January 31, or the date of ISMMS's annual Commencement in May. Students depositing by the January or April deadline will receive their diploma at Commencement

Notification of Registrar – By March 1, students must notify the Registrar of their intent to deposit their thesis on or before the April deposit deadlines in order to be included in the Commencement exercises of that year. Commencement information will be sent during the spring semester to the student's last email address recorded with the Graduate School Office.

Special consideration – Those students who have a dissertation or thesis defense scheduled between April 16th and June 15th MAY, at the discretion of the Dean of the Graduate School of Biomedical Sciences, be eligible to participate in the spring Commencement ceremony even though they have not met the April 15th thesis/dissertation deposit deadline. In cases where a student is allowed to participate, he/she will not receive a diploma at graduation. After a successful defense, a diploma will be awarded on the next date that degrees are conferred (September 30th). Only students in good academic standing will be offered this courtesy. In this case, good academic standing means that all coursework has been completed with passing grades and the student's mentor/committee fully expect the student will successfully defend his/her thesis/dissertation prior to June 15th. If either of these criteria is not met, the student will not be allowed to participate in the spring graduation ceremony. Additionally, any student whose defense was not acceptable to their committee will not be allowed to participate in Commencement until after successfully defending and depositing.

♦ Publications –

Publications stemming from an MSBS student's thesis research should include the following acknowledgement -

"This work represents the Master's thesis of (students name) as partial requirement for the fulfillment of the MS degree in Biomedical Sciences offered by the Graduate School of Biomedical Sciences at Mount Sinai."

Master's to PhD

Master in Biomedical Sciences students may seek entry into the PhD in Biomedical Sciences program or the PhD in Neuroscience program.

Master's students seeking entry into one of the PhD programs must complete all the requirements for admission, including a new application and personal statement that explains the reason for undertaking pursuit of the PhD degree. Refer to the PhD Program description for application the deadline. Official transcripts and test scores

previously submitted to the Graduate School may be used in support of the new application, but must be supplemented by official transcripts for any academic course work taken since entering the Graduate School. Two new letters of recommendation must be submitted. Students who wish to continue their research in the same laboratory as their Master's research, must include a letter of recommendation from their thesis advisor stating that s/he is willing to have the student join his/her lab for PhD dissertation research. However, students must rotate in at least one other laboratory before starting their dissertation research in their MS thesis advisor's laboratory. MSBS students transferring to the PhD or MD/PhD program will be required to retake the RCR course.

Most or all of the credits earned in pursuit of the M.S. degree can also be applied towards PhD degree requirements, so students who begin their studies in a Master's program can later complete a PhD program with minimal loss of time.

If the student wishes to complete and receive the Master's degree before starting the PhD program, this request must be made in writing at the time of the application to enter the PhD degree program. This request will be granted only if the student has substantially completed the requirements for the Master's degree and plans to deposit his/her Master's thesis by April 15. In practical terms, this means that the student should need only to complete fewer than six additional credits, including the Master's Thesis, during the spring semester before entry into the PhD program.

CHAPTER 8 – MS in Biostatistics

MS in Biostatistics Program Description

Program Directors

Emilia Bagiella, PhD

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Emma K. T. Benn, MPH, DrPH

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Educational Coordinator

Deidra McKoy

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Program Goals/Objectives

The Master of Science in Biostatistics program is designed to prepare students for careers as data analysts and applied statisticians in the biomedical sciences and for clinical professionals who would like to increase their research capacity through formal training in biostatistics. It also serves as the perfect stepping stone on the path to earning a doctoral degree in Biostatistics, Epidemiology, or Bioinformatics.

Program Website

http://icahn.mssm.edu/education/masters/biostatistics

Program Description

Presented in a one-year, full-time format, the MS in Biostatistics program offers students rigorous, comprehensive didactic training in high-quality clinical and translational research. Our curriculum provides students with strong quantitative training as well as practical strategies for addressing complex challenges of novel, clinical research. The program also helps students hone their critical thinking skills. The program's structure provides students with the opportunity to gain excellent mentorship and individualized attention from faculty in biostatistics and a variety of other disciplines.

MS in Biostatistics Program Requirements
Course Requirements

Each track in the MS in Biostatistics Program curriculum consists of at least 34 credits which must be completed in one full-time academic year. In addition to coursework, students will complete a capstone project in each term. A detailed curriculum and a capstone overview are provided below.

Coursework – Theory and Methods Track

Students are expected to take a total of five required courses (12 credits) in the Fall Term, five required courses (13 credits) in the Spring I Term, and three required courses (7 credits) in the Spring II Term. In addition to the 32 credits of required coursework, students must take at least two clinical research-related elective credits, yielding the 3-credit minimum to successfully complete the MS in Biostatistics Program in one year. Required coursework is indicated in bold below, with possible electives listed in italics.

Fall

Course Number	Course Title	Credits
BIO6400	**Biostatistics for Biomedical Research**	**3**
BIO6100	**Fundamentals of Epidemiology**	**3**
BIO6500	**Probability and Inference I**	**3**
BIO6100	**Capstone**	**1**
BIO6300	**Introduction to R Programming**	**2**
CLR1010	Clinical Trials Management (elective)	1
BMI1005*	Computer Systems: Unix/Linux Fundamentals (elective)	1
BMI1006*	Computer Systems: Scientific Computing (elective)	1
BMI1007*	Computer Systems: Python 3 (elective)	1

* Must seek course director's approval prior to registering.

Spring I

Course Number	Course Title	Credits
BIO8700	**Theory of Linear and Generalized Linear Models**	**3**
BIO8200	**Analysis of Categorical Data**	**3**
BIO8500	**Probability and Inference II**	**3**
CLR0320	**Applied Biostatistics in Clinical Trials**	**3**
BIO8000	**Capstone**	**1**
CLR0700	Professionalism and Ethics in Clinical Research (elective)	2
CLR1113	Application of Translational Research in Oncology (elective)	3

Course Number	Course Title	Credits
BSR3400	Intro to Algorithms – Applications to Biology (elective)*	2
BSR2400	Lessons in Scientific Publishing (elective)	1
MPH0105	Health Economics (elective)	3
CLR0810	Genetic Epidemiology (elective)	3

Requires some prior knowledge of a CS-style programming language in addition to R/Python. Must seek course director's approval prior to registering.

Spring II

Course Number	Course Title	Credits
BIO9200	**Analysis of Longitudinal Data**	**3**
BIO9100	**Survival Analysis**	**3**
BIO9000	**Capstone**	**1**
BIO9002	Race and Causal Inference Seminar (elective)	2
CLR1114	Translational Oncology: Drug Development – From Discovery to Commercialization (elective)	1
MPH0414	Cardiovascular Epidemiology (elective)	3
CLR0207Culture Illness and Community Health (elective) 3CLR1114	Translational Oncology: Drug Development – From Discovery to Commercialization (elective)	1
BIO9001	Applied Analysis of Healthcare Databases (elective)	3
	Required Credits	**32**
	Minimum Elective Credits	2
	Total Credits	**34**

Coursework – Clinical Applications Track

Students are expected to take a total of five required courses (11 credits) in the Fall Term, five required courses (12 credits) in the Spring I Term, and four required courses (8 credits) in the Spring II Term. In addition to the 31 credits of required coursework, students must take at least three clinical research-related elective credits, yielding the 34-credit minimum to successfully complete the MS in Biostatistics Program in one year. Required coursework is indicated in bold below.

Fall

Course Number	Course Title	Credits
BIO6400	**Biostatistics for Biomedical Research**	**3**

BIO6100	**Fundamentals of Epidemiology**	3
CLR1010	**Clinical Trials Management**	1
BIO6500	**Probability and Inference I**	3
BIO6000	**Capstone (Research Project)**	1
BIO6300	Introduction to R Programming (elective)	2
CLR1010	Clinical Trials Management (elective)	1
BMI1005*	Computer Systems: Unix/Linux Fundamentals (elective)	1
BMI1006*	Computer Systems: Scientific Computing (elective)	1
BMI1007*	Computer Systems: Python 3 (elective)	1

* Must seek course director's approval prior to registering.

Spring I

Course Number	Course Title	Credits
BIO8700	**Theory of Linear and Generalized Linear Models**	3
BIO8200	**Analysis of Categorical Data**	3
CLR0320	**Applied Biostatistics in Clinical Trials**	3
BIO8000	**Capstone (Research Project)**	1
CLR0700	**Professionalism and Ethics in Clinical Research**	2
CLR1113	Application of Translational Research in Oncology (elective)	3
BSR3400*	Intro to Algorithms – Applications to Biology (elective)	2
BSR2400	Lessons in Scientific Publishing (elective)	1
MPH0105	Health Economics (elective)	3
CLR0810	Genetic Epidemiology (elective)	3

*Requires some prior knowledge of a CS-style programming language in addition to R/Python. Must seek course director's approval prior to registering.

Spring II

Course Number	Course Title	Credits
MPH0822	**Applied Linear Models II**	3
BIO9002	**Race and Causal Inference Seminar**	2
BIO9000	**Capstone (Research Project)**	1

BIO9001	Applied Analysis of Healthcare Databases	3
CLR0011	Research Grant Writing (elective)	1
CLR1114	Translational Oncology: Drug Development – From Discovery to Commercialization (elective)	1
MPH0414	Cardiovascular Epidemiology (elective)	3
CLR0207	Culture Illness and Community Health (elective)	3
	Required Credits	**32**
	Minimum Elective Credits	2
	Total Credits	**34**

Capstone Overview

The capstone-related lectures and projects will:

♦ Engage students in important discourse surrounding data management and research ethics

♦ Challenge students to turn conceptual research questions into testable hypotheses and to determine the appropriate analytic testing methods

♦ Provide students with the opportunity to shadow Biostatistics faculty mentors in the Center for Biostatistics consultation service

Additionally, students will learn how to create appropriate study design-related and methodological solutions to cutting edge, real-world research questions. Students will conduct advanced preliminary analyses under the guidance and supervision of their mentors. At the end of the Spring II term students will communicate their findings to an institution- wide audience at an MS in Biostatistics Capstone Symposium.

MS in Biostatistics Program Admissions

Eligibility – Theory and Methods Track

You must meet the following eligibility requirements to be considered for the Theory Track in the MS in Biostatistics Program:

♦ At least one college-level linear algebra course with grade of B or higher

♦ At least two semesters of college-level calculus with grade of B or higher

♦ GRE (Optional)

♦ TOEFL if you are coming from a non-English speaking country

Eligibility – Clinical Applications Track

You must meet the following eligibility requirements to be considered for the Clinical Applications Track in the MS in Biostatistics Program:

- Be a clinical researcher (hold a degree in medical sciences and be actively involved in clinical research)

- At least one semester of college-level calculus with grade of B or higher

- At least one college-level linear algebra course with grade of B or higher

- GRE (Optional)

- TOEFL if you are coming from a non-English speaking country

Application

The application deadline is August 1st. You will receive a comprehensive evaluation for admission based on factors including your academic record, post-undergraduate professional experiences, and motivation for successful completion of the program. We require the following application materials from you:

Theory and Methods Track

Completed online application form including:

- Background and demographics

- Personal statement (700 words or less) clearly explaining your motivation for applying to the program and your post-graduation career objectives

- Current curriculum vitae or resume

- Non-refundable application fee of $80

Clinical Applications Track

Completed online application form including:

- Background and demographics

- Personal statement (700 words or less) clearly explaining your motivation for applying to the program and how an MS in Biostatistics degree will help advance your career in clinical and translational research

- Current curriculum vitae or resume

- Non-refundable application fee of $80

Submit official transcripts for all undergraduate and graduate programs for which a degree was earned to: Icahn School of Medicine, Office of Admissions, One Gustave L. Levy Place, Box 1002, New York, NY 10029, and please include:

- Two letters of recommendation to be emailed by recommenders directly to admissions@mssm.edu

- GRE scores (optional), and TOEFL scores if applicable, using School Code 2464

Women and underrepresented minorities are especially encouraged to apply.

MS in Biostatistics Program – Core Courses Curriculum Overview

KEY:

   	Both tracks
   	Theory and Methods track only
   	Clinical Applications track only

Fall	Spring I	Spring II
Core Courses	**Core Courses**	**Core Courses**
Biostatistics for Biomedical Research	Theory of Linear & Generalized Linear Models	Analysis of Longitudinal Data
Fundamentals of Epidemiology	Analysis of Categorical Data	Survival Analysis
Probability and Inference I	Probability and Inference II	Applied Analysis of Healthcare Databases
Clinical Trials Management	Applied Biostatistics in Clinical Trials	Applied Linear Models II
Capstone	Capstone	Race and Causal Inference Seminar
Introduction to R Programming	Professionalism and Ethics in Clinical Research	Capstone

CHAPTER 9 – MS in Genetic Counseling

MS in Genetic Counseling Program Description

Program Directors

Randi Zinberg, MS, CGC
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Program Assistant Director

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Director, Clinical Research

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Program Goals/Objectives

The Genetic Counseling Program is a 21-month, full-time course of study designed to train future genetic counselors through intensive coursework and a variety of clinical placements.

Program Website

http://icahn.mssm.edu/education/graduate-school/degrees-and-programs/ms-in-genetic-counseling

Program Description

The Genetic Counseling Program is a 21-month, full-time course of study designed to train future genetic counselors through intensive coursework and a variety of clinical placements.

The integration of the academic and clinical disciplines within the Graduate School of Biomedical Sciences, ISMMS, and the Mount Sinai Health System provides our students unparalleled opportunities for didactic and clinical experiences to develop the medical, scientific, and psychosocial skills necessary to practice in this challenging and exciting field. Our graduates are uniquely qualified and highly recruited professionals in one of the fastest growing areas in healthcare.

Students must complete the core curriculum. Students are also required to rotate through a variety of clinical settings from prenatal to pediatric to adult genetics. These rotations provide opportunities for extensive supervised experience in history taking, interviewing, patient education, psychosocial assessment, and genetic risk assessment. For the thesis project, students must complete an in-depth study of a selected genetic counseling issue or topic. Students are strongly encouraged to study topics appropriate for national presentation and/or publication. Graduates are eligible to sit for the American Board of Genetic Counseling Certification Examination. The Program is accredited by the Accreditation Council for Genetic Counseling (ACGC).

MSGC Program Requirements

Course Requirements

The core curriculum of the Master of Science in Genetic Counseling is provided by the faculty of the Department of Genetics and Genomic Sciences, the Graduate School of Biomedical Sciences, including the Master of Public Health and Clinical Research programs, and the School of Medicine. Courses include:

♦ Structures (Embryology)

♦ Molecules, Cells & Genomics

♦ Biostatistics

♦ Clinical Research Ethics in Genetic Counseling

♦ Topics in Genetic Counseling I, II, III

♦ Introduction to The Ethical Responsibility of Genetic Counselors

♦ Introduction to Interviewing and Counseling Methodology

♦ Medicine, Social Justice, and Public Health

♦ Medical Genetics

♦ Culture, Illness and Community Health

♦ Impact of Illness on Patients and Families

♦ Practical Analysis of a Personal Genome

The program begins in early August. All courses are not concurrent. Students are expected to be in residence throughout the summer except as designated by the Program Director.

Graduation Requirements

♦ Achieve a cumulative GPA of 3.0 or higher for all required courses

♦ Complete the core curriculum

♦ Attain the minimum clinical competencies defined and documented by each clinical training area

♦ Complete a minimum of 50 clinical cases as required by the Accreditation Council for Genetic Counseling

♦ Complete, present and deposit an in-depth thesis project of a selected genetic counseling issue or topic

Thesis Milestones

Year 1:

March 15st

♦ Send a brief summary of proposed research to Program Director / Assistant Program Director / Director, Clinical Research

- ♦ Program Director / Assistant Director / Director, Clinical Research will provide feedback regarding feasibility and potential advisors

March 31st

- ♦ Advisor(s) secured

May 15th

- ♦ First draft of proposal completed

- ♦ Include hypothesis, summary, background and proposed methodology

- ♦ Proposals will be reviewed by the guiding committee

June 30th

- ♦ Final Deadline to Submit project proposal to relevant regulatory bodies

Year 2:

Mid-March

- ♦ Presentation of Research to clinical faculty/staff/students

April 15

- ♦ Final date for deposit* of thesis for May graduation**

*Deposit instructions can found at

http://icahn.mssm.edu/education/student-resources/resources-for-current-students/registrar/graduate-school-forms

** If a thesis project cannot be completed by April 15th students cannot receive their diploma in May. Students should discuss alternative deposit deadlines with Program leadership.

Advising

Students will meet with the Program Director/Assistant Director a minimum two times/year. Students will acquire a thesis advisor(s) based on the topic of interest. In addition, students are provided a genetic counselor to serve as a mentor for psychosocial skills development and professional growth.

MSGC Program Admissions

Students who will be considered for admission must have completed a baccalaureate or graduate program from an accredited college or university and should have a strong background in basic and social sciences including genetics, biology, biochemistry, psychology, and statistics. Competitive applicants should demonstrate an understanding of the genetic counseling profession and have experience in a communication or support organization. Experience(s) could include any peer counseling related activities or working with external agencies that provide counseling services.

In addition to the application form and supporting documents, applicants are required to submit GRE scores for the general exam, three letters of recommendation, a statement of purpose and register with the National Matching Services (NMS).

Important Admission Dates

- ♦ January 5 – Application deadline

♦ February-April – Competitive applicants are invited to interview with our faculty and students

♦ Spring – Notification of admissions will follow the guidelines established by the Association of Genetic Counseling Program Directors. Typically, admission decisions are announced in late April through the National Matching Service.

CHAPTER 10 – MS in Healthcare Delivery Leadership

MSHCDL Program Description

Program Director

Brian J. Nickerson, PhD, Administrative Director,

MS in Health Care Delivery Leadership

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Program Manager

Herb Lopez

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Program Description

Health care delivery is undergoing rapid change. It demands innovative, highly-skilled, forward-thinking leaders who can adapt and transform health care organizations to meet the challenges of this new era. The Master of Science in Health Care Delivery Leadership (MSHCDL) is designed to meet these needs. Delivered in a blended online format, the program provides students the competitive advantage required to provide strategic leadership in a changing health care landscape.

Our curriculum is built upon the philosophy that effective and efficient solutions to current challenges in health care delivery require:

♦ Evidence-based approaches to decision making

♦ Revised strategic frameworks of thinking and implementation

♦ Holistic change management

♦ Deep understanding of complex health care reforms

The program is delivered primarily via an enhanced e-Learning Management System, over the course of 19 months while students continue to work full time. Almost all online courses will take seven (7) weeks to complete and require on average sixteen (16) hours per week on substantive course tasks which equates to 2.5 credit hours.

Two (2) of the courses are delivered as in-person seminars: one in the beginning of the program and one that bridges into the second year, and run intensively over a four (4) to five (5)-day period and require substantive pre-residency seminar work equating to two (2) credit hours for successful completion. Total credit hours for the program is 35. This unique educational approach allows students flexibility in completing engaging coursework, while also providing multiple opportunities for collaborative learning and networking with other program participants, faculty, and health care leaders.

MSHCDL Program Admissions

The ideal applicant to the program will have several years of professional experience in a healthcare setting or in an industry supporting health care delivery. Candidates should also have leadership and/or management experience in any of the following organization types:

♦ Hospital, research or clinical setting

♦ Health care service company

♦ Health plan/insurer

♦ Pharmaceutical company

♦ Medical device corporation

♦ Educational organization

♦ Government agency

♦ Consulting firm

Applicants to the program receive a comprehensive evaluation for admission based upon a range of factors including academic record, professional experiences, leadership capabilities, major accomplishments, and motivation to complete a demanding degree program.

For groups of two or more individuals from the same organization, we also require a brief letter of institutional support from someone in a senior leadership position.

Standardized test scores (GRE, MCAT, or GMAT) are generally not required to apply to the program, but scores taken within the last 3 years can be submitted as evidence towards preparation for advanced graduate study. Applicants who do not possess a graduate-level degree and have only the minimum years of expected experience may be asked, during the admissions process, to take and submit scores as additional evidence of capability to complete the rigorous program.

Applicants from non-English speaking countries will be required to submit a TOEFL score. This requirement may be waived by the Program Directors after conducting an evaluation of a candidate's prior experience in English-speaking settings. Academic transcripts from non-US institutions will need to be submitted to the World Education Service (WES) or similar reputable credential evaluation agency for a course-by-course evaluation.

Application Deadline

Priority deadline is March 15. Regular deadline is July 15 but can be extended.

Courses

Fall I:

♦ Gateway Seminar: Critical Themes for Health Care Delivery in the 21st Century

♦ Strategy Creation for Health Care Delivery Organizations

♦ Improving Population Health Delivery

Spring I:

- ♦ Leading and Managing Health Care Delivery Organizations

- ♦ Health Information Systems Innovations

- ♦ Operations Management in Health Care Delivery

Fall II:

- ♦ Leveraging Big Data for Evidence-Based Decision-Making in Health Care

- ♦ Health Care Delivery Economics

- ♦ Seminar 2: Systems, Tools and Techniques for Improve Health Care Delivery

- ♦ Finance Essentials for Health Care Delivery Leadership

- ♦ Transformations and Innovations/Capstone Review

Spring II:

- ♦ Navigating Health Care Reform Policy and Politics

- ♦ The Affordable Care Act

- ♦ Capstone

Computer System Requirements

All students must have a laptop with up-to-date hardware and software to access video and other digital course content on the Learning Management System 24/7. For the most current requirements, please visit the website at icahn.mssm.edu/mshcdl.

Attendance

ISMMS expects students to participate in and attend all instructional activities. The requirement of active participation is no different in an online course versus classroom base course, albeit using different methods and mediums. Student "attendance" in an online course will be measured against the criteria for active course participation that is defined in the individual course syllabus.

To maintain integrity of the cohort model learning process which requires active peer-to-peer knowledge exchange, assignments should not be submitted prior to the official course start date. Students are required to view all lectures and presentations and be actively engaged in Blackboard LMS online learning community

All course activity is monitored to ensure compliance with regulatory standards of contact hour participation. Online courses will, at a minimum, have weekly mechanisms for student participation, which can be documented by any or all of the following methods: student tracking records in Blackboard; submission/completion of assignments; and communication with the instructor. As a measure of added identity verification, students will be randomly assigned to receive a number of challenge questions derived from publicly available information (no pre-set questions), to which only they would know the answers, as they are submitting a course assignment or examination. Additionally, alternative identity verification processes may be employed to which the student is obligated to comply. Discussion board postings are an integral part of the course. As such, you must post your own responses to the discussion board and must read and respond to at least two other student's posting. Responses must be more than "I agree." They should be substantive and should reference reading assignments, web references, lecture notes and outside resources..

Class synchronous sessions are required (mandatory) in courses. Refer to the course syllabus for specific information about synchronous meeting requirements.

Students who fail to maintain active participation in an online course as defined in the course syllabus will be contacted by the course instructor and/or the program administrator to figure out the best way to quickly re-engage. Multiple or long periods of neglect toward actively engaging in week-to-week course activities may

result in poor grades on related assignments, a failing grade in a course, and, in some instances, dismissal from the program.

Netiquette

What is etiquette online?

Etiquette in technology, referred to as netiquette, regulates what conduct is considered acceptable in an online or digital environment. Netiquette provides general conduct guidelines and reminders, such as not using all capital letters because it is the equivalent of shouting or shorthand texting abbreviations that can be easily misunderstood. Participants in the online environment should use a more formal approach than we find via social media avenues. Even though most of the work is taking place online the digital classroom should resemble acceptable behavior in a traditional classroom environment. The social code of netiquette guidelines below will also help reduce online miscommunication.

General Netiquette Rules:

♦ Make the Connection.

ee. Pay attention to the context of your postings.

ff. Responses submitted in discussion forums, blog posts and other communication. platforms in the online space need to be written in a way that is logical and clear to your peers.

♦ Be Professional

gg. Remember that there is another person on the other side of the computer.

hh. Sometimes people incorrectly think that when communicating in the online space that there are lower standards of ethics or personal behavior.

ii. While communication may be present in multiple forms in the online space, professional standards are not lower than they are in real life.

jj. If conflicted about what professionalism is online, consult the code and values followed in your day- to-day professional life. Chances are you will find the appropriate answer.

♦ Agree to Disagree - Be Pleasant and Polite

kk. You will not always agree with everyone.

ll. Remember that people are presenting from their own perspectives and experiences.

mm. Do not use offensive language or be confrontational for the sake of confrontation. Challenging ideas put forth by peers is acceptable, but must be done so in a collegial manner and not personalized.

♦ Ask Questions

nn. Remember that people in the online community come from various backgrounds.

oo. Culture is a set of shared values which influences communication and may explain the context of offered statements. Before drawing negative conclusions, ask for clarification.

- Forgive Your Community Members

    pp. Not everyone has experience communicating online.

    qq. When someone makes a mistake with spelling, asking a "stupid" question or responding unnecessarily long, it is best to be kind about it.

    rr. If you decide to inform someone of their mistake, be polite and preferably by private email rather than in the public forum.

- Remember to give people the benefit of the doubt

This Netiquette policy is adapted from Rutgers [Netiquette – Often-Overlooked Policy](#), Howard Community College's [Netiquette Statement](#) and Virginia Shea's [The Core Rules of Netiquette](#).

Part-time and Non-Matriculation/Degree-Seeking Options

Beginning Jan 1 2018, participants may elect to take the program on a part-time basis. The exact timing and sequence of course would be decided upon in consultation with the Program Director. A student must complete all requirements within a 5 year period or risk losing the ability to earn the degree. Students will be charged a per-credit tuition rate for each course in which they enroll.

Occasionally, professionals are interested in taking only a few courses or only part of the program in which case they may enter the program under a non-matriculation / non-degree seeking basis. Such enrollees earn academic credit and are charged the per credit tuition rate in effect at the time of registration. A transcript showing credits and grades earned will be provided. If a non-matriculated participant wishes to transfer to degree seeking status within this program, then all credits will be transferred into the degree (see below). Transferability of credits to other programs is at the discretion of that program's administration and policies.

Other conditions that apply include:

-There is a 2 course maximum for any non-matriculated student

-Any credits earned on a non-matriculated basis from the MS HCDL program are fully transferrable to the program should a non-matriculated students wish to move to degree-seeking status.

-Non-matriculated students participate fully in weekly assignments, discussions etc.

-Tuition fees for a non-matriculated student are charged at the equivalent per credit tuition rate (currently $2,100)

-This policy is subject to further change by the Program Director or Dean' Office

Graduate Program in Public Health Description

Program Director

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Associate Director

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Administrative Assistant

Rose Vallines

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Program Goals/Objectives

The mission of the Graduate Program in Public Health at ISMMS is to educate our students to prevent disease, protect the environment, and promote good health in partnership with the populations they serve. Through interdisciplinary research and innovation, policy analysis, and advocacy, our students and graduates translate knowledge into practice to serve local, national, and global communities.

Program Website

http://icahn.mssm.edu/publichealth

Program Description

Accredited by the Council on Education for Public Heath (CEPH), the Graduate Program in Public Health offers a Master of Public Health (MPH) degree, a 45-credit, competency-based program in which students can pursue a general public health course of study or choose from seven areas of specialization. The Graduate Program in Public Health also offers an Advanced Certificate in Public Health, an MD-MPH dual degree program, a jointly registered MPH-MSW dual degree program with Fordham University's School of Social Service, and a jointly registered MPH-DPM dual-degree program with New York College of Podiatric Medicine.

Program Information and Handbook

For complete program descriptions, the Student Handbook, Curriculum Guide, specialty track checklists, and application materials please visit the website at: http://icahn.mssm.edu/publichealth

CHAPTER 12 – Special Programs

Summer Undergraduate Research Program (SURP)

The Graduate School of Biomedical Sciences sponsors and administers the Summer Undergraduate Research Program (SURP) as a vehicle for bringing outstanding research-oriented undergraduate students into its community. For their research, students are able to select from a large pool of basic science laboratories where they will spend their 10-week internship. In addition to attending a weekly seminar given by a basic science faculty, a roundtable science discussion, and participation in departmental lecture series, SURP students are expected to present their own research at a poster session at the end of their stay. The primary emphasis of SURP is to introduce its students to the school's outstanding basic science research and eventually recruit them for either the PhD or MD/PhD programs. The school's faculty and graduate students interact with SURP students and serve as mentors to them. Many of the SURP students continue to interact with their mentor and laboratory even after the fellowship has ended. A preference will be given to SURP applicants who want to pursue a PhD or MD/PhD.

Post-Baccalaureate Research Education Program (PREP)

The ISMMS's Post-Baccalaureate Research Education Program (Mount Sinai PREP) is a program funded by the Division of Training, Workforce Development, and Diversity (TWD Division) of the National Institute of General Medical Sciences. Mount Sinai PREP supports a 1-2 year, non-degree program of intensive research and opportunities for course-work and skills development that will foster the success of recent college graduates from groups that are underrepresented in health-related sciences and individuals with disabilities

to enter doctoral training in biomedical sciences, particularly in PhD or MD/PhD programs. Mount Sinai PREP scholars work in laboratories of their choice and engage in course-work together with other student groups.

Other Special Programs

The Graduate School periodically sponsors special seminars, workshops, and mini-courses in such areas as Philosophy of Science, Biohazards, Grant Proposals, and Careers in Biotechnology. Students are encouraged to help organize such programs in areas of interest to them.

CHAPTER 13 – Graduate School Committees

Graduate Programs in Biomedical Sciences

Steering Committees

Biomedical Sciences Steering Committee

This Committee is advisory to the Dean of the Graduate School and addresses the educational goals, objectives and policies of the biomedical sciences programs of the Graduate School. The Committee meets monthly.

In addition to faculty members, the Committee includes:

♦ One student member and 2 postdoctoral fellows

♦ The Dean of the Graduate School, at his/her discretion, may appoint additional faculty who represent other stakeholders to serve on this committee.

Members of this committee will be appointed by the Dean of the Graduate School for two-year, renewable terms. Faculty are selected to provide the Steering Committee with representation from a broad range of programs, departments, and institutes. The Dean will appoint one committee member to serve as Chair for the academic year.

Students and Postdoctoral Fellows on this Committee serve as liaisons between trainee leadership (Student Council and Postdoctoral Executive Committee) and the leadership of the graduate programs. Members are appointed based on consultation between the Steering Committee chair and respective trainee groups.

MD/PhD Program Steering Committee

This Committee is advisory to the MSTP Director and addresses the educational goals, objectives and program-specific initiatives of students in the MD/PhD Program. The Committee meets twice per year.

The Committee includes:

♦ Associate Director of the MSTP

♦ Assistant Directors of the MSTP

♦ Three MD/PhD students (representing the preclinical, graduate and clinical phases of the program).

♦ The Dean of the Graduate School, in consultation with the MD/PhD Program Director, may appoint additional faculty who represent other stakeholders to serve on this committee.

♦ Additional members nominated by the Dean of Medical Education

The Director of the MSTP serves as Chair. Student members are appointed as described below.

Curriculum Committee

This Committee is advisory to the Dean of the Graduate School and reviews and evaluates all courses and curricular issues for existing and new degree-granting programs. The Committee meets monthly.

The Curriculum Committee includes:

- Faculty - At the beginning of the academic year, each MTA will nominate 2-3 faculty to serve on the committee. The Dean of the Graduate School will select and appoint faculty for two-year, renewable terms. Each MTA will have at least one faculty representative.

- Four student members (2 PhD and 2 MD/PhD).

- The Associate Dean of the Graduate School serves on this committee as a representative of the Graduate School

The Dean will appoint one committee member to serve as Chair for the academic year. Student members are appointed as described below.

Admissions Committees

PhD Admissions Committee

This committee evaluates applications for admission and makes recommendations to the Dean of the Graduate School about admission or rejection of candidates. The committee meets regularly during the admissions season. The PhD Admissions Committee includes:

- Faculty – At the beginning of the academic year, each MTA will nominate 2-3 faculty to serve on the committee. The Dean of the Graduate School will select and appoint faculty for two-year, renewable terms. Each MTA will have at least one faculty representative.

- Four student members.

The Senior Associate Dean for Curriculum of the Graduate School serves as Chair of this committee.

MD/PhD Admissions Committee

The MD/PhD Admissions Committee evaluates applicants to the MD/PhD Program and scores them based on academic excellence, research experience, letters of recommendation, MD/PhD motivation statement, exposure to clinical medicine, and the interviewer scores. The committee meets 4 or 5 times during the Admissions season. The MD/PhD Admissions Committee includes:

- Leadership –The Director and Associate Directors of the MD/PhD Program

- Faculty –The Director of the MD/PhD Program appoints faculty for three-year, renewable terms. Faculty represent all MTAs and have mentored MD/PhD and/or PhD students in the past. Priority is given to faculty who are physician-scientists and familiar with the unique demands of the joint degree training program

- Two MD/PhD student members and one alternate member, selected by the Director for a two-year term.

The Director of the MD/PhD Program serves as Chair of this Committee.

Clinical Research and Patient-Oriented Programs

Steering Committee

This Committee is advisory to the Dean of the Graduate School and addresses the educational goals, objectives and policies of the clinical research and educational programs (MSCR, MPH, MGC, PhD in Clinical Research) of the Graduate School. The Committee meets monthly.

The Committee includes:

♦ The directors of MSCR, MPH, MGC, and PhD in Clinical Research

♦ Associate Dean for Graduate Education in Translational Research.

♦ The Dean of the Graduate School may appoint faculty who represent other stakeholders to serve on this committee.

The Dean of the Graduates School will appoint one committee member to serve as Chair for the academic year.

Curriculum Committee

This Committee is advisory to the Dean of the Graduate School and reviews and evaluates all courses and curricular issues for existing and new degree-granting programs. The Committee meets monthly.

This Committee includes:

♦ Faculty representing the MSCR, MPH, MGC, and PhD in Clinical Research programs. At the beginning of the academic year, each program (MSCR, MPH, MGC, PhD in Clinical Research) will nominate 2-3 faculty to serve on the committee. The Dean of the Graduate School will select and appoint faculty for two-year, renewable terms.

♦ Students representing the MSCR, MPH, MGC, and PhD in Clinical Research programs. Because of the short duration (2 years) of most of these training programs, selection of student representatives to serve on this committee is left to the Program Director. The term of student membership is one year, except for the PhD in Clinical Research student representative, whose term will be two years.

The Dean of the Graduate School will appoint one committee member to serve as Chair for the academic year.

Students on this Committee serve as liaison between the Graduate School Leadership and their respective graduate programs.

Admissions Committees

Each degree-granting program will have its own admissions committee, which will recommend to the Director of their respective program the candidates for admission.

Student Committee Members

Number and status of student members

The Biomedical Sciences Steering and Curriculum Committees include up to four students each at all times (as indicated above). The PhD and MD/PhD Admissions Committees include up to four students each from their respective programs (as indicated above). Student members enjoy all privileges of committee membership, including the right to vote.

Term of membership of student members

Above committees consists of two consecutive years. Each year, two junior student members are appointed to each committee. Specifically, each year two students (one PhD and one MD/PHD) are appointed as new members of the Biomedical Sciences Steering and Curriculum Committees, two PhD students are appointed as new members of the PhD Admissions Committees; the first year of their membership overlaps with the second and last year of membership of the two senior student members. One MD/PhD student is appointed as a new member to the MD/PhD Admissions Committee each year to allow the two student representatives to serve staggered 2 year terms. Students who have completed a full term of service in a specific committee are ineligible to serve on the same committee again, but may post their candidacy for appointment as members of another committee in the graduate school.

Appointment process of student members

Each June, the Student Council solicits student candidates from the entire PhD and MD/PhD student population for open student positions on the above committees for the next academic year. All interested students are included on a ballot that is sent out to the graduate student constituency with the intention of electing the student committee members. Elected student members begin their service on the respective committees in July. All student members must be in good academic standing to serve on any Graduate School Committee.

Graduate students are also elected to the Student Council Sub-Committees listed below.

- Social

- Athletic

- Library/Bookstore

- Health

- Community Service

- Housing/Security

CHAPTER 14 – Graduate School Forms

All forms referred to in this Handbook can be found on the ISMMS Website: http://icahn.mssm.edu/education/student-resources/resources-for-current-students/registrar/graduate-school-forms

CHAPTER 15 – Student Government

The ISMMS Student Council is composed of members of each graduate program as well as each medical school class. The Student Council meets monthly and considers all academic, wellness, financial, and other matters related to student life in the Graduate School and Medical School. Graduate students are eligible to serve as either program representatives and/or subcommittee representatives.

The program representatives grant approval and funding of student groups and help plan large school-wide events. from Student Council, Student Affairs, Curriculum Committee, Steering Committee, THAW will have monthly meetings with the Deans of their respective programs to discuss PhD program specific agendas. They are also eligible to run for Student Council Steering Committee positions such as President, Vice President, Secretary, Treasurer, or an at large position for their program. The Student Council Steering Committee meets monthly with the Deans and Directors of each program collectively to address large, school-wide agendas.

The subcommittee representatives serve on more focused subcommittees such as athletics, housing/security, social, community service, and student lounge. These positions, along with program representatives, are elected at the beginning of the school year prior to the September meeting. All the positions are one year and open to all students from any program.

All of the above information as well as more information about the organization of the Student Council, its constitution and by-laws may be found on the Student Council webcommons page, www.webcommons.mssm.edu/studentcouncil.

Graduate School Student Handbook 2019-2020

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