Student Guide to the

Icahn School of Medicine at Mount Sinai Medical Scientist Training Program (MSTP)

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Created by the Student Body and MSTP Leadership

This guide describes the organization of the Icahn School of Medicine at Mount Sinai Medical Scientist Training Program. It is intended to familiarize students with the program and to help guide them through their experience. The policies here may evolve over time and this document is intended to be “living” and updated in real time. If any questions arise at any time regarding the policies and descriptions here, please reach out to any members of the MSTP leadership at any time for clarification. The Icahn School of Medicine at Mount Sinai Medical Scientist Program is committed to supporting the equity and inclusion of all students in the program through transparent dissemination of expectations and guidance throughout the phases of the program.

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Contact information

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Communications Table

IF YOU…	THEN CONTACT…

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Direct Deposit	Digital and Technology Partners (DTP) at mountsinaihealth@service-now.com and Payroll at mshpayroll@mountsinai.org
Questions on how to register or for which courses you should register	Consult the MSTP Milestone. And then contact MSTP Program Manager, Bianca Taylor; MTA Director; Registrar Office at registrar@mssm.edu.
Career Advisement	MSTP leadership, specifically Praveen Raju at praveen.raju@mssm.edu; Kara Bagot at kara.bagot@mssm.edu; Physician Scientist Career Advisors
In need of academic advisement	Kara Bagot at kara.bagot@mssm.edu, MSTP leadership, Pre-Clinical Advisors, MedEd, Lauren Linkowski at lauren.linkowski@mssm.edu and Med Ed Learning Resources
Questions about Disability Services and resources	Review the Disability Services site and contact Christine Low at Christine.low@mssm.edu
I want to learn more about anti-racist efforts and the Racism Bias Initiative	Visit the Racism Bias Initiative website ODI & CMCA https://www.mountsinai.org/about/odi
Student housing	Cynthia Morales cynthia.morales@mountsinai.org
Questions about the Academic Calendar	Click here to access the Academic Calendar
Questions about Icahn School of Medicine policies and procedures	Click here to access Graduate School and Medical School Student Handbook
Question about a bill you received	Review your account because it could be a legitimate bill. If it is a billing error, contact Bianca Taylor and/or Student Finance Office at
	Student Council
MSTP event funding for cohorts, MSTPhamilies, and MSTP-recognized groups	Bianca Taylor
Non-MSTP event funding	Student Council
F30/F31 support	MSTP leadership
Room reservations for an event	Sa'Haara Bryant, Graduate School Program Coordinator at sahaara-jade.bryant@mssm.edu
In-house catering	
Reimbursement, salary, tuition	Osei Tutu, Senior Financial Analyst, at osei.tutu@mssm.edu
Blackboard access and MD Google Calendar	Curricular Affairs at curricular.affairs@mssm.edu
WiMSTP	
MSTP Makes	Email Khadijah Crawford at khadijah.crawford@icahn.mssm.edu

Serve as an Admissions Volunteer	Email Bianca Taylor, MSTP Program Manager
Join the Retreat Planning Committee	Email Bianca Taylor, MSTP Program Manager
Health Insurance questions	Stephanie Autenrieth (Senior Associate Dean for Enrollment Services)
Need to take a leave of absence	Please contact the MSTP Director and your PI to explore the possibility of a leave. Then complete the Leave of Absence Request form
Return from a leave of absence	Review this document and complete this form.
I received an F30/F31. Yay! How do I get the Graduate School bonus?	In one email, contact Bianca Taylor and Osei Tutu at osei.tutu@mssm.edu. Please attach your NOA to the email.

MSTP Resources

Resources for students starting in the program

h/t to Jake Herb and Stephanie Song

Recreation office

Follow this link and sign up for the email list to get alerts for discounted entertainment in the city!

EJIS Oracle Applications Cloud

This is a shortcut to see where your paystubs are posted. Your W2 will also be posted here in the run-up to tax season. Your other year-end tax document (the 1098-T, which relates to tuition) will be posted around the same time to Empower under Financials.

Levy print

This is the portal for sending print jobs to the library printers. All students start with a printing balance.

Student Health: Call ****212-241-6023 Monday through Friday (8:30 am–4:30 pm) to make an appointment to see a primary care provider. There is not a web portal to make appointments, you need to call

Academic IT (ASCIT): 212-241-7091

These folks have an office in the library too, and during non-peak hours its usually easiest to get help in person.

Hospital IT: 212-241-4357

Hospital IT is who to call if your issue is related to your hospital account or EPIC access. These are also the people you want to call if you would like to get Haiku set up on your phone, which is the EPIC app. This is helpful but not necessary.

Password reset instructions https://itsecurity.mssm.edu/passwordreset/

Password reset portal (once you have filled out security questions:
https://passwordreset.microsoftonline.com/

Oh the joys of technology. I'm sure by now that you know that you have two separate Mount Sinai logins (your school login and your hospital login) and they both have the same username. Your passwords for each of these accounts need to be reset every 3 months, and if you do not reset your password before it expires you will be locked out of your account. Take a look at the password reset instructions to brush up on how to reset your passwords.

Importantly, you need to answer the security questions in order to be able to use the web portal to reset your password, otherwise, you will need to call academic IT if it is your school account and hospital IT if it is your hospital account.

Finally, when resetting your hospital password, you will log in using a username/email that is very unfamiliar. You might think that your only Mount Sinai email is your first.last@icahn.mssm.edu (in my case, Jake.herb@icahn.mssm.edu). However, you also have a unique hospital email that you will need to reset your hospital account password through the web portal even if you do not have full access to the email. This hospital email follows the format: unique_identifier@mountsinai.org (in my case herbj01@mountsinai.org).

If you're struggling you can always call IT and they can help you. (This was something that I struggled with every 3 months until I learned these important details 🥲)

I'm sure this is all laid out beautifully in the instructions, but I just wanted to let you know

Additional helpful websites:

YPass for 92nd St YMCA: https://gradschool.mssm.edu/y-pass/

Blackboard https://learn.mssm.edu/webapps/login/

MedInfo app https://medinfo.mssm.edu/home

One45 course evals https://icahn.one45.com/

Levy library https://icahn.mssm.edu/about/ait/levy-library

MSVPN https://mshmsvpn.mssm.edu/my.policy

Empower https://student.mssm.edu/fusebox.cfm

Feedback form/mistreatment report https://mountsinai.formstack.com/forms/feedback_form

Sinai Central https://sinaicentral.mssm.edu/

eRA Commons https://public.era.nih.gov/commonsplus

ISMMS Insider Guide to First Year
https://medinfo.mssm.edu/uploads/Insider-s-Guide-to-First-Year-2018-2019.pdf

Course registration guide
https://gradschool.mssm.edu/wp-content/uploads/2021/06/CourseRegistrationGuide.pdf

Student files https://studentfiles.mssm.edu/

Sinai Cloud https://login.mountsinai.org/adfs/ls/IdpInitiatedSignOn.aspx

MD/PhD Student Laboratory Database

MSTP Shared Drive

How to upload F materials for others to use

We have created an easy way to deposit your F award for other students to reference. Previous awards are incredibly useful resources for those who are going through the submission process. Please consider donating your hard work to the cause.
Instructions:
1. Navigate to this link
2. Create a folder using this template
Name_MTA_F30/31_Submission_date_first_submission/resubmission.
(example: LaurenStalbow_GDS_F30_April2021_resubmission)
3. Upload the award and any material you found helpful while applying
4. Optional- you may want to consider removing the last page of your biosketch that includes your MCAT and STEP1 score. It is up to you if you want to include that.
On the backend, we will move these folders to the appropriate MTA-specific folder.

Introduction

The ISMMS MSTP Mission:
To recruit and train a diverse group of students in an inclusive community, to help them become rigorous, visionary and resilient physician scientists and leaders in the biomedical revolution.

The ISMMS MSTP Vision:
We are advancing medical care through an atmosphere of intense collaborative learning, social concern, and rigorous scientific inquiry.

Welcome to the Icahn School of Medicine at Mount Sinai Medical Scientist Training Program! This handbook is designed to provide you with a reference that details relevant policies, procedures, and guidance that impact your day-to-day responsibilities as a student, but also with a guide to understanding the components and how they contribute to your training experience. We hope you will find it useful and use it as a reference to clarify. The MSTP Program Leadership is always available to answer questions and clarify how this applies to your individual training experience and is committed to providing you with the most enriching experience. While this Handbook serves to clarify and consolidate, it remains a guide and does not limit individual experiences. The MSTP leadership together with the student body are prepared to review and modify procedures and programs to improve overall effectiveness and, when appropriate, in response to individual student needs. Your suggestions and comments are welcomed and should be forwarded to MSTP leadership or student representatives to review and revise.

As this is a dual-degree program, our policies largely stem from those that are detailed in the student handbooks of the Icahn School of Medicine at Mount Sinai and the Graduate School of Biomedical Sciences, respectively. Those handbooks are listed here:

Medical School Student Handbook

Graduate School Student Handbook

The purpose of this handbook is to clarify how those policies impact students navigating through this dual-degree program.

Program Overview

Our program integrates an outstanding research environment with a well-rounded, nationally acclaimed medical education. The NIH's Medical Scientist Training Program (MSTP) has funded us continuously since 1977.

Your training begins the summer before your first year of medical school with a laboratory rotation of your choice and our Problem Solving in Biomedical Science course. Through lectures and collaborative problem solving, this course is designed to develop your analytical thinking skills and introduce you to current disease-oriented research problems.

After the summer course, you begin our integrated MD/PhD curriculum with our Biomedical Science for MD/PhDs course, which builds on the medical school curriculum using a series of lectures, tutorials, and graduate-level journal clubs.

Clinical experiences will be an important part of your curriculum from the very beginning. During your graduate school years, you may choose to carry out your thesis research in any of seven different multidisciplinary training areas:

- Cancer Biology
- Development, Regeneration, and Stem Cells
- Genetics & Data Science
- Immunology
- Microbiology
- Neuroscience
- Pharmacology and Therapeutics Discovery

Then, after defending your thesis, you'll return to ISMMS for the last two years of clinical rotations—thereby completing your MD degree. To facilitate your transition back to the clinic, we offer a clinical refresher course, as well as a number of other clinical enrichment activities.

Diversity, Equity, and Inclusion

The Icahn School of Medicine at Mount Sinai (ISMMS) Statement on Diversity, Equity, and Inclusion provides overarching guidance to the MD/PhD program. As an ISMMS academic program, the MD/PhD program recognizes that diversity drives excellence. Our program supports trainees through individualized paths in careers as physician-scientists and values the unique characteristics and career paths of each student from recruitment through the student life cycle through graduation. Recruitment and admissions practices are governed by a holistic approach to each applicant as a means to foster a vibrant student body with different life experiences and biomedical expertise and interest as defined in our institutional mission and diversity statement. We commit to providing MD/PhD students with holistic student support to cultivate an inclusive, thriving, and supportive environment that engages, embraces, and values all of our students, faculty, and staff who contribute to building a diverse physician-scientist workforce.

The National MD-PhD Program Outcomes Study released in 2018 by the Association of American Medical Colleges indicated that MD/PhD enrollee diversity by gender, race, and ethnicity still lags behind that of medical schools. This unacceptable truth must change and we commit to doing our part as an MD/PhD program. Therefore, we aim to:

- Ensure that our student body reflects the growing diversity of the population.
- Identify and disrupt the manifestations of systemic racism in the learning environment which have led to inequities in both healthcare delivery and the practice of research.
- Call attention to the critical role physician-scientists play in breaking down barriers and support the creation of equitable healthcare delivery systems, and increasing the enrollment and participation of people of color in clinical trials and in biomedical research studies, and to the impact of race on pathophysiological mechanisms and health outcomes.
- Become self-educated on and engage in dialogue among trainees and faculty about the concepts of scientific and systemic racism and bias, to spark action in becoming an antiracist academic program.

The MD/PhD program partners with both the Office for Diversity and Inclusion, the Racism and Bias Initiative, and the various student affinity and social activism groups that contribute to the unique and dynamic culture and build community, educate, and enact change at ISMMS.

JEDI Initiative

The MSTP JEDI (Justice, Equity, Diversity, and Inclusion) Initiative is a year-long collection of programs that allow for interactive sessions, chats, discussions, seminars, and a journal club.

Racism and Bias Initiative

http://changenow.icahn.mssm.edu/race-bias/
The role of racism and bias in medicine and medical education has undoubtedly contributed to the development and perpetuation of inequities in health care outcomes for historically marginalized patient population groups. As a result of ISMMS medical student activism and

advocacy aimed at having our medical school recognize the historical underpinnings of racism and bias in medicine and in our medical training**,** we launched the Racism and Bias Initiative in 2015. The spirit of the Racism and Bias initiative is to explicitly address and undo racism and bias in all areas of medical school and center racial justice, health equity, and underrepresented voices and experiences of our medical education colleagues.

The Racism and Bias Initiative is driven by a change management methodology that guides how we engage, prepare, equip, and support individuals and ISMMS to successfully adopt transformational change towards our future state of providing healthcare and education that is free of racism and bias. With a commitment to make the work of this Initiative transparent and accessible, we have created this page to chronicle our efforts to date and the products and resources generated from our work thus far

Onboarding for Incoming MSTP Students

List of relevant websites

Website	URL
2022-2023 ISMMS Academic Calendar	https://icahn.mssm.edu/files/ISMMS/Assets/Education/Student%20Life%20and%20Resources/Med_Academic%20Calendar%202022-2013_FINALv2.pdf
Aetna Student Health	https://www.aetnastudenthealth.com/en/school/846570/index.html
Blackboard	https://learn.mssm.edu/webapps/login/
BuildingLink	https://auth.buildinglink.com/Account/Login
CITI training modules	https://www.citiprogram.org/index.cfm?pageID=14
ClickPay	https://www.clickpay.com/Home.aspx
Course registration guide	https://gradschool.mssm.edu/wp-content/uploads/2021/06/CourseRegistrationGuide.pdf
Empower	https://student.mssm.edu/fusebox.cfm
eRA Commons	https://public.era.nih.gov/commonsplus
Feedback/mistreatment form	https://mountsinai.formstack.com/forms/feedback_form
Insider Guide to First Year	https://medinfo.mssm.edu/uploads/Insider-s-Guide-to-First-Year-2018-2019.pdf
Levy library	https://icahn.mssm.edu/about/ait/levy-library
Levy print	https://levyprint.mssm.edu/myprintcenter/
MedInfo app	https://medinfo.mssm.edu/home
MSVPN	https://mshmsvpn.mssm.edu/my.policy
One45 course evals	https://icahn.one45.com/
Password reset	https://itsecurity.mssm.edu/passwordreset/
PEAK learning center	http://peak.mountsinai.org/learncenter.asp?id=178409&page=280
Recreation office	http://recreation.mountsinaihealth.org
Sinai Central	https://sinaicentral.mssm.edu/
Sinai Cloud	https://login.mountsinai.org/adfs/ls/IdpInitiatedSignOn.aspx
Student Files	https://studentfiles.mssm.edu/

Administrative tasks

See Summer before MD1 section.

Aron Hall-related tasks

- Set up a BuildingLink account to make maintenance requests by emailing cynthia.morales@mountsinai.org and requesting an account.
- Set up a ClickPay account to pay Aron Hall rent online: https://www.clickpay.com/Home.aspx
- It is possible to have your rent deducted from your paycheck after a few months. Ask an upperclassman how to do this.

Curriculum

Preclinical

https://icahn.mssm.edu/education/dual-specialty/md-phd/program/preclinical
The integrated MD/PhD curriculum begins during the fall of your first year with a course called Biomedical Science for MD/PhDs. This course builds on the first year of medical school curriculum using lectures, tutorials, and graduate-level journal clubs—and continues into the spring semester. During this time, you will also take our Art and Science of Medicine course, which includes central patient care experience, and Longitudinal Clinical Experience.

Throughout your first year, you are encouraged to meet with prospective thesis mentors. These mentors will be a great resource during the one or two additional lab rotations you will complete the summer between the first two years of the program. Choosing a compatible thesis advisor will be an extremely important factor in the success of your training experience.

Recognizing the value of interdisciplinary collaboration, we seek to accommodate your interest in performing clinically relevant thesis research in the laboratory of any member of the training faculty of the Graduate School of Biological Sciences, irrespective of your chosen Multidisciplinary Training Area.

PhD Years

https://icahn.mssm.edu/education/dual-specialty/md-phd/program/phd
During the PhD portion of your training, you will pursue advanced courses that match your training area and interests. Advanced coursework is selected in consultation with and with approval by the Directors of your Multidisciplinary Training Area (MTA).

In the fall of your third year, you will work with your thesis advisor to develop a thesis proposal. After developing your proposal, you will sit for an examination to defend this proposal which can then be submitted for an NIH F30/31 application.

While in the PhD portion of the program, you will be able to maintain your clinical skills through our Clinical Exposure course. For this course, you will perform three rotations through any of the clinical disciplines from the last two years of medical school, such as medicine, neurosurgery, pediatrics, and psychiatry. This will help you refresh and enhance your patient interviewing, physical exam, and presentation skills.

During your PhD years, you may also choose to maintain and hone your clinical skills through the East Harlem Health Outreach Partnership (EHHOP). EHHOP is a free, student-run clinic for uninsured patients in East Harlem, sponsored by the Mount Sinai Health System. Every Saturday, volunteer medical students function as primary care providers under the supervision of volunteer attending physicians. EHHOP provides an outstanding opportunity for medical students to “learn by doing” in a supportive, educational environment. MD/PhD students in their PhD phase have long played an important role at EHHOP. Recently, a formal Physician Scientist Track (PST) has been established for MD/PhD students within EHHOP, providing our MD/PhD

students with the clinical information, skills, and confidence they need to excel during their clerkships.

Clinical Years

https://icahn.mssm.edu/education/dual-specialty/md-phd/program/clinical
We offer an eight-week MD/PhD Clinical Refresher course, designed to help facilitate your transition from PhD work to clinical practice. In addition, our InFocus5 (formerly Clinical Skills Week) will help orient you to the policies and procedures of clerkship rotations.
As a third-year medical student, your training will focus on clinical rotations combined with 10 weeks of elective career exploration or additional research time.
You will apply and interview for residency programs during your fourth and final year of clinical education. During this year you will receive ample elective time and the ability to design a course tailored to your interests and professional goals. This flexibility, alo ng with rotations at potential residency sites, scholarly work at other institutions, and longitudinal clinical experiences will give you the experience and training you need to succeed as a resident.

Selecting a mentor

Watching this video on how to pick a Good Mentor

https://www.ibiology.org/professional-development/pick-graduate-advisor/
Dr. Ben Barres gives advice on how to pick a graduate advisor. He strongly suggests picking an advisor who is not only a good scientist, but also a good mentor. In this talk, he describes a mentor's qualities and attributes, and gives suggestions on how to identify an advisor who will be a good mentor.

Resources for finding potential mentors

Selecting a mentor : Questions to ask before joining a lab

- Helpful resources:

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    - https://www.training.nih.gov/questions_for_potential_mentors
    - https://www.sciencemag.org/careers/2003/10/choosing-thesis-lab
    - https://mdphdtobe.com/2020/06/22/almost-docs-how-to-pick-a-research-lab/
    - http://www.biomed.emory.edu/PROGRAM_SITES/GMB/documents/choosing-a-thesis-lab.pdf
    - https://blog.addgene.org/is-this-the-right-place-for-me-8-tactics-for-choosing-a-lab
    - https://www.ascb.org/careers/factors-to-consider-when-choosing-a-lab-for-phd-training/
    - https://mdphdtobe.com/2020/06/22/almost-docs-how-to-pick-a-research-lab/
    - https://youtu.be/DkxAUA2X1BQ

- Does your potential mentor have an appointment in the Graduate School?
    - Check their website listing, under Biography, there should be a section entitled “Multi-Disciplinary Training Areas”; all GS faculty have appointments in a primary and usually secondary MTA; if there is no listing, ask the mentor (the website may not be updated); if they are not GS faculty, they should contact the GS, suzanne.small@mssm.edu to set up an appointment to meet with the Dean, Dr. Marta Filizola)
- Ask questions to current lab members (+ lab neighbors who can be more subjective)
- Ask about weekends / vacations to understand how they approached work/life balance
- Ask about how projects are given to students. Think about whether you want a more “focused” project, or venture into the unknown.
- Ask about the expectations from a PhD (number of papers, etc.)
- Make sure that they know what being an MD/PhD student entails (eg timeline)
- Ask about how much you would be meeting one-on-one

Questions to ask PIs

"What are your strengths? What would you want to work on?"
"What do lab members do to balance their work and life? How do you enable this? "
“What will happen to me if funding isn't available? How long can you guarantee my funding?
"What is one time someone has failed, and how did they react?"
"How much time is given to each person each month? Who decides this scheduling?"
"If you could create the perfect lab, what aspects of this one would you include?"

Other tips:

- Attend lab meetings

Laboratory rotations

Students generally do 3 laboratory rotations.

Rotation #1:	Summer before MD1
Rotation #2:	Summer between MD1 and MD2
Rotation #3:	Summer between MD1 and MD2

Rotation goals

Multidisciplinary Training Area (MTA) Directors and Curricula

MTA	Directors	Email addresses	Curriculum
AIET	Hayit Greenspan Alan Seifert	hayit.greenspan@mssm.edu alan.seifert@mssm.edu	AIET curriculum
CAB	James Manfredi Doris Germain	james.manfredi@mssm.edu Doris.Germain@mssm.edu	CAB curriculum
DRS	Robert Krauss Florence Marlow	robert.krauss@mssm.edu florence.marlow@mssm.edu	DRS curriculum
GGS	Benjamin Hopkins Anne Bowcock	benjamin.hopkins@mssm.edu anne.bowcock@mssm.edu	GGS curriculum
IMM	Konstantina Alexandropoulos Jeremiah Faith	k.alexandropoulos@mssm.edu jeremiah.faith@mssm.edu	IMM curriculum
MIC	Jean Lim Dom Tortorella	jean.lim@mssm.edu domenico.tortorella@mssm.edu	MIC curriculum
NEU	George Huntley	george.huntley@mssm.edu	NEU curriculum
PTD	Avner Schlessinger Eric Sobie	avner.schlessinger@mssm.edu eric.sobie@mssm.edu	PTD curriculum

MSTP leadership

MD/PhD Student Laboratory Database

This database contains all the students in the program, the laboratories in which they rotated, and the laboratories they selected. Please feel free to reach out to any students about how they made their decision.

Sample questions to ask potential mentors

Adapted from https://www.training.nih.gov/questions_for_potential_mentors

When meeting with potential mentors, you need to determine whether their research programs and mentoring philosophies match your own interests and needs. We've divided sample questions into categories. We recommend that you start with questions about the research program before addressing your potential role in the research group.

QUESTIONS ABOUT THE MENTOR AND HIS/HER RESEARCH PROGRAM:

- How often do you meet individually with your students and fellows?
- Does your research group have regular group meetings? If so, how frequently?
- What qualities do you value most in a student or fellow?
- What are your current research projects, and at what stage of completion are they right now?
- Do you allow students/fellows to design their own projects or do you prefer to assign projects?
- How often do you collaborate with other research groups?
- What process do you use to evaluate your students and fellows? How often does this occur?
- How many former students and fellows have you mentored, and where did they go after leaving your research group?

QUESTIONS ABOUT YOUR POTENTIAL ROLE IN THE RESEARCH GROUP:

- What might I be working on here?
- What technologies, approaches, and model systems would I have the opportunity to learn and develop?
- Would be I able to take courses or participate in training programs?
- Would I be able to attend scientific meetings? How often?
- Would I have opportunities to give formal and informal research presentations?
- Would I be working on my own project or sharing a project with other members of the research group?
- Is there a specific person in the group that I could go to with day-to-day questions about laboratory procedures and supplies?

ADDITIONAL QUESTIONS FOR ADVANCED TRAINEES:

- If I joined this group, would I have the opportunity to train or mentor junior members of the research group?
- Do you allow students and fellows to co-author review articles with you?
- Do you allow fellows to pursue independent projects to take with them to their own faculty positions?
- What would you expect of me if I disagreed with your interpretation of results or even the value of a research project?

Conversations to have with mentors

- How to discuss how you want to be trained
- How to discuss planning of your career trajectory
- Negotiating lab responsibilities
- Guidance on writing, how to ask for help
- Best practices in science professionalism
    - how to cite references in your presentation
    - how to reach out to collaborators or mentors
    - when to run things by your PI

- 1. What sort of academic productivity are you looking for? What kind of impact are you looking to produce? How many papers are you looking to produce?
- 2. Do you have a specific project you want to work on?
- 3. Work life balance: How do you approach work life balance? Asking about how they feel about working weekends tells you a lot about the mentor?
- 4. Do you have a project in mind for me? Or more of a general direction? Having a specific project is going to make it easier to be productive faster, but at the cost of your productivity?
- 5. What did people in the lab do after they graduated? Did they produce academics? Or people that went into industry, clinic, ect?
- How does authorship get decided?
    - Does writing the bulk of manuscript get you first? Do you have to generate the most figure panels? Avoid deciding this at the beginning.
    - What happens if you finish someone else's project?
- How present is your mentor? Asking the question directly might not work. Try asking, “how many times a week/month do you expect to meet individually/as a group?”
- 6. Conversation Having Tactics:
    - a. Rephrase your preferences in the language of a grant. Some mentors don’t respond well to an idea unless it can help get the next grant
    - b. Narcissism is common among academics.
        - Can you make your PI think it was his idea?
        - Drop the idea in journal clubs, lab meetings, so that it is normalized in other contexts
    - If you end up in catastrophic situations, have conversations by email to record conversations. Also just to remind PIs that they said stuff they said.
- Bigger vs smaller PIs?
    - Different risk profiles
    - Big labs with great post docs can be good learning experiences even if you see your

-

Joining the lab: Conversations with your new mentor to identify, prioritize, and communicate your needs

From *Mentoring Up for Postdoctoral Researchers:* See CIMERproject.org for complete curricula and attribution.

Instructions:

1. Check the box next to the roles you currently need your primary mentor* to play.
2. Highlight the 5 roles that are top priorities for you at this point in your career.

*Later, you should share your results with your primary mentor.

Check for Roles Currently Needed	**Roles Mentors Can Play Across 5 Domains* of Attributes Needed for Effective Mentoring Relationships**
	Research Skills
	Help me develop research skills in specific areas of D&I research
	Help me become a better science communicator (presenting and writing)
	Help me learn how to collaborate effectively
	Help me write grant proposals and seek other funding
	Interpersonal Skills
	Work with me to define and align the expectations we have for our relationship
	Provide me with constructive feedback
	Communicate honestly and build a trusting relationship with me
	Psychosocial Skills
	Help me build my research self-efficacy
	Help me build my career self-efficacy
	Help motivate me
	Cultural Diversity Skills
	Help me develop a sense of belonging in my program/department

	Be open to conversations about diversity and how it impacts my training experience
	Help me address issues of bias and stereotype threat
	Sponsorship Skills
	Foster my independence
	Help me network in the field of D&I research
	Help me find ways to better balance my work and personal life
	Help me navigate and explore career options

Adapted from Branchaw, J., Pfund, C. and Rediske, R. (2010). Entering Research: Workshops for Students Beginning Research in Science. W.H. Freeman & Co., New York.

**Domains described in: Pfund, C., Byars-Winston, A., Branchaw, J., Hurtade, S., Eagan, K. (2016) Defining Attributes and Metrics of Effective Research Mentoring Relationships. AIDS and Behavior, 20(2), 238-248.*

General tips for how to succeed in lab

Tips for being a good mentee

https://www.insala.com/blog/how-to-be-a-good-mentee

Being a mentee requires more than just showing up to meetings with a mentor. Mentoring relationships require a bit of work and significant input from the mentee. When the mentor and mentee are a good match and understand their roles, the mentorship will blossom into a valuable relationship.

We recommend training your mentees (**and mentors**) before the **mentoring program** begins to help mentoring relationships get off to a strong start. During training, participants should learn about their role and responsibilities within the mentoring partnership.

Below, are our top tips for mentees that will prepare them to maximize their time with their mentor; leading to a happy and helpful mentorship.

Top 10 tips for being a good mentee.

1. **Remember Your Mentor is a Volunteer**
   First off, it's important to remember your mentor is a volunteer. They have more experience in the field, and they are taking time out of their schedule to help you develop and grow, so there must be healthy boundaries and respect in your relationship.

   This means as a good mentee, you should be aware of and minimize time wasters that occur during your meetings. Also ensure you show gratitude for the time and advice, and never act rudely or attempt to downplay their knowledge.

2. **Take Responsibility for Your Own Learning**
   Your mentor cannot do everything for you, they can only give you tools and guidance. You must be willing to take charge of your learning by asking questions and actively participating in the conversations to become a good mentee. Plus, you should absorb all the **knowledge** you can as asking the mentor to repeat themselves frequently is a waste of their time.

3. **Develop Trust**
   Your mentorship does not automatically establish trust between you and your mentor. It must be developed and nurtured. You will both need to work to establish trust at the beginning of the relationship. Having trust can opens up a channel of communication, which is important to the success of your mentorship.

4. **Be Respectful of Your Mentor's Time**
   Your mentor has a lot of room to help you but remember that they are likely a busy person. Again, be respectful of this by cutting out time wasters in your meeting, and make sure you give them plenty of notice if you need to cancel or reschedule a session.

5. **Set Realistic Expectations with Your Mentor**
   Your mentor is a guide. They are not going to do everything for you, they are going to mentor you. Expecting them to do so can lead to unsuccessful mentor matches. A

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successful mentee sets goals and expectations at the beginning to base the mentorship on a solid foundation and avoid these awkward mishaps.

6. **Come to Each Meeting with a Prepared Agenda**
   This ties in with respecting your mentor's time and setting realistic expectations. If you have a prepared agenda for each meeting, you are much more likely to stay on task and optimize the time you have together. However, make sure you stay consistent and set your expectations early. If your mentor says they will bring the agenda, let them.

7. **Be Open About Your Needs and Provide Feedback to Your Mentor**
   Like any other relationship, your mentorship must be suited to fit your needs. But also like in any other relationship, your mentor will not be able to read your mind, so **telling them what you need** from them will allow you to flourish as a good mentee. Be honest if you need something to change and let them know if you don't understand something.

   Also make sure you tell them when they're doing a great job and show them gratitude. They are there to help you, so they'll be excited to know that it's working.

8. **Recognize Your Mentor's Limitations**
   Your mentor may be phenomenal, but they will have a limit to their knowledge and abilities. Don't get frustrated because they cannot help you but talk with them and work in areas where they can. If you need guidance beyond that which your mentor can give you, ask for their recommendations to help you find others who have the necessary skills.

9. **Take Appropriate Risks**
   Your mentorship offers the opportunity to have someone else committed to your progress. They will help you remove barriers and pull you out of your comfort zone. Don't fight them on this. Leaving your comfort zone is often where the real work happens. Try new things and allow yourself to make mistakes.

10. **Be Flexible and Learn**
    A mentorship can be an amazing and productive way to improve yourself. Take advantage of this relationship and learn as much as you can but be constantly aware of ways to better yourself and the relationship. Flexibility will help you be a better mentee in this regard.

Big points:

- Define success for yourself and what your goals are
  - Everyone's PhD is different, so it is important to think about what **you** want to get out of your PhD, and think about goals around that (for some students entering a field they are familiar with it might be cell, science, nature papers, for others entering a foreign field it might be mastery of a skill, technique, discipline).
    - Goals can include one or some of the following: graduating on time, high impact papers, skills/techniques that can assist you in getting a residency/ job placement, having fun/enjoying your PhD thesis, growing as a scientist
  - It is important to have a discussion with your mentor **early** in your PhD so they are aware of your goals, so they can help you achieve them. A good mentor will try and help you reach these goals (something to think about when picking a lab).

        - In my own lab we do bi-annual interpersonal development progress reports, and there is one section where we reflect on previous goals and can reassess and re-evaluate short term and long term goals till the next IDP.
    - Be willing to and be flexible and open to opportunities: your goals may change during your PhD. At first perhaps you wanted to get in and out, but later you might have struck an interesting hypothesis that you want to track down. Spend some time at least twice a year or yearly, and check in on your goals. Useful to talk about this with friends/ mentor.
    - When thinking about goals it is useful to think about lag and lead goals. A lag measure/ goal is something that will follow and a lead measure is something measurable that you can assess each day to know you're making progress on that goal. For example, a lag goal can be finishing your dissertation, but a lead goal is spending 2-3 hours each day writing. Breaking down goals like this can be helpful for tackling large challenges.
    - During your time in graduate school, you will likely have to juggle several goals at once. At this point it is important to prioritize your goals/projects prior to tackling each of them. To do so, it may be useful to consider what is Important and/or Urgent. For example, if something is important (i.e. something that is required prior to moving on to the next step) AND urgent (i.e. something time sensitive), it may get more weight over something that is important but NOT urgent. (maybe a better fit for somewhere in the section below? -Sope)
    - Be proactive about asking for feedback from your mentor, other lab members, committee members
    - Read broadly. Push yourself out of your comfort zone
- Dealing with unstructured life and making it structured
    - Intro: The biggest obstacle when transitioning from medical school to graduate school is an almost complete dropoff in the amount of structure. Success in the graduate program is often very dependent on finding a level of structure that sets you up best for success. **This depends on you (no one is going to make sure you put in the work)**. So put in a plan that you can hold yourself to. Structure will require you to plan your long term goals (months and years) based on how you define success for yourself during your PhD years. You'll then have to action those plans into schedules on the order of days and weeks. Optimally, you can combine this with organizational tools to keep you on track and keep you accountable to your future self.
    - For myself, I learned a lot about myself from second year and dedicated step 1 studying and applied it to PhD years -- having discrete to do lists that i should complete each day, and planning those in advance. If you do this, **underestimate** what you will be able to do each day, things always take longer and might be harder especially when starting out.
    - Planning
        - Planning is key to succeeding during PhD. Unlike in medical school, you are in control of your own time, and often days can go by without anything happening. First, **this is okay**, not everyday is going to be super productive but on off days when you are not experimenting, block time for reading, planning, and organizing data. One thing I did was make figures as soon as I had data on off days, so when it was time for a talk WIP i could just copy and paste.
        - Don't wait for someone to tell you to do something.
        - Routine is key: having a routine every day is helpful for steady progress

and as you continue to do it, it will get easier and more familiar.
    - Organization goes hand in hand with planning.
    - Long term goals and timelines (monthly/yearly)
        - Gantt charts can be helpful here (Excel, Monday.com)
        - Build this with mentors, your PI, fellow students, etc.
        - Think about how many years you would like to graduate in (3-4 years is most common)
            - This will often influence the extent to which you choose things like computational or animal work (worth noting that the choice of project is more likely to come before the choice of years)
    - Progress Reports - specifically for thesis committee
        - By physically writing out progress reports for your committee and/or your PI, you can check your progress against your original plans - gives committee members insight into your organizational skills, thought processes (future letters of recommendation)
        - Also consider use of the IDP here
- Scheduling
    - At the start of the week, think through how well you're aligning with your medium term goals and put together a high level to do list, especially considering multi-day experiments
        - Monday.com is an extremely effective tool here as are single week planners
    - Daily/weekly "To Do" lists
        - Looking over your weekly plan first, think through specifics you plan to accomplish this day. Keeping track of meetings/classes through Google Calendar is also vital here for setting up effective use of your time.
- Hot tip: pi rule always applies. Everything takes ~3x longer than you can plan, and still takes 3x longer than you plan even if you take this rule into account.
- Organization
    - Lab notebook (electronic - Benchling, Evernote)
    - Well labeled files and folders on your computer from day 1
    - Mendeley or another paper organizing software is vital, especially when you finally get to writing a manuscript

- Professional Development: One of the most important things you want to leave your PhD with are the professional development skills and experiences that will set you up to do the work you want after graduating from the program. Over the course of your graduate school experience, you will have the opportunity to gain various professional development skills including reviewing grants/manuscripts, building skills at conferences or through coursework and honing skills to promote yourself and your work. Below is some advice on how to take advantage of such opportunities.
    - Many students are presented with the opportunity to review grants, manuscripts, or textbook chapters in collaboration with your PI or someone senior in your lab (i.e. senior graduate student and/or post-doc). This is a great way to stay abreast of the burgeoning literature in your field. The skills you build helping a PI or post doc through the reviewing process are skills you will need to be an effective PI if that is a career goal for you. If this is an opportunity that is not presented to you outright and it is something that you are interested in, do not be shy about asking your advisor or a post-doc in your lab about having exposure to this experience. Few PIs will turn down the opportunity to get help with this kind of work.

    - Skill Building: while the main focus of your graduate work should be on your dissertation, you may also have several opportunities to explore other areas that you are interested in through workshops or coursework. For example, if you have an interest in genomics or bioinformatics there are workshop opportunities through Cold Spring Harbor Laboratories (https://meetings.cshl.edu/courses.html) and coursework through Cooper Union offered to Sinai students.
        - Conferences also often have practical workshops and special trainee sessions
        - Not only do you want to ensure you are taking all relevant coursework to the fields you wish to work in (or are already working in) but it is important to be on the lookout for subjects and topics that may be relevant to future work you want to do. Taking courses in bioinformatics for example may be helpful even if you do not do bioinformatics yourself. You are very likely to collaborate with individuals in this field, and having a primer in the work goes a long way towards being an effective collaborator.
        - Other skills can open up entirely new analyses (new instruments, new advances, new techniques)
    - Self-promotion
        - Building your brand retreat talk notes
        - Keep in touch with mentors so they are updated on what you're doing (important to consider it as a component of self-promotion)
            - Rec letters implications (F awards etc)
        - This is one of the most difficult things for many graduate students, so don't let yourself feel like the odd one out if it doesn't come naturally.
- Making connections: Graduate school will be an incredibly unique period where you get the opportunity to explore your field of interest and make connections with individuals that are similarly excited about your area of research. During this time, it is important that you keep an extensive network for both support as well as to build your scientific community. From a personal standpoint,building a support network will help you through a time that for many can have some of their highest highs and lowest lows. From a professional standpoint, the connections you make now may open up opportunities for collaboration and even potentially offer new career options.
    - Whether coming from afar or nearby, you will already have your support system of friends and family, but will quickly find that your Sinai peers become a supportive group as you navigate BMS, medical school, and graduate school rotations. This format is excellent because you build a go od connection with your classmates prior to diving into your graduate years. Once fully into your graduate years, make sure you're intentional about connecting with your classmates throughout whether through occasional picnics, potlocks, or rock climbing. The MD/PhD classmates you enter with will be with you for the better part of a decade and can be one of the tightest group of friends you might form.
        - Don't forget about family and significant others. It can be easy to get caught up in the all encompassing nature of graduate school, but a life outside of school is vital.
    - Within lab, dept, school
        - Ask questions whenever you can since it's a good way for people to get to know you. If shy, first start with lab meetings, then departmental meetings, and invited speaker seminars
        - Especially early on during your time in the lab, ask post docs and other graduate students what they're working on. Ask questions during lab meetings and WIPs. Attend as many talks as you can and talk with

members of your lab and department over lunch. Too often the biggest breakthroughs made during the PhD years are born of a simple conversation over lunch or a comment/question in passing.

- Outside of your institution there will be several opportunities to engage with scientists at regional, national, and/or international conferences. When attending conferences, make sure you attend social events to connect with other scientists. In addition to physical conferences, there are also opportunities to connect with other scientists via social media. For example, Twitter has become a useful platform to engage with scientists and their work as well as promote your own research. While, it's normal to at first be a passive twitter user as you survey how people use the platform, make sure you go beyond that by engaging when you can via retweeting and/or commenting on others' tweets. Additionally, tweetorial threads about papers have become a new long form of an abstract for papers published in pre-print journals (e.g. bioRxiv or medRxiv) or peer-reviewed journals. This is a great way to highlight your work or begin discussions about the work of others.
    - Conferences: socialize with as many as you can, especially at poster sessions and during/after talks. Say yes to as many opportunities as you can throughout the conference to meet others. Take down the names/emails of those who ask questions at your poster or give especially inspiring talks and reach out
    - Workshops:
    - Twitter: don't be a passive twitter user. Engage when you can via retweets and/or comments. Tweetorial threads about your papers are useful
- MSTP Retreat

- Meetings/talks/presentations:
    - Intro
        - Meetings and presentations are **extremely important** for 1) learning to communicate your work to a variety of audiences, 2) establishing your reputation, and 3) getting people as interested in your science as you are. So learning how to give good talks is an important skill that will follow you well past your PhD years. But don't worry, this is a learning process that you will develop and hone throughout your graduate school career. It's also important to keep in mind that everyone gives talks differently. You will find your own voice and style as you mature. It's okay to do things differently, but as you see different talks, think a bit about how the presenter gave their talk, and what about it you liked / didn't like or found effective / ineffective.
    - Thesis Committee Meetings
        - I've found thesis committee meetings to be extremely helpful but often frustrating. Your committee can be your advocate but also a bone spur, so it is important to know your committee and choose your members wisely. Please see above sections on the dynamics of the thesis committee but I will focus on the talk specifically here. For your committee meetings it is useful to have the talk structured into 1) professional development, 2) background significance (because they will always forget), 3) aims and updates, 4) summary, 5) **timeline and next steps** (this last part is crucial if you are thinking about getting ready to defend and want everyone to be on the same page of your progress in the PhD). Often committee meetings will run over time and people will want to leave, so you might not finish. In that case it is useful to put certain agenda items at the

beginning of your talk.
    - Dept WIPs. Dept WIPs are a great place to trial new slides, present new data. These are safe spaces where you can fail and get helpful feedback, so you nail it at the national conferences. Don't be worried about negative comments or criticism, in fact you should try and pull as much of the questions from the audience and address them in your slides or do experiments to answer those questions, so when you give your big talk at a conference or thesis committee you have an answer.
    - Lab Meetings
    - Conference Presentations
    - Conference posters
    - Any resources on general ppt advice? How to speak in public? This could be a nice place to put resources or example presentations. Maybe a Google Drive folder with recorded talks at conferences, ppts, posters, etc.
- Dealing with failure
    - This is far and away both the most difficult part of the PhD and easily the most common. Keep in mind that for most students, pure coursework and academia has played a majority role in their experiences thus far. The incentive system in academia is often more straightforward, with inputs being reasonably well correlated with outputs (although, we all know this is not always the case). But in research, putting in lots of hours with perfect time efficiency, planning, and foresight, still does not guarantee the success of your experiences. And beyond simple bad luck, we will all make mistakes, many of them.
    - Dealing with failure is a multi step process. The first steps you can take though can be before any mistakes have been made. Building relationships with peers, mentors, your PI, and others can help put you in a position to handle failure as effectively as possible. Building up a support system (and helping serve as a support system for others) is vital to resiliency.
        - The second step is understanding truly what has happened and then working out what the way forward is. Sometimes a failure can be a success in disguise, only requiring a rewording of your intended research goals to be an even more interesting research questions. Sometimes failure is a clarifying moment making it clear that the current direction is no longer the right way forward. Sometimes failure indicates an area of growth for you as an individual, whether building up better skills in your technique, planning etc. Sometimes a failure is simple bad luck when a flow cytometer breaks down mid run and you lose your entire sample. Each scenario requires recognition of what has happened and what it actually means.
    - Most importantly, if you're dealing with failure, reach out. Whether it is to friends within your year, other students in the program, program directors, other mentors, or friends and family outside the program. Find people you can talk to about what's happening and people you can talk to about things that have literally nothing to do with science.
    - If and when you fail, always try to fail forward. What I mean by that is even if you fail (defined by you did not get outcome you expected), set up your experiment or task in a way that you will have learned something from it so in the future you are still a bit ahead. This basically comes down to taking copious notes, setting up appropriate controls, this will ensure that whenever you fail, there is still a teaching moment.
        - Secondary to this, there are some experiments/ tasks that will be leaps of

faith. These can be high risk high reward, but try not to do too many of these especially when it is high stakes (e.g. your main finding of PhD depends on it). Or if you do, diversify risk and have other projects going that can sustain you even if the riskier project fails.

- Wrapping up: Congrats! You're nearing the end of your graduate school experience. This can be a very hectic, but rewarding time. As you start to make plans for defending your thesis, below is some advice on how to make this process as painless as possible:
    - Thinking about defending/re-entry into third year: Attend all the re-entry to the clinic meetings! These start in Fall of your third year of graduate school with one meeting that gives you an overview of the anticipated re-entry timelines. Your PI also is supposed to attend this meeting so everyone is on the same page. Scheduling a meeting with your PI immediately after this would be a great idea so that you can make sure you're both on the same page about defense plans. This is esecially recommended if your PI has not graduated an MD/PhD student before. During your fourth year of graduate school, you will also have to attend this meeting again (with your PI) and is a great marker for when you should try to meet with your committee to ask for permission to graduate. Though there is some flexibility when you re-enter into the third year of medical school, the timeline assumes entry in July at the end of your 4th year of graduate school.
    - Committee meeting to ask for permission to graduate: although it likely varies from department to department, it's a good idea to consider asking your committee for permission to graduate ≥6 (??) months prior to your anticipated defense date so for re-entry into third year.
    - Mark Bailey's advice on changing your schedule (waking up early)
    - Writing a little every day for months ahead of time
    - Start to think about re-learning all the med school mumbo jumbo you forget after taking step 1. As you get 2-3 months out from re-entering medical school think about watching some videos (pathoma, boards and beyond), doing some anki, or re-reading some old notes. This will slowly get you back into the med school mindset.
    - Organize your stuff: as you prepare to leave, it's a good time to organize your data, write down where you got certain reagents from, make sure you have an up to data inventory of samples, so your lab will bother you less later.
    - If possible try to have your final papers done and submitted before you leave, and perhaps generate some back up samples that might be hard for other lab members to make ready to go in case of revisions. So you don't have to try and do them in the middle of night while you're on surgery rotation.
    - Plan and schedule in time for a vacation - you deserve it!

Planning
Daily Scheduling
Monthly Scheduling
Yearly Scheduling

Lab notebooks
Best practices for computational work
Making mistakes and failures
Patiences - does this mean patience in the process?
Building networks

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Writing your thesis - tips for this and other writing projects

https://www.sciencemag.org/careers/2018/04/how-write-your-phd-thesis

Start back asking yourself three questions:

- Am I on track?
- What's holding me back?
- How can I make a positive change?

Am I on track?

Maybe you don't know the answer to this question because you don't have a plan. Map out a game plan with a timeline to help you decide if you're on track. Get input from your mentor, labmates, your thesis advisory committee. Refer back to this plan regularly and revise if the plan is not working.

What's holding me back?

Rarely in life are there times when we find ourselves in a state of *Flow* when the work emerges from us fully-formed and without effort. Usually there are things that hold us back. They tend to fall into general categories:

Technical errors

- You don't have designated time set for writing
- You haven't created the right atmosphere for writing
- You don't know how much time a particular task will take
- The task you have set out to accomplish it too complex for the allotted time
- Your space is disorganized
- You can't find the files you need

External constraints

- Your workload is too large
- You have health challenges (either your own or your loved ones)
- You have other life transitions or stressors
- You are working in an environment with high interruptions
- You have someone in your environment who is negatively impacting you
- You have a lot of conflict around you that takes up your energy

Psychological blocks

- Perfectionism (the idea that the work has to be perfect on the first go-round)
- Feeling disappointed in the writing or the data or your own capabilities
- Caregiving responsibilities that take up mental and physical energy
- Fear or failure
- Fear of success
- Fear of implications
- Fear of completion
- Unrealistically high expectations

- Unclear goals and priorities
- A loud inner critic

How can I make positive change?

We all have resistances that hold us back. We need to develop approaches to keep these resistance at bay.
There are several things we can do to increase our ability to move forward, even when there are numerous sources that may hold us back.

- Set time on the calendar every day to write
- Map out a game plan
- Find a writing zone: a time and place that feels right. You may not find it right away. Experiment with options
- Make this time sacred - put it on your calendar and protect it ruthlessly
- Write without criticism or judgement. Just write. You can always edit later.
- Treat yourself. Every day with something. You deserve it.
- If you are finding that your progress is unsatisfactory to you, examine why. See what resistances may be getting in the way and how to avoid them.
- Get a writing buddy. Be accountable to each other.
- Be grateful. During a stressful time, it's easy to take for granted those things for which we should be grateful. Think about how far you've come, something that you've learned that you didn't know before, and something that has changed you.
- Don't give up - if things aren't working, talk to friends, mentors, and find ways that work for others and experiment.

Guidance for Course Selection

- Biostatistics
    - MPH 0300 Introduction to Biostatistics
      Course Director(s): Doucette, John
      This course provides an introduction to the principles underlying biostatistical methods and their application to problems in epidemiology, public health and clinical research. Students will learn about basic probability distributions, descriptive statistics, presentation of data, hypothesis testing principles, and the specific hypothesis tests and analytic methods for a variety of data types. These analytic methods will include t tests, chi-square tests, nonparametric tests, analysis of variance, correlation, regression, and basic survival analysis methods. Students will have the opportunity to apply these methods to sample data both via direct calculation and using SAS® statistical software. Each week, a one-hour laboratory session will reinforce material from lecture with additional examples and instruction in use of the SAS® software. Methods for determining sample size and power for a variety of commonly used study designs will also be presented, as will measures of the accuracy of diagnostic and screening tests.
      Credits: 3 | Offered: Fall

    - BIO 6400 Biostatistics for Biomedical Research Course Director(s):
      Bagiella, Emilia; Benn, Emma
      This course covers the basic tools for the collection, analysis, and presentation of data in all areas of basics, clinical and translational research. Central to these skills is assessing the impact of chance and variability on the interpretation of research findings and subsequent implications on the understanding of disease mechanisms, drug discovery and development, and applications to clinical practice. Topics covered include: general principles of study design including internal and external validity; probability and sampling distributions, theory of confidence intervals and hypothesis testing; review of methods for comparison of discrete and continuous data including one-sample and two-sample tests, correlation analysis, linear regression, sample size and power. Additionally, students will learn to apply their statistical knowledge to complex real-world challenges, while gaining introductory statistical computing proficiency in R and SAS.

    - BSR1026: Applied Biostatistics for Biomedical Research (3 credits)
      Course Director: Dr. Emma Benn
      Term: Spring
      Placement Test: No. If interested, contact Dr. Benn

      Prerequisites: This course assumes that students have a working knowledge of college-level algebra and strong familiarity with logarithms and exponents. It is recommended, but not mandatory, that students have taken at least 1 college-level calculus course. All students taking this course **must have successfully completed a GSBS programming course (i.e., Python, R, SAS, or MATLAB)** or have **prior proficiency in programming as demonstrated by evidence of prior coursework in a relevant programming language on their undergraduate/graduate academic transcript.** The

Course Director will make the final decision as to whether a students' prior proficiency in programming as demonstrated on the academic transcript is sufficient given the expectations of this course.
Target audience: open to all GSBS graduate students who meet the prerequisites.
Course Description: This course covers the foundational elements for the collection, analysis, and presentation of data in biomedical research. This course will cover the following topics: general principles of study design including internal and external validity; probability and sampling distributions, theory of confidence intervals and hypothesis testing; review of methods for comparison of discrete and continuous data including one-sample and two-sample tests, correlation analysis, and linear regression. Upon completion of this course, students should have introductory proficiency in statistics to apply their expertise to current biomedical challenges. This course will additionally facilitate important discourse around rigor and reproducibility and introduce students to innovative applications of biostatistics and data science to complex, real-world biomedical research ranging from building predictive algorithms for complex diseases to genetic analysis in ancestrally diverse populations.

- Other Course Advice

Required graduate courses by MTA

AIET curriculum (under construction)							
Course number	**Course Title**	**MP1 Fall**	**MP1 Spring I**	**MP1 Spring II**	**MP2 Fall**	**MP2 Spring I**	**MP2 Spring II**
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	
	Elective course*	X					
BSR4401 / TBD	Journal Club in Genetics and Genomic Science / TBD	X	X		X	X	
BSR5401 / TBD	Seminars in Genetics and Genomic Science / TBD	X	X		X	X	
BSR5402 / TBD	Works in Progress: Genetics and Genomic Science / TBD	X	X		X	X	
*refer to AIET curriculum website and MTA directors for information							

CAB curriculum							
Course number	**Course Title**	**MP1 Fall**	**MP1 Spring I**	**MP1 Spring II**	**MP2 Fall**	**MP2 Spring I**	**MP2 Spring II**
• See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of	X					

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	Research						
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	
BSR6202	Advanced Topics - Tumor Biology	X					
BSR6201	Advanced Topics - Tumor Biology		X				
SR4201	Journal Club in Cancer Biology	X	X		X	X	
BSR5201	Seminar in Oncological Sciences	X	X		X	X	
BSR5202	Cancer Biology Work-in-Progress	X	X		X	X	
BSR6203	Optional: Practical Cancer Genomics (Plus any other electives within the GSBS Consult your MTA Directors)		X				

DRS curriculum

Course number	Course Title	MP1 Fall	MP1 Spring I	MP1 Spring II	MP2 Fall	MP2 Spring I	MP2 Spring II
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	

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BSR 2300 or BSR 6301	Embryos, Genes and Development OR Stem Cells and Regenerative Biology*	X			
SR4301	Journal Club in Developmental and Stem Cell	X	X	X	X
BSR5302	Department of DRB and BFSCI Seminar Series	X	X	X	X
BSR5301	Developmental, Regenerative and Stem Cell Biology Works in Progress	X	X	X	X
Two advanced courses in developmental and stem cell biology are offered for DSCB students starting with the second year. The two courses are held in the fall semester, alternating each year.					

GGS curriculum

Course number	Course Title	MP1 Fall	MP1 Spring I	MP1 Spring II	MP2 Fall	MP2 Spring I	MP2 Spring II
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	
	Elective course*	X					
BSR4401	Journal Club in Genetics and Genomic Science	X	X		X	X	
BSR5401	Seminars in Genetics and Genomic Science	X	X		X	X	
BSR5402	Works in Progress: Genetics and Genomic Science	X	X		X	X	

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*refer to GGS curriculum website and MTA directors for information

IMM curriculum

Course number	Course Title	MP1 Fall	MP1 Spring I	MP1 Spring II	MP2 Fall	MP2 Spring I	MP2 Spring II
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	
BSR1501	Fundamentals in Immunology	X					
BSR6502	Advanced Topics in Immunology		X				
BSR4501	Immunology Journal Club	X	X		X	X	
BSR5501	Seminars in Immunology (includes Works in Progress)	X	X		X	X	
*refer to IMM curriculum website and MTA directors for information on elective requirements							

MIC curriculum

Course number	Course Title	MP1 Fall	MP1 Spring I	MP1 Spring II	MP2 Fall	MP2 Spring I	MP2 Spring II
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		

BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X	X	X	X	X
BSR1501 **OR** BSR6601	Fundamentals in Immunology* **OR** Advanced Virology*	X					
					X		
BSR4601	Microbiology Journal Club	X	X	X			
BSR4603	Virus-Host Journal Club	X	X	X	X	X	X
BSR5601	Seminars in Microbiology (includes Works in Progress)	X	X	X	X	X	X
*refer to MIC curriculum website and MTA directors for information on elective requirements *both Virology and Immunology are required courses, but are taught in alternating years during the Fall semester.							

NEU curriculum

Course number	Course Title	MP1 Fall	MP1 Spring I	MP1 Spring II	MP2 Fall	MP2 Spring I	MP2 Spring II
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	
BSR4702	Selected Topics in Neuroscience	X	X		X	X	
BSR5701	Translational Neuroscience Seminar Series	X	X		X	X	
	Advanced elective						
*refer to NEU curriculum website and MTA directors for information on elective requirements							

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PTD curriculum							
Course number	**Course Title**	**MP1 Fall**	**MP1 Spring I**	**MP1 Spring II**	**MP2 Fall**	**MP2 Spring I**	**MP2 Spring II**
See biostatistics description	Biostatistics	X					
BSR1003	Responsible Conduct of Research	X					
BSR1022	Rigor and Reproducibility		X				
BSR5003	Medical Scientist Grand Rounds (Fall)	X			X		
BSR 5007	Medical Scientist Grand Rounds (Spring)		X			X	
BSR8000	Independent Research for Basic Science Research	X	X		X	X	
BSR4801	Journal Club	X	X		X	X	
BSR5802	Advanced Elective* PST or SCB Seminars	X	X		X	X	
*refer to PTD curriculum website and MTA directors for information on elective requirements							

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Advising Resources

Physician Scientist Career Advisors
Physician Scientist Career Advisors are individuals who have completed training as MDs and MD/PhDs who are engaged in physician scientist careers and can provide trainees with guidance about the experiences as a physician scientist. Students are invited to contact these individuals at various states during their trainees to see advice or guidance in career development.
https://icahn.mssm.edu/education/dual-specialty/md-phd/physician-scientist-career-advisors

Multidisciplinary Training Area (MTA) directors
The 1-2 directors of each of the 7 multi-disciplinary training areas are an excellent resource for considering mentors, labs, curriculum, and guidance.
https://icahn.mssm.edu/education/graduate/about/program-directors

Thesis advisory committee

Individual Development Plan (IDP)

Description:
The Individual Development Plan is an instrument that is intended for students to track their progress through the program, to consider their goals and career development, and to provide information to the MSTP leadership to help advise through various phases of the program. The IDP will be completed annually and due on March 1 of each year. It is an electronic form that uses branched logic to tailor the questions and guide to the phase of the program. Upon completion of the form, students will receive a report which summarizes their answers and can be shared with the advisor/mentors of their choosing.

How to prepare to complete the IDP:
Think about your current stage in training and what your goals are for advancing to your next phases, your thoughts for the upcoming year, and your long term goals. This is a tool to help you identify skills, mentors, and approaches to help you accomplish your goals. This tool can be used to help you in any way that you think it can be best leveraged; this includes discussion with your mentor, advisor, or other designated individuals with whom you consult for your academic and professional growth. It will take about 20-30 minutes to complete, but it can take more or less depending on you. Things to have ready when you complete:

- your updated biosketch/CV to import info
- ecommons ID
- NCBI My Bibliography link
- ORCID iD

Link to the IDP: https://forms.gle/7NLM1dHtVstQ49KMA

IDP Report
The information entered into the IDP will be populated into a report that will be returned to the student in a report that can be shared for discussion.

If you have any questions or comments about the IDP, please email Bianca Taylor or Talia Swartz.

MSTP Milestones

Year in program	Milestone	Deadline
Summer before MD1	❑ Identify first laboratory rotation before arrival (Director's approval required) and complete laboratory rotation agreement	June 15 (before matriculation)
	❑ 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
	❑ Identify first laboratory rotation before arrival (Director's approval required) and complete laboratory rotation agreement	June 15 (before matriculation)
	NOTE: Vacation is taken before starting in program ● Problem Solving in Biomedical Science (PSBS) course (summer) ● First laboratory rotation (summer)	
MD1	❑ 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 (MSTP IDP)	Feb 15
	Required Courses and Events ● Annual MSTP Retreat ● Medical school courses	

	● Biomedical Sciences (BMS) for MD/PhD Fall/Spring Courses ● Medical Scientist Grand Rounds (MSGR) ~8 sessions per year	
MD2	❑ Complete 2nd and 3rd Laboratory Rotations / Laboratory Rotation Presentation	Early Aug (date varies)
	❑ Dinner meeting with Director and PhD phase students to discuss transition to PhD phase	Mid Feb (date varies)
	❑ Get approval of Director regarding your selection of PhD mentor (Sept – Feb)	Feb 15
	❑ Complete Individual Development Plan for MD/PhDs (IDP for MD/PhD)	Feb 15
	❑ Submit form to Declare MTA / mentor (Director's approval required)	March 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 ● MSGR ~ 8 sessions per year	
MP1	❑ Start in lab	July 15
	❑ With PhD mentor, identify and invite Advisory Committee members (check with MTA Directors for guidelines) and fill out this form https://mountsinai.formstack.com/workflows/dissertation_committee_declaration	August 30
	❑ Annual MSTP Retreat – abstract, poster presentation *encouraged*	Sept (date varies)
	❑ Lab Coat Ceremony for those entering the lab	Sept (date varies)
	❑ Organize and meet with thesis committee ***at least once*** prior to thesis proposal exam	Oct - Mar
	❑ Review and Revise MSTP IDP	Feb 15
	❑ Thesis Proposal Exam. Complete the Thesis Proposal Voting form and submit the signed form to Bianca Taylor, Program Manager	June 30

<table>
<tr><td></td><td colspan="2">Required Courses and Events
Summer vacation: 2 weeks following USMLE Step 1 (mentor begins to pay stipend after the 2 week vacation)
Graduate School course registration deadline is June 30 for the fall semester
With MTA director, identify and register for MTA-specific coursework
MSGR ~8 sessions per year
Responsible Conduct in Research (RCR) [might have been taken in MD1]
Rigor and Reproducibility (R&R) [might have been taken in MD1]
Biostatistics; waiver Exam optional (grade 85 or above = pass)
MPH0300 or a higher level course, BIO6400 or BSR1026. Eligibility for BIO6400 is based on satisfying one of the following criteria: (1) satisfactory grade on a placement exam or demonstrating a grade of B+ or better in a college calculus course. MPH0300 does not have a prerequisite. Qualified students who wish to be exempted from the Biostatistics requirement take a waiver exam upon request (Dr. Emilia Bagiella). BSR1026 is intended for students with proficiency in R, Python, or MATLAB. For eligibility questions, please contact Dr. Emma Benn.
Thesis Advisory Committee Meeting (twice per year), complete Advisory Committee Meeting form
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 (form)
Submission of F30/F31 application (strongly recommended)</td></tr>
<tr><td rowspan="5">MP2</td><td>❑ Annual MSTP Retreat – abstract, poster presentation required</td><td>Sept 1 (abstract due in mid Aug)</td></tr>
<tr><td>❑ Lab Coat Ceremony</td><td>Sept (date varies)</td></tr>
<tr><td>❑ Review and Revise MSTP IDP</td><td>Feb 15</td></tr>
<tr><td>❑ Thesis Proposal Exam. Complete the Thesis Proposal Voting form and submit the signed form to Bianca Taylor, Program Manager.</td><td>Fall-Spring</td></tr>
<tr><td colspan="2">Required Coursework and Events
Advanced MTA coursework</td></tr>
</table>

	● 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	
MP3	❑ MD3 Re-entry Planning Meeting (for all MP3+ students and mentors)	Sept 1 (date varies)
	❑ Annual MSTP Retreat – abstract, poster presentation **required**	Sept 1 (abstract due in mid Aug)
	❑ Review and Revise MSTP IDP	Feb 15
	❑ Thesis Advisory Committee Meetings every six months. Complete the Progress Report/Advisory Committee Meeting form	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	
MP4+ (MP4 and above)	❑ Annual MSTP Retreat – abstract, poster presentation required	Sept (abstract due in mid Aug)
	❑ MD3 Re-entry Planning Meeting (for all MP3+ students and mentors)	Sept 1 (date varies)
	❑ Thesis Advisory Committee Meeting to discuss defense plans	Fall, before December 15
	❑ January Re-entry Planning Meeting	End of Jan (date varies)
	❑ Meeting Faculty Advisor for Re-entry planning	During month of Feb

	❏ Lottery	End of Feb (date varies)
	❏ Register for Clinical Refresher Course	End of Feb (date varies)
	❏ Review and Revise MSTP IDP	Feb 15
	❏ Schedule PhD Thesis defense (strongly encouraged that the defense take place prior to April 1) ❏ Defend and deposit dissertation, required to return to MD3 ❏ Dissertation must be both *defended and deposited* in order to return to MD3 year (by June 15)	April 15, *suggested for May Commencement*
	❏ Defend and deposit dissertation, required to return to MD3	April 15, *suggested for May Commencement*
	❏ InFocus5 - 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). Complete the Progress Report/Advisory Committee Meeting form ● MSGR ~8 sessions per year ● Responsible Conduct of Research (RCR) Refresher course (mandated by NIH every 4 years) ● Prepare for reentry to medical school ● PhD Thesis defense ● Clinical Refresher Course (April through first week of June, dates vary) ● Note: please schedule 2 weeks of vacation mid-June (between end of Clinical Refresher and start of InFocus5)	
MD3	❏ Review and Revise MSTP IDP	Feb 15
	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 2CK and CS	
MD4	❑ Meet with MSTP Director for Research letter component of MSPE (May-July)	July 15
	❑ Review and Revise MSTP IDP / Exit Survey	Feb 15
	Required Courses and Events ● USMLE Step 2 CS and CK (summer between year 7 and 8) ● Meet with Faculty Advisor re: MSPE (Spring) ● 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) ● Convocation for graduating MSTP students ● Participate in panel discussion "Residency and Beyond" at MSGR (April) ● Commencement (mid-May) ● Effective May 15 (date may vary depending upon the year), your stipend will be reduced to 2% and subsequently terminated on July 1. This small stipend makes it possible for you to retain your health care coverage through June 30.	

Detailed guide to the training program

Summer before MD1

Summer before MD1 Milestones

Students will identify a rotation laboratory where they will spend their first summer. Resources for identification of this laboratory include MSTP program leadership, MTA directors, students who may be identified through the MD/PhD Student Laboratory Database and faculty with whom they interviewed.

Students will also take Problem Solving in Biomedical Science.

I. Administrative Things - Summer before M1

Email and eRA Commons

Life Numbers and MSSM email addresses

- You should've received your Mount Sinai Health System Life Number and your MSSM email address and activation instructions. A life number is a unique employee/student identification number. It is used for everything from payroll to IT Help Desk tickets. This number will be on your ID.

Appointment to the T32 grant

- In the coming days you will receive an email at your mssm.edu account regarding the creation of a profile in eRA Commons. From there you'll need to log into your eRA Commons account and complete your personal profile. I'll send more information very soon. It is imperative that you take action when you receive the email so you can be added to the grant and receive financial support, including your stipend.

Health Insurance:

You will receive an email re: enrollment or waiver of the health insurance plan before you begin M1 that reads as though you will need to pay if you opt in because it is sent to all new medical students. This is not the case. If you opt into the health insurance plan, the MD/PhD program pays for the cost. It costs you nothing. Eye and Dental Insurance are an extra $200-400 out of pocket if wanted. If you already have a suitable insurance plan, you can choose to opt out. By opting out, you can receive a supplemental stipend (typically around $2,500) per academic year. You have to choose to opt out every year (usually around July). Questions about health insurance or the supplemental stipend can be answered by the Student Affairs office:

Office for Student Affairs
Tel: 212-241-4426
Student.affairs@mssm.edu

How to get VPN access:

"So you'll need to download the VIP Access app, then set up VPN. You can find the VIP Access app in the App Store here or in the Google Play Store here. And to set up and connect the VPN, you'll want to connect with ASC-IT at 212.241.7091. Have your life number ready when you call them. I believe they take calls from 8am-8pm ET and would suggest calling them earlier in the day for no wait time or a low wait time."

How to set up direct deposit:

Please go into https://ejis.login.us6.oraclecloud.com > Select "Company Single Sign on":

If you're a School user Sign-in using MSSMCAMPUS\UserName OR with your Email Address, first.last@icahn.mssm.edu

1. On the left hand side of the Mount Sinai logo the 3 horizontal lines is the navigator.
2. Then select "ME"
3. Then select "PAY"
4. Then, select "PAYMENT METHODS"

5. Then select "+ ADD" shown towards middle right of the page.
6. Enter the required information and click SAVE

II. Orientation Information

Courses to register for - (Fall M1):

1. BSR-1016 for PSBS
2. BSR-1017 for BMS
3. BSR-5006 for MSGR

INSTRUCTIONS FOR REGISTRATION:

Please read the below instructions on how to login and register, or change your registration.

1. Go to: https://student.mssm.edu

2. Use your current Mount Sinai log on and password, e.g. ***smithj01***

3. Go to the top **Navigation bar**

4. Click on **Student Records > Course Tools > Course Registration**

5. Click the "**Add Courses"** button to add courses

6. In list of courses, click the "**Interested" Check box** to filter course to top (detailed course information can be found by hovering over the **Detail** link)

7. Click on "**Schedule"** button to right

8. Your selections will appear on the **next screen**

9. Click the **Check Boxes** for your selected courses on left, then "**Select/Process"** button

10. Click "**See Detail"** on next page to see your registration status of your selected courses

11. Students with Pending Registrations will need to review the conflicts and adjust their registration

Resources:

- Blackboard - (https://learn.mssm.edu)
    - Course Information Sheets
    - Milestones
    - Calendars
    - Absence Request Form
- Complete Anatomy

- Grant's Anatomy
- Dr. Shaw's Virtual Histology
- Free Office365 (w/ student email): https://www.microsoft.com/en-us/education/products/office
- Student files (need to access on Sinai wifi or with a VPN): http://studentfiles.mssm.edu/
- Textbooks: https://libguides.mssm.edu/reserves

Email responses from Lauren Linkowski re: studying techniques for structures:

1. I'm used to taking notes on lectures in word documents or by hand and then collating all those notes into larger study sheets prior to each exam. Do you think this method of studying will work for structures or should I start figuring out how to use Anki/ some of these other resources?

This method can work for structures. What works about your method is that there is limited research that shows handwriting seems to have greater memory power than typing. It is also always good for the student to self-organize notes, whether physically or by rewriting - it creates better memory. However, what you should consider is what happens once the study sheet is made. How do you study from it? If you study from it by "reviewing" "going over" or "reviewing" - reconsider. These methods are considered lower yield. Higher yield tactics include self-testing.

Anki IS one way to self-test, but it is not the ONLY way. If you want to use Anki, you can choose a premade deck (either from Reddit - less effective in the first year - or from a previous student) or you can make your own. In this method, you would make your notes to build understanding, but instead of re-organizing and reviewing those notes, you would hop straight to flash cards. Another way to self-test, btw, is with physical flashcards. Anki is great, but if you prefer paper it will not be a problem.

Other means of self-testing could literally be covering up the headline on your study sheet and quizzing yourself from them, either by thinking, writing, or verbalizing what you should know. You could keep your exact process, but then finish the process with self testing.

2. Other than Anki, what other study resources do students use in structures?

You want to be careful to not have too much "stuff" for Structures. There is quite a lot in the course already - the lectures, the syllabi, the excellent dissector tool and TA review question - use all this stuff before you venture out for more.

Here are the most common extras, beside Anki decks. Remember, you definitely should not use every option - they key is to pick 1 or 2 things that support your learning:

1. Group or paired study. This is a very valuable way to self-test, and it works because you have a table conference group.
2. Drawing stuff out works. Some people use Draw It To Know It (which we buy) because it has good videos that can remind you of things quickly - it also has half-filled in PDF sheets so you can draw along or from memory: https://drawittoknowit-com.eresources.mssm.edu/
3. I really like the U Michigan Blue LInk site. For each structure, in the self-assessment area there are extra questions, as well a occluded images you can fill in as a test: https://sites.google.com/a/umich.edu/bluelink/curricula/first-year-medical-curriculum?authuser=0
4. Often overkill, but the Complete Anatomy app is nice https://3d4medical.com/ and it has a free trial.

In all honesty, to sum up the steps of studying for Structures:
-Preview Lecture
-Take good notes
-Organize those notes
-Test yourself on those notes in whatever way you like- flashcards (use the premade Anki decks), quizzing from notes, and group study all work.
- Have practice sessions with your group for TCs - make powerpoints with images to quiz each other

MCG/BMS - Taught by Dr. Bechhofer
This course is weird for us because we don't take the exams but do take all the quizzes (this was recently changed to make the course a bit easier for us). Most of the material overlaps up until the last block. On the BMS exams about 25% of the questions are from MCG so it's truly not that much MCG material overall. Don't kill yourself getting every last detail of MCG material! Your TAs will send out study guide materials from the previous years which are SUPER helpful. The BMS lectures are super super cool and are given by researchers at Sinai who could be your PI in the future! Come with some questions (their lectures are posted prior to the class time). Also, go over your problem sets as a class. The class is wildly flexible so know that Nicole and Matthew are ok with moving around exams/changing anything to make the class more bearable.

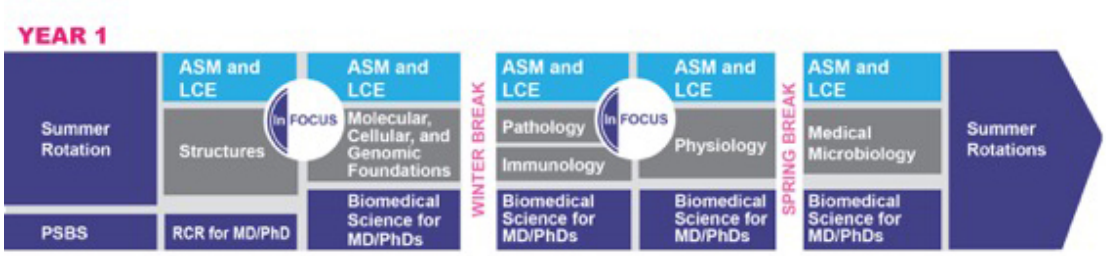
Immunology and Pathology Advice
The optional pathology

Medical Microbiology Advice
Anki and Sketchy!!!! There is a shared Google Drive with all the resources.

ARON HALL ADVICE:

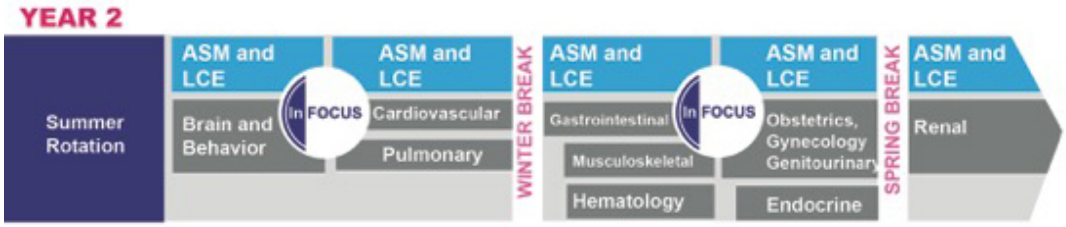
1. Request a room on a higher floor (14/11) and DO NOT live in a G apartment
    a. Balconies on floors 14 and 11
    b. Train runs right next to bedrooms in G
2. Buy a router for Aron wifi (like this one)
3.

MD1



Summer before MD2

MD2



PhD Years

Steps to ease the transition from MD2 to PhD years

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Transitioning into lab

During Spring of MD2
[ ] Meeting with MSTP Director to decide on lab
[ ] Meeting with MTA director to clarify expectations and course selection
[ ] Meeting with PhD mentor
[ ] End of February meeting with MD2 students and senior students about the transition
[ ] July Meeting with students and mentors re: discuss transition and Mentor-mentee compact
[ ] Registration for Fall courses in June
[ ] USMLE Step 1 by June 30

Please note that as of Spring 2022, all MSTP students will be required to take USMLE Step 1 before transitioning to their laboratory (MP1) phase. The deadline for MSTP students to take USMLE Step 1 is June 30. This is a date that is mutually agreed upon by Student Affairs, MSTP leadership, and the Graduate School and student mentors; July 1 is the date when MSTP support is transitioned from Medical School to Graduate School.

Guidance on Graduate Course Selection for MSTP students

Resources for selecting courses

Biostatistics

BIOSTATISTICS OPTIONS FOR ISMMS GRADUATE STUDENTS

Biostatistics is a Graduate School requirement

Options:

- **Waiver exam** for students with biostatistics background (contact Dr. Emilia Bagiella) need score of 85% or better to place out of this requirement OR

- **3 Course options**

1. **MPH0300 – Introduction to Biostatistics** (3 credits)
   Course Director: Dr. John Doucette
   Term: Fall (12 weeks)
   Placement Test: No
   Prerequisites: None
   Weekly Statistical Computing Lab: Yes, using SAS.
   Target Audience: MPH Students, other Graduate Students who conduct public health research.

Course Description: This course provides an introduction to the principles underlying biostatistical methods and their application to problems in epidemiology, public health and clinical research. Students will learn about basic probability distributions, descriptive statistics, presentation of data, hypothesis testing principles, and the specific hypothesis tests and analytic methods for a variety of data types. These analytic methods will include t tests, chi-square tests, nonparametric tests, analysis of variance, correlation, regression, and basic survival analysis methods. Students will have the opportunity to apply these methods to sample data both via direct calculation and using SAS® statistical software. Each week, a one-hour laboratory session will reinforce material from lecture with additional examples and instruction in use of the SAS® software. Methods for determining sample size and power for a variety of commonly used study designs will also be presented, as will measures of the accuracy of diagnostic and screening tests.

2. **BIO6400 – Biostatistics for Biomedical Research** (3 credits)
   Course Director: Dr. Emilia Bagiella
   Term: Fall (12 weeks)
   Placement Test: Yes or evidence (unofficial transcript accepted) of having taken calculus in the past 2-3 years with a grade of B+ or higher. A certificate attesting completion of an online calculus course (e.g., Corsera) will also be accepted.
   - Placement Test Dates: Offered online on blackboard upon request.

· Placement Test Content: The test covers topics in calculus and algebra and is meant to determine whether students have a sufficiently strong math background to take the class. The average time it takes to complete the test is approximately 20-25 minutes. Please note, this is not a waiver exam.

Prerequisites: Calculus
Weekly Statistical Computing Lab: students can choose between a SAS or R Lab.
Target Audience: MS in Biostatistics, MS in Clinical Research, and PhD in Clinical Research students. All other Graduate Students with a strong mathematical background.

Course Description: This course covers the basic tools for the collection, analysis, and presentation of data in all areas of basics, clinical and translational research. Central to these skills is assessing the impact of chance and variability on the interpretation of research findings and subsequent implications on the understanding of disease mechanisms, drug discovery and development, and applications to clinical practice. Topics covered include: general principles of study design including internal and external validity; probability and sampling distributions, theory of confidence intervals and hypothesis testing; review of methods for comparison of discrete and continuous data including one-sample and two-sample tests, correlation analysis, linear regression, sample size and power. Additionally, students will learn to apply their statistical knowledge to complex real-world challenges, while gaining introductory statistical computing proficiency in R or SAS.

3. **BSR1026: Applied Biostatistics for Biomedical Research** (3 credits)
Course Director: Dr. Emma Benn
Term: Spring
Placement Test: No. If interested, contact Dr. Benn

Prerequisites: This course assumes that students have a working knowledge of college-level algebra and strong familiarity with logarithms and exponents. It is recommended, but not mandatory, that students have taken at least 1 college-level calculus course. All students taking this course **must have successfully completed a GSBS programming course (i.e., Python, R, SAS, or MATLAB)** or have **prior proficiency in programming as demonstrated by evidence of prior coursework in a relevant programming language on their undergraduate/graduate academic transcript.** The Course Director will make the final decision as to whether a students' prior proficiency in programming as demonstrated on the academic transcript is sufficient given the expectations of this course.
Target audience: open to all GSBS graduate students who meet the prerequisites.

Course Description: This course covers the foundational elements for the collection, analysis, and presentation of data in biomedical research. This course will cover the following topics: general principles of study design including internal and external validity; probability and sampling distributions, theory of confidence intervals and hypothesis testing; review of methods for comparison of discrete and continuous data including one-sample and two-sample tests,

correlation analysis, and linear regression. Upon completion of this course, students should have introductory proficiency in statistics to apply their expertise to current biomedical challenges. This course will additionally facilitate important discourse around rigor and reproducibility and introduce students to innovative applications of biostatistics and data science to complex, real-world biomedical research ranging from building predictive algorithms for complex diseases to genetic analysis in ancestrally diverse populations.

How to have conversations with mentors

It can be daunting to start important conversations like these with your PI. One of the best times to bring up these subjects is when Selecting a mentor. However, it is never too late or early if you've already begun your PhD phase.

Email tips

- Keep emails about one idea; try to avoid "by the way"
- Ask a question - make the action item clear - what are you asking for?
- Set a deadline? i.e. it would be really great if you could get back to me with your edits by XXXX so I can share with the committee
- Bold key phrases (but don't use too much bold)
- If you need to move forward with something and you're afraid you may not hear back, you can say, "Any objections?" or "If I don't hear back from you by XXX, I'll assume it's okay"
- Do keep your PI in the loop about things
- Haven't heard back? Send a followup and preface with: "I'm sure you're really busy"
- Know that you've sent emails where you haven't heard back before? You can end by saying: "I know you're really busy, so if I don't hear back, I'll send a follow up in XXX days."
- If you have a lot of items, make a numbered list (this will help you organize your thoughts too). It helps if each item has an action item.

Discussing training goals

Discussing mentoring goals

Discussing career goals

If your PI's career isn't your goal, it can be helpful to utilize other mentors with careers more aligned with your goals.

Negotiating laboratory responsibilities

Guidance on writing

How to ask for help

Best practices in scientific professionalism

Citing references
Best practices in giving a research seminar
Reaching out to collaborators of mentors
Convening scientific advisory committee meetings
When to run things by your mentor
Lab meetings

Grants

Diversity supplements

F30/F31 guidance

Check out the shared drive for F resources from other students:
MSTP Shared Drive

How to upload F materials for others to use
We have created an easy way to deposit your F award for other students to reference. Previous awards are incredibly useful resources for those who are going through the submission process. Please consider donating your hard work to the cause.
Instructions:

1. Navigate to this link
2. Create a folder using this template Name_MTA_F30/31_Submission_date_first_submission/resubmission. (example: LaurenStalbow_GDS_F30_April2021_resubmission)
3. Upload the award and any material you found helpful while applying
4. Optional- you may want to consider removing the last page of your biosketch that includes your MCAT and STEP1 score. It is up to you if you want to include that. On the backend, we will move these folders to the appropriate MTA specific folder.

APSA Things I wish I Knew Before Applying For My NRSA!

1. **ISMMS MSTP F30/F31 folder.** This contains prior successful applications and advice from MSTP students. The student grantees have agreed to share their applications with you; please respect their confidentiality and do not disseminate them: https://drive.google.com/drive/folders/1SIpd3KmwvcPhQpnlaJUiN8g5IkowCiun
2. **Apply for an F30 that funds both PhD and MD phases** (if possible). Opt to apply for a mechanism that funds both phases rather than a grant that funds only the PhD phase. Different institutions differ on this so best to check with the program officer.
3. **Take the Graduate School grant writing course (BSR3102 Principles of Scientific Proposals).** This course will aim to inform and instruct students on the process of applying for a predoctoral fellowship. Students will learn the different funding mechanisms available to them for a fellowship and will ultimately prepare several components of the application with the intent of submission. The subject matter will include strategies for building a highly competitive application by thoroughly analyzing the scored review criteria: Fellowship Applicant; Sponsors, Collaborators, and Consultants; Training Potential; Institutional Environment and Commitment to Training; and Research Training Plan. It will also include strategies for converting a completed Thesis Proposal into the analogous documents for fellowship applications. The course will primarily focus on the application for an NRSA F30/31 award, but will be applicable for students targeting NIH F99, DoD, NSF, and other granting mechanisms. Homework assignments will aid in the preparation of a fellowship application and will, therefore,

keep students on pace for the current submission cycle (December 8th in the Fall of 2021). Prerequisites: Successfully having passed your Thesis Proposal Exam with the intention to submit a fellowship application by the end of the semester.

Here's what Michelle Tran said about it in preparation for her F30 submission:
"I would highly recommend the grants class that is offered to the graduate school. It is offered for students who have proposed their thesis successfully and who are planning to submit an F30/31 the same cycle as the class. I found it super helpful in guiding me through the process, along with upperclassmen MD/PhD advice/applications, and the MSTP student guide.

1) I know others in my MSTP class didn't join as they had reservations prior about keeping up with their research and the coursework, but found my experience to debunk that. The instructors were very nice and understanding and the class was meant to help guide us along rather than add extra work.
2) I think their step-by-step walkthrough of each section and what reviewers often look for was highly valuable. They mentioned key differences between the F30/31 and R01's and other grants, which our labmates and PI's are probably more familiar with
3) It was a really great way to get to know other PhD students outside of my MTA and their research. People were really generous with their energy in peer review, and I found their comments really valuable.

4. **Ask for the maximum period possible**. Dual degree students are allowed a total of six years of support on any NRSA training grant or fellowship. This includes the MSTP and T32 training grants. Round up to full years to avoid budget and timing complications. For example, if you are eligible for 3.5 years of support, request 4 years of support. The excess budget will be returned to NIH.
5. **Ask for the maximum budget possible**. The dollar amounts for stipend and institutional allowance are fixed; you should ask for the maximum allowable amounts per NIH guidelines. However, the tuition calculation is more complicated. You should propose a full 9-credit load for every PhD phase semester, even if you anticipate lower credit registration costs for some of them. Unused funds will be returned to the NIH. For fellowships that support both MD and PhD phases, you should propose MD tuition in the final two years of the budget.
6. **Current tuition rates.** Contact Osei (osei.tutu@mssm.edu) for the current tuition rates. Assume a 4% tuition increase per year. Sample budgets are included in the shared drive above.
7. **Understanding the difference between T32 and F30/F31 funding**. Indicate that the ISMMS MSTP T32 does not provide financial support for all phases of MD-PhD training, and that you do not have current funding from the ISMMS MSTP T32, so there is no question of overlap. This needs to be stated explicitly. We recommend that the mentor's letter of support clarify this issue of non-overlap, and it should also be stated in the budget justification section and/or wherever else is appropriate.
8. **Training plan, research, and clinical activities.**

How to specify research vs. clinical activities for the years of training in the training plan section: In general, the reviewers want to see research training activity, so bring this out as the primary focus of the proposal, but it is OK to indicate how your clinical interests will tie in with your research goals. You don't need to spend much time on describing clinical training, but you can mention it as a phase of your training. Don't miss the opportunity to indicate research in a year when it might be there. For example, if the training period will include a mixture of research and clinical periods (e.g. the end of your PhD and the beginning of MD3), then put down an appropriate mixture of research and clinical. You can also include a small amount of clinical time (~5%) during the PhD phase if you intend to do MSTP Clinical Tutorial (explain that this will be individualized and customized to link to your research field). Remember, for MD4 you might do research electives, and we recommend that you propose this as an attractive feature in the application (write in your training plan that you intend to do some research electives that year; don't worry, you won't be locked into this plan). If you propose this, you might put MD4, the last year of your training, as something like 60-70% clinical, 30-40% research.

MSTP Knowledge Nuggets, the F30/F31 Experience

MSTP Knowledge Nuggets, the F30/F31 Experience

Letters

Reference Letters vs. Letters of Support: What's the Difference?

	References Letters	Letters of Support
When are they used?	Fellowships, mentored career development awards and other programs as requested	Used to demonstrate: -institutional commitment or resources -collaboration or role in the project -potential or current user of a resource or service proposed in the application
Who writes them?	Referees should be individuals not directly involved in the application, but who are familiar with the applicant's qualifications. The sponsor/co-sponsor(s) cannot be counted toward the 3 required references.	Collaborators, key personnel, institution, and other significant contributors to the scientific development or execution of the project.
What should be included?	-Describe qualities and potential of candidate -Letters can be addressed to "To Whom It May	-Describe the type of support your collaborators will provide to the project -Summarize the

	Concern" or "Dear Reviewer"	agreements you have in place to support your project
Who submits them?	A referee submits the letters through eRA Commons (no login needed). The letters are maintained separate from the corresponding application.	Applicant organization submits the letters of support as part of the application.
Who sees them?	Only reviewers and select NIH staff	Anyone with access to view the application
What are the instructions?	-Reference Letters page -Special instructions may also be found in funding opportunity announcements and notices	-"Application form instructions" on the How to Apply – Application Guide page. -Special instructions may also be found in funding opportunity announcements and notices (including Notices of Special Interest)

Selecting a Referee

- At least three, but no more than five, reference letters are required.
- The letters should be from individuals not directly involved in the application, but who are familiar with the applicant's qualifications, training, and interests.
- The sponsor/co-sponsor(s) of the application cannot be counted toward the three required references.
- Resubmission do not need to use the same list of referees, but do require new reference letters from all listed referees.
- Make sure you include a list of referees (including name, departmental affiliation, and institution) in the cover letter of the application so that the NIH staff will be aware of planned reference letter submissions.

Instructions to Provide to Referees

Fellows/candidates should provide their referees with the appropriate instructions. Remember to include your name as it is shown in your Commons account, your eRA username, and the number of the FOA to which you are applying.

Letters must be submitted directly to the eRA Commons at: https://public.era.nih.gov/commons/public/reference/submitReferenceLetter.do?mode=new.

- Instructions for Fellowship Applicant Referees (MS Word - 16 KB)

Reference Letter Submission Process

- Each FOA will indicate whether Reference Letters are required and, if so, how many.
- Referees must submit reference letters through the eRA Commons by the application due date.
  Note: Referees DO NOT need to login to eRA Commons to submit their letters.
- Referees will need to provide the following information with their reference letter:
  - PI's (fellow/candidate's) eRA Commons user name
  - PI's first and last name as they appear on the PI's eRA Commons account
  - Number of the funding opportunity announcement to which you are applying
- Upon submission of the reference letters, the eRA Commons will send confirmation e-mails to both the referee and the fellow/candidate.
  - The confirmation sent to the referee will include the mentee and applicant's names, a confirmation number, and the date the letter was submitted.
  - The confirmation sent to the fellow/candidate will include the referee's name and the date the letter was submitted.
- The eRA Commons will link the reference letter up with the application.
- The fellow/candidate is responsible for reviewing the status of submitted reference letters and contacting referees to ensure that letters are submitted by the due date.
  - The fellow/candidate may check the status of submitted letters by logging into their Commons account and accessing the "check status" screen for this application.
  - While the fellow/candidate is able to check on the status of the submitted letters, the letters are confidential and the fellow/candidate will not have access to the letters themselves.
- Contact the eRA Service Desk if you need assistance submitting your reference letter.

1. **Notice of Award**
   Please notify MSTP leadership when the grant is awarded, and please send a copy of your Notice of Award to Bianca and copy Osei Tutu at osei.tutu@mssm.edu.

2. **Stipend Bonus**
   The MSTP provides a $2,000 annual stipend bonus to MSTP students who are awarded F30 fellowships that include funding for those years. The bonus is applied in each month for which the student's fellowship provides funding.

3. **F30/F31/F31-Diversity Funding Opportunities**
   There are two program announcements for F30 funding, one for students at institutions like ISMMS that have an MSTP T32 training grant, and one for students at institutions that do not. Because we have an MSTP T32, you can apply only to that one. There are also two program announcements for F31 funding, one that supports PhD training only (F31), and a diversity award that may support both PhD and MD training phases (F31-Diversity, see below). For program announcements and general information about the F awards, see the NIH F Kiosk. F30/31 applications must be submitted within 48 months from the time of matriculation as an MD-PhD student. In addition, over the total duration of F30 support, at least 50% of the award period must be devoted to full-time

graduate research training leading to the doctoral research degree. Applications are accepted in three cycles per year, in April, August, and December. Because ISMMS MSTP students matriculate in July, the latest possible application cycle is April of PhD year 2.

MSTP letter

You'll need a letter from the MSTP Director. Please complete this form and email Talia Swartz to request.
https://forms.gle/e8aBw43dA1x75zXY7

F31-DIVERSITY SPECIFIC INFORMATION

Students from diverse backgrounds (per the NIH's definition) are eligible to apply for the F31-Diversity Award, formally known as the *National Research Service Award (NRSA) Individual Predoctoral Fellowship to Promote Diversity in Health-Related Research (Parent F31-Diversity).* The F31-Diversity has its own funding announcement/fund number separate from those of the F30 and F31 Awards.

Similar to the F30, **MD/PhD students applying for the F31-Diversity Award are eligible to apply for funding for both graduate school and medical school years.** The non-diversity F31 only supports graduate school years.

Most of the F31-Diversity application is the same as the F30 application; however, there are some additional requirements. These requirements are:

1. A letter from your institution stating your eligibility for the F31-Diversity. This can be written by the MSTP directors.
2. A document titled "Description of Candidate's Contribution to Program Goals," which is a letter from your institution describing how your training will contribute to the diversity goals of your program and institution. This can be written by the MSTP directors.

Other F30/F31 items to include:

- Principles of Scientific Proposals (BSR3102) materials
- Centralized checklist of what we need to do
    - Very very detailed.
- Contacts for Grants Admin (Departmental and GCO)
    - GCO assigned administrators by department/division: https://icahn.mssm.edu/files/ISMMS/Assets/Research/GCO/GCO-Dep
    - NOTE: the assigned GCO grants specialist for your F30/31 fellowship may not be the same as for your PI's R01, so you will need to check with GCO
- A timeline of when to apply
- Examples of previous F30s (https://drive.google.com/drive/folders/1SIpd3KmwvcPhQpnlaJUiN8g5IkowCiun?usp=sharing)
    - By MTA, if possible
    - Are we able to get comments with these?
    - Explanation of differences between a thesis proposal and F application
- Tips from successful students
- Preparation of a RPPR progress report

Other grants

R01 Diversity Supplements

- Full funding for at least 3 years, potentially extendable (computer, yearly conferences $1500/travel, research budget)
- Focused on training --- grant cannot be outside of the scope of the R01 award, as it is intended to provide a training opportunity
- GREAT to apply for early when you enter lab as the funding last for the duration of the parental R01 award (3-4 years), and this gives you ample time to apply for an F-award without worry about funding for your training duration.

Departmental T32s

- Each department has them, most have between 2-4 slots for the grant per year.
- Applications typically go out in the summer/email each MTA director with information on how to find application
- Can apply for ones not in your department, each MTA has specific rules
- Generally, funding for insurance / stipend / small research amount for 2 years, re-application needed / status update
- Each have requirements for satisfaction and retention of grant – i.e. taking a certain course, participating in journal club, presenting WIP, etc. Be thoughtful about this, as if you are in another department but are required to take WIP/journal club/etc from a different department can be a lot of work.

Scheduling Thesis Advisory Committee Meetings

Thesis Advisory Committee Meetings should be scheduled once per semester, twice a year, and ideally scheduled far in advance to keep on track. Scheduling the meeting can be challenging for a few reasons:

1. You feel like you don't have enough to share. Maybe things haven't gone completely as you expected or hoped and you're afraid to disappoint.
2. You don't feel like you have time. You'd rather work on experiments and/or you have something else going on that is consuming your attention.
3. It's hard to schedule a meeting with 5-6 people.

Here's why it's a good idea to proactively set the committee times and hold to them.

1. The accountability is good - it's okay if you haven't achieved everything you hoped for - you can address the growth at the meeting - what got in the way of the progress and what could be done to improve things? Is the hypothesis not what you expected? Do you need to pivot? Would you benefit from external guidance?
2. You'll find that the investment of organizing your progress into a presentation can take time but also be a valuable investment in optimizing your strategy and progress moving forward. Spending time working on a flawed model system, approach, or hypothesis without stopping to get input can lead to a much longer time investment than frequent check ins.
3. The scheduling piece is hard - but there are ways to make it easier. Check out the top 10 tips for scheduling your Thesis Advisory Committee Meetings.

Top 10 tips for scheduling your Thesis Advisory Committee Meetings

Start this 1 month before the anticipated meeting

1. Draft your email to the committee. It should be brief, to the point, and convey the goal.
   Dear XXX,
   I am writing to ask for your availability to set up a meeting of my Thesis Advisory Committee. Please take a moment to share your availability at this link: <<insert URL>> by <<3 days from now>>. I will send a reminder and hope to finalize the date on <<3 days from now>>.
2. Share the draft with your advisor, get feedback, and ask for a list of times that work for your advisor (aim for ~10 blocks of time over a two week period). Try to avoid weeks if you know will be busy, i.e. big conferences in your field, big interview blocks, or big grant deadlines.
3. Create a bunch of times using the scheduling tool of your choice (i.e. Doodle, when2meet, whenisgood). Try not to give too many options, as this can be easily overwhelming.
4. Set a deadline. Ask everyone to complete the scheduling by X date - and make that date not too far in the future, as you'll ask everyone to hold the dates until you finalize the schedule.
5. Set a reminder for yourself to send a reminder to the group the day before the deadline.
6. Set a reminder for yourself to send a final time to the group at the deadline so they can release the other times.
7. Sending an email to finalize the meeting, thank everyone for participating, and send a calendar invite with the location of the meeting and/or virtual link.
8. Send a reminder the week before the meeting and attach any relevant materials.
9. Send a reminder the day before the meeting and again attach any relevant materials.
10. After the meeting, thank everyone for attending and attach any follow-up discussion and tell them when you agreed that the next meeting would be so that you will reach out the month before to set this up again.
11. Repeat.

The Thesis Proposal Committee

The Thesis Proposal Committee is composed of at least 4 members. Members of the student's Advisory Committee serve on the Thesis Proposal Committee and may appoint additional Committee members, subject to the approval of the MTA Director and the Dean. Committee members should represent a breadth of scientific interests related to the students' specific area of study. Faculty members who have directly collaborated on the project, who have co-authored papers or abstracts with the student (except for rotation work that is unrelated to the current project), or who have been substantially involved in supervising the work, cannot serve on the Committee. The mentor of the candidate cannot be a member of the Committee (see below).

The Chair of the Committee shall be a senior faculty member of that MTA designated by one of the Directors of the candidate's Multidisciplinary Training Area. 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.

The student's thesis adviser may be present during the questioning phase of the Thesis Proposal Defense; however, the adviser MUST remain silent during the question period. Committee members must not direct questions to the dissertation advisor, and s/he must not answer questions directed to the student.

In addition, each student is strongly encouraged to discuss the expectations of the MTA Co-Directors 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 ten days 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 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. Following the question period, the student and thesis adviser should leave the room to allow the committee to discuss the exam results and vote in their absence. Following the discussion phase, the student should re-enter the exam room WITHOUT the adviser for a private conversation with the committee. The student will then be asked to leave and the advisor will be invited to have a private conversation with the committee as well. 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.

Getting the most out of your thesis advisory committee meetings:

1. Set the next meeting at your last meeting

I know what you're thinking. OMG, who can think that far ahead. Think of it like a dentist appointment. Set it and take out the emotion. You will never be "ready." Plan to set the date and set milestones to update the committee based on what you expect to accomplish. End the meeting by saying: "by next time, I hope to show you XYZ."

2. Start earlier than you think.

Contact your advisory committee members early to schedule the meeting; refer to: *Top 10 tips for scheduling your Thesis Advisory Committee Meetings*. Be thinking about what you will report and how to structure your slides during lab meeting and WIP presentations. Think about concrete milestones and what pieces have been added to the puzzle and what pieces remain outstanding.

3. Have an agenda in mind.

Orient your committee to the relevant background information, establish a clear premise and gap in knowledge, and provide an approach to how you plan to execute these experiments, the results you expect(ed) to find, and what you found. Be prepared to share your conclusions and discuss the next steps.

4. Have the form ready to go.

https://mountsinai.formstack.com/workflows/student_progress_report_and_idp
Complete the information beforehand so your committee can include notes. Make sure you are in agreement with the plan. Meet with your mentor after to lay out how to accomplish your goals by the time you next meet.

The Dissertation Committee

The Dissertation Committee is composed of five members, including the mentor, who must be a silent observer during the Defense by the student. There must be four voting members on the Committee. Two members will be experts in the field of the student's work but they cannot be collaborators of the mentor. One member should be from outside the field of the project. One additional reviewer, who shall not be a faculty member of ISMMS, will be appointed. This "outside" examiner may not have been an active collaborator in the student's work. 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 ISMMS, are those who have:

-directly collaborated on the project

-co-authored papers or abstracts with the student (except for rotation work that is unrelated to the dissertation project)

-been substantially involved in supervising the work.

If the student has two dissertation co-advisors, both may be present and both must be silent observers during the Defense.

The Training Area directorship and the Graduate School Dean must approve the Committee roster, and the former will appoint a senior member of the Committee, other than the dissertation advisor, to serve as Chair of the Committee. The Dean will invite the outside examiner to sit on the Dissertation Committee and will outline the duties of the reviewers and of the Committee.

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 and the Dissertation Defense and Seminar Registration form along with the Voting form may be obtained from the Graduate School office. The student must include with the written document the Statement of Authorship page.

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.

Alternative Timelines

- Special considerations - why might you do this
- How to set this up
- Relevant changes in dates/timings/registrations/etc

Our MSTP offers tremendous flexibility, when it comes to the timeline students follow for their

training. The traditional path that the majority of students take is to complete their first and second years of medical school (Preclinical; completion and passing of USMLE Step I are highly recommended at this point), followed by their four-year PhD (extenuating circumstances can be observed by program leadership to elongate the duration of the PhD), and lastly the final two years of medical school (Clinical). This is the designated, traditional “2-4-2” path. Alternatives to this timeline are possible, such as a “1-4-3” or “3-4-1” timeline, but permission must be granted by the program leadership.

Currently, there are students pursuing the “1-4-3” timeline, in which upon completion of their first year, they progressed to their PhD with a chosen mentor, with the intent of returning to their second year of medical school, after defending their dissertation. Electing to proceed with this timeline will require approval from MSTP leadership, and direct communication from the chosen mentor to affirm this arrangement.

Pros:

Cons:

[Depositing your dissertation]

Participating in EHHOP during PhD years

Participating in EHHOP has been a productive way for PhD-phase students to stay engaged with clinical medicine, better prepare themselves for 3rd year, and provide an important service for the community during this phase. There are a number of opportunities for involvement, outlined below. Students can participate in a number of diverse auxiliary roles (Pharmacy, Nutrition corps, Access to Care Team, Research Team), but here we focus on the roles that involve working as a Senior Clinican:

1. Basics of the SC role
    a. requirements:
        i. Have finished MS2 and passed Step 1
        ii. Attend SC training night(s) in the Spring each year
    b. role
        i. fully described in the EHHapp
        ii. in short, see 1-2 patients independently per clinic day, present to an attending preceptor, write notes.
2. Chronic Care program
    a. This is a program of ~20 MS3 and PhD students who apply to take on a panel of 2 more complex patients for whom they follow closely and lead the management.
    b. Apply in the Spring (during MS2 or PhD phase)
    c. MD/PhD students traditionally participate for 2+ years
    d. During the first year, attend & participate in monthly didactics with the other Chronic Care senior clinicians. During the 2nd year, attend Physician-Scientist Track didactics.

e. Receive direct mentorship from the Physician-Scientist Teaching Senior(s) (PSTS) during 1-on-1 meetings and monthly PSTS rounds with other MD/PhD CC seniors.

3. -Physician-Scientist Track

Transition to Clinical Years

- September: meeting with MD/PhD students and their mentors to discuss milestones as they anticipate their final year in lab. This includes discussion of committee meetings, completing experiments, planning and writing manuscripts and dissertation, dissertation defense, graduation, and vacation.
- January: MD/PhD students are invited to a meeting that previews the third year and expectations for joining the rising MS3 class, including timelines and deadlines, compliance, and the MD/PhD Clinical Refresher Course.
- February: MD/PhD students join the rising MS3 students to learn about lottery planning; a dedicated session for MD/PhD students with MD4 peers allows for students to participate in Q&A about the re-entry process and success in their clerkships
- Spring: all students are encouraged to meet with their mentor and Thesis Advisory Committee to be sure they agree that students are on track to defend this spring.
- Clinical Refresher – April-May. All MD/PhD students who plan to re-enter are required to take this course.
- InFocus5: Formerly known as “Clinical Skills Week” this week long session during the week prior to start of clerkships includes clinical skills, ethics sessions, and advising cohort sessions designed to orient students to expectations during the clerkships.
- IMPORTANT: Dissertation must be deposited before an MSTP student can re-enter medical school.
- KEEP IN MIND: There are 28 weeks total of elective time during years 3 and 4 of medical school; of these, 16 can be used for research.

MD3

MD4

FAQ for students anticipating return to clinic

FAQ

When do I need to notify the MD program of my intent to return to Year 3? Please fill out the following form by https://mountsinai.formstack.com/forms/intent_to_return by February 15 of the anticipated return year.

To whom do I ask questions about clerkship order, how to prioritize? Meet with your faculty advisor, Dr. Kara Bagot, to discuss lottery options that may work best for you. Additionally, it is highly recommended you attend the sessions on planning for the third year (end of February, dates vary year to year) to learn in more detail about the lottery process.

Immediately after, we will have a panel of peers who can discuss their strategies for planning the third year and experiences so far.

How flexible is switching my schedule after the lottery? The lottery determines the order in which you take clerkships. Students with a planned life event (i.e. wedding or family planning – please review the excused absence policy in the Student Handbook for everything else) that will occur during year 3 clerkships may submit a request to Student Affairs or to your Faculty Advisor prior to the lottery (due **March 1 at 9AM**) with the date of the event and time needed. Approvals for these events happen prior to the lottery. The order of clerkships outside of your requested time frame is determined through the lottery. After the lottery results are posted, students have ten days to request 1-1 switches with peers. After the 1-1 switch period, students will still be able to request changes to their schedules. Students requesting changes at this point will need to complete the clerkship change form (http://icahn.mssm.edu/education/students/registrar/medical-forms), and submit the completed form to the respective clerkship coordinator for approval. Changes will be granted based on availability.

How many weeks of elective can I cluster together, and can any be used for research? Over the course of years 3 and 4, you are required to take 28 weeks of elective. Of this, 16 weeks can be used towards research. In year 3, you have ten (10) weeks of elective, split into: 4 weeks (during your Neuro/Psych block), 4 weeks during the Surgery/Anesthesiology Block, and 2 weeks (during your Peds/Ob block). The lottery determines the order of which you will receive these blocks.

Please note, if you return late and register for research elective at the beginning of the year, those weeks count towards your 16 weeks allotment. Students who are returning late should register for elective credit **prior to** the start of the MD phase. A maximum of 16 weeks of research elective credit will be granted. Students should fill out the Elective Registration: Tailor-Made Research for MD/PhD form, found here: http://icahn.mssm.edu/education/students/registrar/medical-forms.

I'm not sure if I will finish by PhD in time for the start of InFocus5, what should I do? Meet with Dr. Talia Swartz to determine what may be the challenge to coming back by InFocus 5. If you think there is a chance you will be able to, it is better to notify the medical school of your intent to return and go through the lottery. This will ensure your preferences for lottery are taken into account. There will be opportunity to modify your intent to return in April, with approval from MD and MD/PhD program leadership.

What's the latest I can come back? All students returning to year 3 of the MD phase must participate in **InFocus 5** (last week in June). Students who need additional time to finish any lab duties, but would like to come back in the upcoming academic year, **must still participate** in InFocus 5, but may be able to begin year 3 as late as 1C (late August-early September) to be able to graduate on time. Students should discuss timeline and **must receive approval** from

program leadership (in coordination with the registrar); they will help you with your scheduling and guide you through this process.

I had planned to return but I have changed my mind and will return next academic year. What do I do? Please fill out the MD/PhD Modification of Intent to Return form by May 15: https://mountsinai.formstack.com/workflows/md_phd_modification_of_intent_to_return

Questions? Email:
talia.swartz@mssm.edu; jillian.palmer@mssm.edu; nelson.pe@mssm.edu

Advice for students anticipating transition back to MD3
Transition meeting slide deck: https://tinyurl.com/yyygn3sw
Video overview of the return process: https://tinyurl.com/y4aznex3

Electives

- Electives requirements (28 weeks total over years 3 and 4):
  - 10 weeks in Year 3
  - 18 weeks in Year 4
- Type of electives
  - Clinical
  - Research
  - International/global health
  - Away electives (4th year only)
- Up to 16 weeks of elective credit can be research. MSTP program leadership does not need to approve this if it is a continuation of the dissertation work.
- More information on registration on Blackboard (on the student resources page, electives box)
- Need guidance about electives? Questions? Want to review your elective schedule?
  - Make an appointment with Dr. Beverly Forsyth through MARC or email beverly.forsyth@mssm.edu

Awesome resources for success in MD3-4

MSTP MD3-4 Specific Clerkship Advice and Elective Reviews and Study Advice
Dr. Staci Leisman's Guide to Being an Outstanding Medical Student
Dr. Lauren Linkowski's Guide to Clerkships and Shelf Study

USMLE Step 2

Important note for MD/PhD students:

The NBME Certificate of Identification and Authorization form is initially completed as part of the Step 1 registration process. It lasts 5 years. That means that nearly all MD/PhD students will need to renew this in order to register for USMLE Step 2 CK and CS. This is important to note because it may result in scheduling delays.

- Register for the exam
- Complete the on-line form
- Pay for the exam

To certify your identification, you must either print out Part B of your application OR download it. You will then need to attach a professional, passport sized headshot to the form and sign at the bottom. Finally, you can either bring the hard copy to the registrar's office in Anneberg or email your complete form to registrar@mssm.edu

- Receive your scheduling permit (may take several weeks)

The MSPE

The Medical Student Performance Evaluation (MSPE) is a major part of the residency application process. It describes, in a sequential manner, your performance through three full years of medical school. The MSPE includes an assessment of your academic performance and highlights professional attributes. The MSPE is not a letter of recommendation but rather a compilation of your academic record and information you choose to highlight. The Office of Student Affairs compiles your data into one document to form the MSPE. In addition, and as a reminder No single person writes the MSPE, and no one involved in the MSPE preparation has a role in evaluating you. You will meet with your Faculty Advisor at the end of third year (or beginning of 4th year) to review the MSPE. The MSPE is considered a component of the students' academic record and, thus, is available for your review. We allow a review of the MSPE in mid-July and a final review in mid-September for the purposes of fact checking, but do not allow revisions to the evaluative statements in the MSPE.

If you are in the MSTP Program, you will have a letter added to your MSPE written by the Graduate School of Biomedical Sciences. This letter will explain your progress as a PhD student and your accomplishments. This will be at the beginning of your MSPE, prior to your identifying information. Student Affairs works with the MD/PhD Program to ensure that this portion of the MSPE is complete.

The MSPE does not specify a student's specialty choice.

Sample MSPE
Sample MSTP Research Letter (addended to MSPE)

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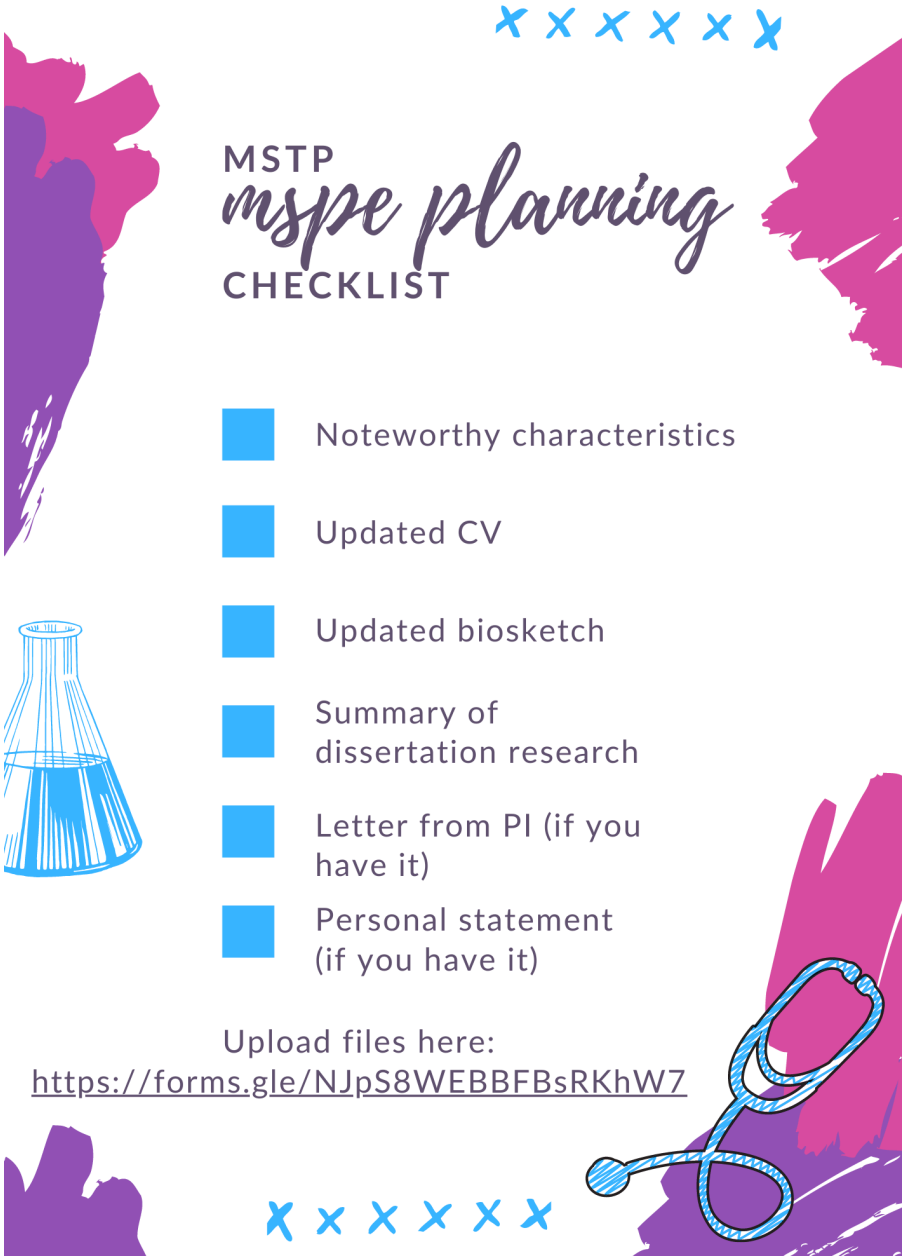
MSPE Planning for MD/PhD Students



Due in advance of May-June MSPE meeting
MD/PhD specific - to upload here in advance of our meeting) via this form: https://forms.gle/F2qTZCzvKKpLjMCa8

- ❏ Updated CV
- ❏ Updated biosketch
- ❏ Lay summary of your dissertation research, 1 page max.
  This summary should be understandable to a basic scientist whose expertise may not be in your area. Identify appropriate publications (your own) at the

appropriate places in the summary and explain, in a single sentence, how each one helped to move the field forward. You may wish to confer with your PhD thesis mentor in preparing this page. The discussion of your research is really critical because this is what sets you apart from MD students. This statement should also include other things that you have done while in the program (service and extracurricular work). Here is an example.

❏ Letter from your PI (optional but would help) – ask for this now, why wait?
Here are some resources you may provide them if they are looking for guidance:
- https://www.aamc.org/system/files?file=2019-09/lettersguidelinesbrochure.pdf
- https://oitecareersblog.od.nih.gov/2018/10/09/writing-a-letter-of-recommendation-tips-for-mentors/

❏ Personal statement, optional, if available

At your Faculty Advising May-June meeting 1:1, you'll:

- review your academic file for accuracy
- review your full MSPE to date
- review your noteworthy characteristics
- discuss plans for 4th year
- identify letter writers
- ensure you have a specialty advisor
- discuss concerns

At your MSTP Director Letter in June meeting 1:1, you'll:

- discuss your MSTP Director's Letter to include
  - Previous research before matriculating at Mount Sinai (if applicable): to document that you had an early commitment to science.
  - Basic coursework; advanced courses
  - Your thesis research
  - Awards, presentations (oral, poster)
  - Teaching
  - Leadership (positions held, if applicable)
  - Your specific residency interests
  - Interest in continuing to do research of any kind (laboratory, clinical, computational etc.)
  - Career aspirations

Residency Planning

Other Research Residencies

Pediatrics
Neurology
Pathology

> The UCSD Psychiatry Research Residency Track is dedicated to providing outstanding training and career development to future scientists in Psychiatry and Neuroscience. Our program description can be found at:
>
> https://medschool.ucsd.edu/som/psychiatry/education/research-programs/Pages/research-residency-track.aspx
>
> Since 1987, the UCSD Department of Psychiatry has supported a designated Research Residency Track, with the goal of training future leaders in neuropsychiatric research and Academic Psychiatry. Our program is currently funded by an NIMH R25 Award. Our program received renewed R25 support in 2018 with a perfect "10" priority score.
>
> Over the past 30+ years, the majority of our Trainees (including myself!) have been MSTP graduates. The focus of our program for these individuals is to help them apply the tools acquired during their MSTP training to develop into highly skilled Psychiatrists, world-class scientists, effective teachers and powerful advocates for patients and families with mental illness.

Frequently Asked Questions for ERAS Residency Applicants
https://students-residents.aamc.org/applying-residency/faq/faq-eras-residency-applicants/

Super awesome MD-PhD residency application planning resource

created by Cindy Tian and Sandhya Chandrasekaran in everything you need to know as an MD/PhD student about to start fourth year.

- Part 1 (Residency Application Planning): https://docs.google.com/presentation/d/1j2CuWuaFOLqy7fHnXgzIqg-FbQRlFgx76zmVVbh26oo/edit?usp=sharing
- Part 2 (Interview Prep + Match): https://docs.google.com/presentation/d/1NgkwG8JmQqs0iJpXxFccpez0KxZrF0JlCdlygu2RFUE/edit?usp=sharing

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MSTP-specific courses

Problem Solving in Biomedical Science (PSBS)

This course is designed to introduce you to current disease-oriented research problems through lectures and collaborative problem-solving. In each session, we will explore experimental model systems and paradigms that are advancing biomedical science. We use a problem-based learning approach to help you develop experimental design and scientific critical thinking skills.

Course Directors**:** Margaret H. Baron, MD, PhD

Biomedical Sciences for MD/PhDs (BMS for MD/PhDs)

Our Biomedical Sciences for MD/PhDs course is a one-year graduate core course tailored for MD/PhD students. The fall offering of this course (BSR1017) is designed to present concepts in biochemistry, cell biology, and molecular genetics, and occurs concurrently with the medical school course Molecular, Cellular and Genomic Foundations (MCG). The medical school MCG course provides a broad molecular and cellular framework for understanding normal physiology, with an emphasis on concepts related to human disease. Our course provides a parallel lecture series with an emphasis on mechanisms, methodological approaches, and experimental context that will help you understand the basis of our current knowledge. Tutorial Sessions are integrated into the course, and include journal club sessions focussed on experimental concepts and critical reasoning. The spring offering of the course (BSR1018) presents more advanced concepts in cell biology, cell physiology, immunology and microbiology, stem cells and differentiation, animal models of human disease, and aging.

Course Directors**:** Matthew O'Connell, PhD and Nicole Dubois, PhD

Medical Scientist Grand Rounds (MSGR)

This full-year course was designed with the goal of emphasizing cross-fertilization between basic science and clinical medicine and as an additional mechanism for providing continued contact with students in their PhD years. Student participation is required through the end of PhD training. This series brings together the Mount Sinai academic community by partnering clinicians with physician-scientists and biomedical research presentations in lively and interactive discussions about health and disease that reflect innovations in both clinical medicine and basic science. The sessions are centered upon a clinical case presented by senior MD/PhD students with Mount Sinai house staff and clinical faculty. The student and house staff lead a discussion through the clinical reasoning that led to the diagnosis and treatment. The discussion of the clinical topic will then lead into the second part of the session, a presentation of PhD research by a senior MD/PhD student that provides some background behind the pathophysiology of a disease and/or a therapeutic approach. Senior clinicians and scientists are invited to attend and participate in the discussions. The sessions will close with comments from the senior faculty regarding the significance of the topic and frontiers to be advanced by future research in the field. The objectives of this course are to 1) interact with students at various levels of the MD/PhD program; 2) meet clinical and basic science faculty as

potential mentors/advisors; 3) learn about translational science as it pertains to a specific field; 4) engage in a dialogue between clinicians and scientists through moderated panel discussion; and 4) identify key gaps in knowledge within specific fields.

MD/PhD Clinical Refresher

This eight-week course is designed to facilitate the transition from your PhD training years to your clinical medicine years. The course incorporates practical and didactic sessions to help you regain familiarity with history taking, physical examination skills, written and oral presentations, and clinical reasoning. You will receive a full day orientation re-introducing the fundamentals of history taking and physical examination skills. The course is split up into four sections: Clinical Basics Orientation, Module 1: Supervised patient care, Inpatient shadowing, and Module 2: Individual patient care. From these four sections there will be six weeks of direct patient encounters, during which students will practice their oral and written presentations and participate in didactic case discussions led by field experts. The course incorporates board-style questions into each weekly topic, thereby introducing the concept of multiple-choice format clinical reasoning. By the end of the course, you will be able to conduct history and physical examinations, present in both written and oral forms, interpret and assimilate clinical data to create differential diagnoses, and review pathophysiology of common disease processes.

Course Directors**:** Jenny J. Lin, MD, MPH, and Talia H. Swartz, MD, PhD

Teaching Opportunities

Medical School

- Teaching Assistants for Structures (Anatomy, Histology, Human Embryology)
- Teaching Assistants for Brain & Behavior
- Teaching Assistants for Medical Microbiology
- Teaching Assistants for Physiology

Graduate School

- Teaching Assistants for BMS course for PhD students
- Teaching Assistants for advanced PhD courses

MSTP-specific

- Teaching Assistants for Problem Solving in Biomedical Sciences
- Teaching Assistants for BMS for MD-PhDs

Pipeline programs and community

- Tutoring grades 7 through college by the Mount Sinai Center for Excellence in Youth Education (CEYE)
- MedStart Enrichment Program for middle school students (grades 6-8)
- Teaching in Medical Discovery of Careers (MEDDocs) Program for high school students
- College essay assistance in First-Generation Scholars Program for high school seniors who will be the first generation in their families to attend college or who come from underserved communities.
- Tutoring at the Adolescent Health Center at Mount Sinai
- Mount Sinai Mentoring in Neuroscience Discovery at Sinai (MiNDS): classroom activities for elementary school children; lessons on comparative brain anatomy for high schoolers
- Tutoring at City University of New York (7 year BS/MD Program for URM and economically/educationally disadvantaged students)
- MSAR MCAT Preparation for ISMMS Pipeline students

Shadowing

Guide to Shadowing - Compiled by the Learning Community Student Leaders

Shadowing experiences are an excellent way for students to get exposure to different areas of medicine. Shadowing is not a requirement, and students will not be viewed differently if you shadowed more or less in preclinical years. It can only benefit you by opening your eyes to other fields and giving you clinical experience. The first and second years of medical school are packed full, so you will want to consider how to best balance your time.

The following resources are suggestions for finding shadowing opportunities.

- Mentor database located in Blackboard
- Peer recommendations
- Faculty Advisor
- Specialty Advisors
- Course Directors/Lecturers
- Residents

The **mentor database** on Blackboard is a comprehensive database of over 200 faculty across the institution that have self-identified interest in working with students. You can search by experience (shadowing, career conversation, etc), by department, and/or by mentorship interest. Mentors opt into the database on a yearly basis and have continued interest in working with students.

Asking your **upperclassmen peers (M3/4s)** is a great way to find a faculty member who will provide you a meaningful experience. They have experienced shadowing experiences recently and can let you know who is really the best.

Faculty advisors and **specialty advisors** are also a great resource. They have had experiences and may recommend great mentors. Specialty advisors are good if you have a specific area of interest. Your faculty advisors are great at this as well, but can also help you hone down your areas of interest if you are undecided what to do. The MedInfo app has a section dedicated to Career Planning Services and provides you with the names of specialty advisors in many of the specialties you might be interested in (https://medinfo.mssm.edu/CPS).

Think about what experiences you are having in your **courses** as well. Perhaps you have been enjoying a course/specific topic or there was a lecturer that piqued your interest. You can reach out to those faculty who have many connections within the health system. Great connections have been made this way.

Students should also feel free to reach out/follow **residents** as well! Often, there is a smaller age difference than a student vs. attending which therefore makes students a bit more comfortable reaching out, and asking questions while shadowing. It is less formal but an equally valuable experience.

Finally, searching the Mount Sinai website can help you identify specific faculty members/physicians who are clinicians in the area you may be interested in as well as enabling you to see what research they may be engaged in.

Not sure where to start or what you're interested in? If you don't have a specific area of interest and are just beginning to explore, that's ok! Discussions with your peers and Faculty Advisor will help you narrow down and identify seasoned mentors who are excited to work with students, regardless of interest.
Drafting a communication

A blind reach out can be scary. Here are a few tips of what to include:

- Address the email professionally.
- Identify who you are
- List how you found their name
- Indicate why you interested in shadowing with them
- Identify your availability and ask theirs (make sure you do not have any mandatory classes)
- Sign the email

Example email:

Dear Dr. XXX,

My name is Jane student and I am a first year medical student at ISMMS. I found you in the medical student mentor database. I am very interested in learning more about the visiting doctor's program and would like to set up a shadowing experience with you.

I am free every Tuesday afternoon after 1 PM and on Friday mornings, and have additional flexibility around my courses. Please let me know your availability and I look forward to hearing from you.

Thank you for for you time,
Jane Student

Tips:
- Don't be discouraged if you don't hear back, as faculty are very busy.
- If you don't hear from them within 1-week, send a polite follow up.
- If you don't hear back after the follow-up, go back to your resources and identify a new faculty member -- there are many who are very excited to partner with students.

Expectations for students shadowing in a clinical setting
- Prepare questions ahead of time

- Dress business casual, with comfortable shoes
- Be on time!
- Bring a notebook
- Ask questions and take notes (in between patients and not in front of them)
- Manage your expectations
- You will be identified as a medical student in front of patients
- You may be asked to leave the room if the patient asks
- Be responsive to any communications from the faculty member in a timely manner
- Send a post-shadowing thank you note

Tips:
If possible, students should observe and try to help out in any way possible, even with minor things. This can go a long way so don't be afraid to ask if there's anything they can help with as they shadow the attending! Even getting gloves is helpful at times.

MSTP-Specific Student Activities

Annual MSTP Retreat

Held off-campus over a Fall weekend, the Retreat is an important venue for program evaluation and for all students to interact with each other both personally and professionally outside ISMMS. The Retreat begins with a “State-of-the-MSTP” session, a report by the Director of issues addressed over the past year and new initiatives planned for the coming year. The broad-based, spontaneous feedback generated by lively discussions among the students, Directors and guests (including alumni, whose perspective is greatly appreciated) is invaluable in prioritizing areas for attention. The Retreat also features an outstanding physician-scientist keynote speaker, a career-oriented session, poster and platform scientific presentations by current MSTP students, and training stage-relevant break-out sessions led by program Leadership, faculty actively involved in the program, and students.

Meet the Physician Scientist

This is a monthly student-organized activity in which MD-PhD trainees at all stages meet over lunch with a physician scientist (from Mount Sinai or another New York City institution) to discuss career development issues.

Table 4 Eight

Students from each of the approximately eight years of the MSTP meet over lunch (one for each year) once a month to discuss science, medicine, career development, and other areas of interest to the group.

Bedside Rounds

In this monthly program, a physician leads a group of six MD/PhD students through an interesting clinical case, demonstrating clinical findings and familiarizing the group with the thought processes involved from diagnosis to management. This one-hour structured shadowing and networking experience is open to MD/PhD students of all years but is especially valuable for those preparing to transition back to the clinic.

Professionalism

https://icahn.mssm.edu/education/students/handbook/student-faculty-conduct
Professionalism encompasses a broad set of aptitudes, attitudes, and behaviors. Being a professional can mean many things, including internalizing a set of shared values, behaving according to standards of medical practice or scientific investigation, and being accountable for one's actions. Students have a responsibility to act at all times in accordance with the highest standards of integrity. The same standards of behavior are expected in the classroom, laboratory, clinic, hospital, or elsewhere on campus, including housing, or whenever you are seen as representing the School. As a student, we expect you to adhere to the same professional codes of behavior as physicians and scientists.

ISMMS Student Code of Conduct

The Icahn School of Medicine at Mount Sinai (ISMMS) is dedicated to providing its students, residents, faculty, staff, and patients with an environment of respect, dignity, and support. Please review the Student Mistreatment Guideline in the Institutional Guidelines Section of the Student Handbook.

Career Development

Research Residencies vs. Categorical in Internal Medicine

For more info, see this AAMC guide to PSTP residencies.

Most major academic residencies offer a Physician Scientist Pathway (referred to below as a PSP) or Physician Scientist Training Pathway (PSTP) or fast-track, short-track, or research track. Like MSTPs, no two are the same. What they share is a goal of recruiting students (MD/PhD and MD with significant research background) to an institution for residency and then training beyond, typically using the ABIM research pathway (a.k.a., the short track). In many cases, these programs include easier access to fellowships at the same institution, and the extent to which this occurs at different programs, even within the same institution is highly variable. Most programs provide mentorship to help keep the science part of the brain working during residency. Your match into such a program does NOT require that you do a fellowship at the same institution. Here are some thoughts as you are considering options for what to do beyond graduation.

1. **Think about your long-term goals.** If academic medicine is your plan and being a physician scientist is your ultimate aspiration, then strongly consider a research track residency. These are not everywhere so the program you select has to offer the track and a discussion with the program director is necessary to see if the program can accomplish your goals. These programs come in several shapes in sizes and may lump clinical training together or separately.
2. **Think about whether you want to do a fellowship.** If so, it makes sense to consider this together with the residency program and try to come up with a plan with the program directors of both. Perhaps such a program already exists and this will be easier to set up and apply for.
3. **Research tracks are one option**…,but getting a traditional clinical training with a three year residency and then doing a fellowship is fine too. In actuality, there is not much difference, and this track may afford more flexibility later on if you decide you have different research or clinical interests later.
4. **Look for a research-friendly program**. Usually Medicine programs are the ones that offer research tracks or research concentration and among these, only a handful have a set research track. It helps if people have done this before at that program (because the option is fellowship-specific). If no-one has done this for your subspeciality before, talk it over with the program director – they may be amenable.
5. **Look for protected research time**. This means at least 75% of your time is off service, not holding a pager that can be dedicated to the lab. You have no idea how distracting a

pager can be, even if it's just answering questions by phone. In order to be successful and publish and get funded, protected time is essential.

So, you've finished your PhD and you're ready to start your pathway to Physician Scientist-ness. Should you short-track or not?

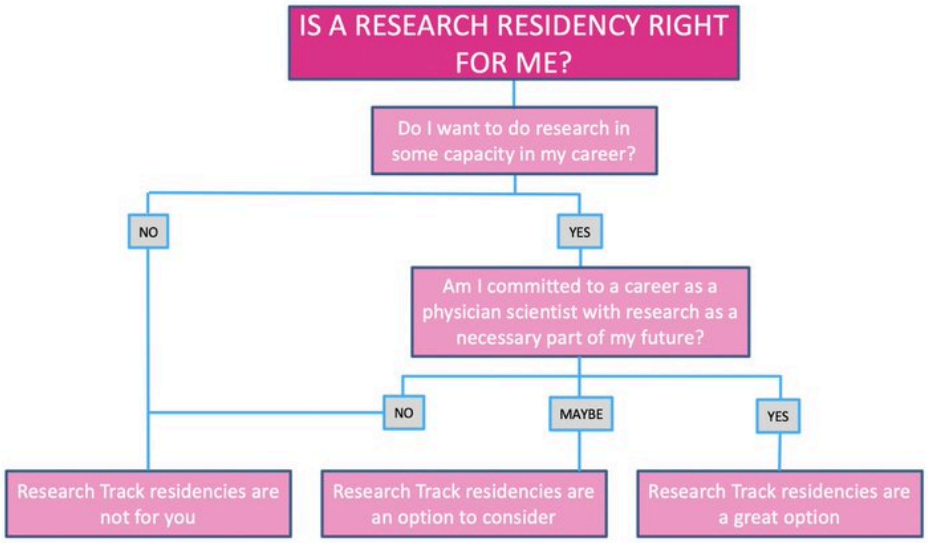
Short track pros	Short track cons
One less year of q3-q4 call	One less year of clinical training
You don't miss very much in that year and most feel competent with clinical training by the end of PGY2	Some senior clinicians may not think that you are as clinically qualified (but you could always prove them wrong)
You can back into the lab one year sooner	You don't actually save time, only what you are doing (the total number of years of training is actually the same, or potentially even more)
You may be guaranteed a slot in fellowship earlier than your categorical peers	You may end up stuck in a training position longer than you want towards the end of your training
Your boards are delayed by a year (both specialty and subspecialty)	Your boards are delayed by a year (both specialty and subspecialty)

To give you a sense of what a short track means in terms of logistics, here are two sample schedules for a categorical and a research track trainee, both of whom are pursuing a fellowship and planning to pursue a Physician Scientist career:

Year	Categorical	Research Track
PGY1	Intern	Intern
PGY2	Resident	Resident
PGY3	Resident (some research time), Medicine Boards in summer	Fellow Year 1(clinical)
PGY4	Fellow Year 1 (clinical)	Fellow 2 (some clinical, mostly ~80% research), Medicine Boards in summer
PGY5	Fellow Year 2 (some clinical, mostly research), Subspecialty Boards in fall	Fellow Year 3 (~>80% research)
PGY6	**Choices:** Fellow Year 3 (optional) Get a job Do anything you want	Either Fellow Year 4 (>80% research), or if you are fortunate, get a job (but this depends on a supportive department and can be tricky), Subspecialty Boards in fall, need to be doing 80% research as fellow or faculty in order to complete training

Ask lots of questions and think about your options.
Perspective: Residency 101 for Physician-Scientists
https://resdb.physicianscientists.org/Main_Page

Wondering whether a research residency is right for you? Tweetorial:
https://twitter.com/taliaswartz/status/1277713569950371842?s=20



What are some benefits to research track residency?

- A community that includes mentoring and programming to help support you
- The expectation that you'll be recruited as faculty with protected research time - this is key to successful funding
- One less year of residency

What are some things to look for in specific programs?

- Does the institution have a PSTP?
- Are there Research in Residency programs?
- What is the K track record of graduates?
- Are graduates retained as faculty?

The choice to pursue a categorical track vs. research track hinges on one less year of residency at the expense of adding time on the back end to fellowship and research training later. Here's a sample timeline.

Research Residency vs. Categorical Timeline

	Research Residency	Categorical Residency	
PGY1	Intern	Intern	
PGY2	Residency	Resident	
PGY3	Fellow	Resident	← Specialty boards
PGY4	Fellow (research)	Fellow	
PGY5	Fellow (research)	Fellow (research)	← Sub-specialty boards
PGY6	Fellow (research)	Fellow (research)	
PGY7	Fellow (research)	Faculty!	
PGY8	Faculty!		

Questions?
There are many people you can ask:

- Faculty Advisor
- MSTP Leadership
- Physician Scientist Career Advisors

Building a CV

Your curriculum vitae (CV) is a summary of your training and experiences and will be important for residency applications, future job applications, and will remain a living document for you to build over the course of your training and career. You will continuously be adding to your CV as you develop and will refine and expand this over time.

Why keep your CV up to date?

- You'll forget things if you don't add them right away
- It will help to apply for programs, residencies, and any possible opportunities by having this ready to go as needed and can quickly give you a birds eye view of what you've done
- Most of this information will be helpful reference when asked about key dates or accomplishments
- You may provide this to any letter-writers at any time for quick reference about your background and accomplishments

The CV can be organized into general categories including the following:

- Contact information (name, contact information, email address)
- Education (all degrees and training including key dates and degrees, institution and location)
- Honors and awards (include title, dates, organization)
- Work experience (include title, employer, location, and dates)
- Research, list with title of project (include mentor, title, institution, location and dates)
- Activities, list the most important activities including committee work, organization projects
- Publications, bold your name in the author list, use consistent style of citation throughout
- Presentations, include the type of presentation (venue, location, date, and any other relevant details)
- Professional memberships (include organization name, membership and/or any leadership positions)
- Outside interests - list anything that you'd like others to know about you

General formatting

- Keep a clean and consistent format between sections
- Margins should be at 1 inch
- Font should be no smaller than 11-point
- Use the same font - or no more than two font types for headings
- Make sure to proofread for errors - ask a friend to review

Here's a SAMPLE ACADEMIC CV from Mount Sinai.

Here are some simple CVs from MD/PhD students who have been kind enough to share theirs:

Cindy Tian

Sandhya Chandrasekaran

You may also try these: Gallery - Templates, Examples and Articles written in LaTeX

Writing a personal statement

The personal statement is an opportunity for you to share qualitative information with potential interviewers. It should aim to address:

- Your story
- Your interest in the speciality
- What you are looking for in a residency program
- MD/PhD specific: how you view your training path as an asset to this residency program
- MD/PhD specific: how you will leverage your training into your career aspirations

The reader will be looking for the following:

- Are you an effective written communicator?
- Are you genuinely interested in this residency program?
- What makes you unique?
- Can your goals fit in with what the program can support and help you to thrive?

What should you include?

- Anecdotes that reveal relevance to your clinical interests
- Why you have chosen this residency
- Your career goals
- Special skills and qualifications - should include your research and how you think it is relevant (either related or if not obvious, how this training will offer you a unique perspective in the field)
- If you want to - personal information about your background, identity, other challenges that you want to highlight
- Any reasons that reviewers might be concerned? Extended leaves or academic challenges? You may use this opportunity to explain the context

General tips

- Include some story that makes it person
- It should sound like you
- Ideally it would weave in three major elements: who you are, what you've done, and where you think you are going (for MD/PhD applicants, the career aspirations are particularly important to include)
- End with an upbeat and forward thinking message that ideally ties into themes you've described, link your conclusion back to your introduction
- Be brief - aim for 1 page
- Get lots of feedback from all different types of people (family, friends, mentors)
- Expect to make many revisions
- Don't:

- Include typos
- Use cliches
- plagiarize

Personal Statement Perspective of a Residency Program Director:
“As the director of an internal medicine residency program, I read hundreds of personal statements every year. I know many program directors who find them irrelevant at best, and I confess I can't blame them.. . .
. . . . I hate them all. Not the candidates, but their personal statements. Because there's really very little that's personal about them. The major thing they've told me about themselves is that they are very much like 90% of the other candidates for my program. . . .
I want to hear from the candidate who appreciates the fibers of alpaca wool, the benefits of painting with oils rather than acrylics, the one who won the world clogging championships at the age of 12, or the one who worked hard at becoming a varsity football player but ended up handing out towels on the bench. . . These are the ones that demonstrate a feature that is still key to being a doctor: humanity. How else are we to know about this side of our candidates if not for their personal statements? ”
-T McNamee. Ann Int Med. 2012;157(9):675

Residency Letters of Recommendation

For most specialties, you need four letters.

- PhD advisor
- The program director or chair of the department in which you are applying (often comes from your Sub-I, but can be also from a strong clerkship experience); multiple people may contribute to this letter which will be signed by the chair
- MD of your choice
- MD of your choice

For letters 3 and 4, whether it comes from physicians in your specialty or others may depend on the residency in which you are applying. They can be from attendings with whom you've worked over the third and fourth year and do not need to be people that you have known very well over several years. Someone who has seen you in both clinical and research worlds - although hard to come by - can be a great letter writer. A good letter could come from 2 weeks of meaningful clinical encounters.

Note for MD/PhD students:

- the MSPE that includes the MSTP Director letter does NOT count towards your 4 letters
- None of the clinical letters will match the depth and breadth of content that your PhD advisor will be able to write because that person will know you for much longer than the clinicians who may know you for a few weeks, usually at the most

Requesting a clinical letter

When asking for a letter, ask the letter-writer if they can write you a *strong* letter. Be ready to provide them with your CV and your personal statement (if you have it). This will help to write a much stronger letter. Start working on your personal statement early.

Tips for asking for a letter:

1. If you have a meaningful experience with an attending, you can ask for a letter right away and save it for later. You don't have to use it but might come back to it later. It can be uploaded to ERAS over your third year and you select which letters to send when you are ready to apply.
2. Ask if the individual can write a strong letter. Provide an updated CV (and personal statement if you have it).
3. Because you are dual degree students, it's important that you have a strong science letter from your PhD advisor and also strong letters that speak to your clinical competence. This means that you should make sure that you come across as well rounded if applying to residency programs that will expect you to be clinically excellent.

Requesting a letter from your scientific mentor

This letter will be much longer and more detailed than the other letters because the nature of your relationship is much longer and deeper than the other clinical letters. Here are general tips for letter writing for your scientific mentor:

1. **Explain your relationship with the applicant:**
    - How long have you known the applicant?
    - In what capacity have you interacted (e.g., faculty, premedical advisor, supervisor)?
    - Are your observations of the applicant direct or indirect?
2. **Explain your role and summary of mentoring responsibilities**, i.e. how many trainees have you supervised so far.

3. **Describe the dissertation project of your student**
    - What was the central question?
    - What was learned?
    - How was this disseminated (papers, presentations)? Awards/recognition?
    - How this can be contextualized within the field and how it could potentially impact human health and disease?
4. **Describe behaviors** you have observed directly when describing your student. Consider:
    - The situation or context of the behaviors.
    - The actual behaviors you observed.
    - Any consequences of the behaviors.
5. **Consider including unique contributions** that an applicant would bring to an incoming class, including:
    - Obstacles that your student had to overcome and how those obstacles have led to new learning and growth.
    - Contributions that your student would bring to a program's diversity, broadly defined (e.g., background, attributes, experiences).
6. **Other information** that selection committees find comparison information helpful
   If you make comparisons, be sure to provide context. Include information about:
    - The comparison group (e.g., students or trainees mentored in your laboratory)
    - Your rationale for the comparison.
7. **Be aware of gender bias**. It's very common that letters include gendered language unintentionally. A study by Trix and Psenka (2003) noted that:
    - Men were described as "successful" and "accomplished" and letters for male applicants contained more repetitions of superlatives such as "outstanding" or "exceptional."
    - Women were described as "nurturing" and "compassionate" and letters for female applicants often include *doubt raisers*, statements like: "It appears that her health and personal life are stable."
    - Letters for female applicants were shorter, lacked basic components like the relationship of the writer with the applicant or comments about achievements, while letters for male applicants were more aligned with job requirements.

   Check your biases. You can copy and paste your letter into a Gender Bias Calculator here.

Community Building

MSTP Student Event Funding

ISMMS MSTP values community and connection. We want to help you create and strengthen bonds by providing funds for MD/PhD student programming. Funding is available for class cohorts, MSTPhamilies, and official MSTP student groups, to use for student events, activities, and other related, qualifying expenses. Funding is available only in the form of a reimbursement, which typically takes six to eight weeks to process. Your event proposal will be reviewed by the MSTP leadership team to determine if it meets eligibility and is in line with allocated funds for the year. The ISMMS MSTP aims to distribute students funds equitably.

Eligible Requests

- Event types
    - Class cohorts (e.g. MD1, MD2, MP3, etc) may receive up to $600 per year or $300 per semester, based on 12 students per cohort.
    - MSTPhamilies may receive up to $800 per year or $400 per semester, based on 16 students per MSTPhamily.
    - Per calendar year, MSTP student groups may receive a maximum of $1,000 to be applied to events, initiatives and other related items.
- Qualifying expenses
    - Meals or food
    - Local travel expenses
    - Other items may be considered on a case by case basis
    - Guest speaker. Student groups seeking funds to bring a speaker to campus (in-person or virtually), must be advertised as co-sponsored by the MSTP and the talk content must be relevant to the greater MSTP community. The honorarium request must not exceed $75.

Ineligible Requests

- Requests for funding cannot be made retroactively
- Alcohol is not permitted. Alcohol should not be listed on receipts submitted for reimbursement.
- Events that happen when school is not in session are not eligible for reimbursement.
- Mount Sinai is tax exempt, therefore, taxes do not qualify for reimbursement.

For those currently enrolled in the Medical School, a small budget for events is available. Please contact Dr. Kara Bagot and/or Jillian Palmer for more information. Please note, any program or event that is funded by the Medical School cannot be funded by the MSTP. Student Council also offers funding to recognized student groups. Student groups must submit proposed budgets at the beginning of the academic year; click here for more information.

Those seeking financial support for conferences and meetings, please refer to the Graduate School of Biomedical Sciences Handbook and Student Council. You can find more information on the Grad School Travel Award in the Student Handbook and via the Travel Award Application. And you can learn more about conference funding through the Student Council here. The MSTP has a small budget for physician-scientist conferences, such as APSA or Keystone. Please note: Mount Sinai requires those who plan to submit for reimbursement for travel expenses to initial a travel request. This must be done on Sinai Central under Finance/ Transactions/ New/ Travel Request.

Before requesting funding, please ensure that your request aligns with Infection Prevention's latest protocol, which can be found here and here.

Steps to Requesting Student Funding:

1. Check all requests for funding against the school refund policy, and Infection Prevention Guidelines for Student Gatherings.
2. Complete the ISMMS MSTP Student Event Funding Application
3. Await approval
4. For any event greater than 20 attendees, organizers must complete this form to confirm that IP guidelines are met.
5. Enjoy the event!
6. Submit for reimbursement by using this form.
    - All receipts **must** be itemized
    - Credit card statement if not paid with cash.
        - If providing a credit card statement, it must list the payee's full name, date of services rendered and total cost, and last four digits of the credit card number. You can black out any non-relevant information.
    - Provide a full attendance list for group events
    - Request for reimbursement must be made within six weeks of the event date
    - Please direct questions about your reimbursement request to Sa'Haara Bryant, Program Coordinator for Student Engagement and Success, at sahaara-jade.bryant@mssm.edu. Your reimbursement will be added to your paycheck.

ISMMS MSTP Student Event Process

Check Policies

Check all requests for funding against the school refund policy, event policy, and Infection Prevention Guidelines for Student Gatherings.

Complete application

Complete the ISMMS MSTP Student Event Funding Application to enter information about your event and budget proposal

Await approval

Your event proposal will be reviewed by the MSTP leadership team to determine if it meets eligibility and is in line with allocated funds for the year. The ISMMS MSTP aims to distribute students funds equitably across cohorts.

gathering form

For any event greater than 30 attendees, organizers much complete this form to confirm that IP guidelines are met.

Enjoy the event

Have fun! Be safe. Meet new people and / or reconnect with old friends.

reimbursement

Submit for reimbursement: itemized receipts, a full attendance list, credit card statement

Questions?

Contact bianca.taylor-starobin@mssm.edu

ISMMS MSTP values community and connection and we want to help you create connections and strengthen bonds by providing funds for MD/PhD student programming. Funding is available for cohorts, MSTPhamilies, and official MSTP student groups, to use for student events, activities, and other related, qualifying expenses. Funding is avilable only in the form of a reimbursement, which typically takes six to eight weeks to process.

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MSTPhamilies

Big Sib - Little sibs

Admissions and Recruitment

We are restructuring the admissions process to streamline and ensure equitable screening, interviewing, committee discussion, and selection processes. All students who are members of the admissions committee or who participate in the interviewing of any applicants will be **required to attend a two-hour training session** that will include unconscious bias training and a discussion of conflict of interest, confidentiality, and process integrity. This training will be required for both those who are new to the process and those who have participated in the past.

There are four different ways to engage with the Recruitment and Admissions Process.

1. **MD/PhD Student Recruitment Participant.** This is open to all students in the program and can involve participation in many ways depending on your talents and passions. This can include being an applicant buddy, video creator, social media contributor, coffee chats, panels, etc. We ask for you to complete an interest form to let us know that you are interested. You are welcome to participate in as many or as few events as you like. No application or training is required.
2. **MD/PhD Student Recruitment Chair**. This position is intended for two individuals, MD2 and above, who are interested in taking on leadership in overseeing and organizing recruitment events. Both an application and training are required. The full call for applications can be viewed here: https://drive.google.com/file/d/1h9d0UcESkjaPYK9wRKXswl73PL0QYdlp/view?usp=sharing
3. **MD/PhD Student Admissions Interviewer.** This is open to all students in year MP1 and above and involves interviewing applicants for MD/PhD admission. Because this involves access to confidential information, understanding process integrity, conflict of interest, and the impact of bias on decision making, all student interviewers are required to engage in training at the beginning of the season. Please note that this applies to all interviewers, regardless of the number of interviews you conduct.
4. **MD/PhD Student Admissions Committee Member.** This position is intended for two individuals in year MP2 and above (term 1-2 year years, seeking two new members in addition to two members who have served in this role for one previous year) who represent the student voice during the admissions committee meetings. The MD/PhD Student Admissions Committee Members are voting members of the committee, engage in interviewing and summarize the impressions of student interviews who are not present at Admissions Committee meetings. Both an application and training are required. The full call for applications can be viewed here: https://drive.google.com/file/d/1Sw0glDthzl-SYcJSgzzZSzCGWVst0Cav/view?usp=sharing

For a summary of these positions, please see below:

	Eligibility	Interest form required	Application required	Training Required	Application/interest form
MD/PhD Student Recruitment participant	open to all students	X			https://forms.gle/BrPsNapJXjfhj23i7

MD/PhD Student Recruitment chair	open to MD2 and above		X	X	https://forms.gle/qbXTwidRVrTLtAgz8
MD/PhD Student Admissions Interviewer	open to MP1 students and above	X		X	https://forms.gle/JJdDtvWggmS9bafn6
MD/PhD Admissions Committee Member	open to MP2 students and above		X	X	https://forms.gle/YwmxiujNtmegjMFRA

Alumni

Alumni of the Icahn School of Medicine at Mount Sinai MSTP pursue diverse careers as physician scientists.

- >95% pursue a residency after training
- 80% end up doing research for some part of their career
- Most common settings include academia, industry, and government
- Most commons fields include
    - Internal Medicine (research / categorical)
    - Pediatrics (research / categorical)
    - Psychiatry
    - Neurology
    - Pathology
    - Radiation Oncology

alumni.icahn.mssm.edu

Alumni Connect Program

The Icahn School of Medicine at Mount Sinai Alumni Connect Program is an online easy-to-use platform designed to cultivate meaningful mentorship opportunities for the global ISMMS community. Students and alumni can use the platform to connect with alumni in various career fields. Alumni from all class years, programs, and schools may participate as volunteer advisors and hosts. These advising relationships are meant to provide valuable support and guidance to student advisees as they navigate their careers, explore new career paths, or pursue other educational endeavors.

How It Works

- The program is open to students and alumni from all class years, programs, and schools.
- Participants must register by logging onto the mentorship program's easy-to- use online platform and completing a profile, which takes 10 to 15 minutes.
- Alumni participate as advisors and hosts. Students may participate as advisees.
- Alumni Advisors may accept up to three advisees at a time; advises may have up to two Alumni advisors at once.
- Student advisees are then able to search for and request a mentor who best matches their career interests.
- Alumni advisors may either accept or decline a mentorship request.
- Alumni Advisors remain offline until the connection is accepted. Once mutually established, the advisor-advisee pair then agree on goals and communication preferences, including whether they'll speak by phone or meet in person and how often they'll connect, whether it's once or multiple times throughout the year. In certain instances the Alumni advisor may agree to host an advisee in their home for residency/employment interviews.

Administrative Concerns

Finances

Effective May 15 (date may vary depending upon the year), your stipend will be reduced to 2% and subsequently terminated on July 1. This small stipend makes it possible for you to retain your health care coverage through June 30.

MSTP Taxes

What to know about taxes for MSTP students: We do not pay FICA taxes (medicare and social security). This also means our income does not count as contributing to social security. We do pay Federal, State and City taxes.

For 2020, assuming an income of 40k, the taxes will be roughly:

Federal Income	10.37%	$4,147
State Income	4.16%	$1,663
Local Income	2.89%	$1,157

The bare minimum forms are a W2, which comes by mail (for me at least) and the 1098-T, but only for calendar years in which you were enrolled in the MD portion. In TurboTax, you can edit the section where the 1098-T is uploaded to manually enter any qualified expenses (room + board, books, software, step stuff) which is especially important if you're using a tax privileged education account like a 529 for any expenses. 1098-T is found on empower.

For finances in general, I've heard good things about the book The White Coat Investor and investing early in a Roth IRA is a good idea."
https://www.amazon.com/White-Coat-Investor-Personal-Investing/dp/0991433106

T32 Training Grant

This is the competitive renewal for the Medical Scientist Training Program (MSTP) at the Icahn School of Medicine at Mount Sinai (ISMMS). The MD/PhD program at Mount Sinai began in 1971 and in 1977 was awarded its first funding from NIGMS as an MSTP. For 39 years, our mission has been to educate future physician-scientists in a rigorous, integrated joint degree program. The program features an open and collaborative environment that fosters innovation in fundamental and translational biomedical research. Our trainees become independent investigators and leaders who apply basic science discoveries to improve healthcare in all communities. A large percentage of the trainees (82%) continue to pursue biomedical research (academic, pharma, federal agencies). During the past five years, ISMMS has continued to increase in ranking as one of the nation's top translational biomedical research institutions, 15th in research funding among US medical schools. Based on an ambitious Strategic Plan, ISMMS established a series of institutes that bridge basic science and clinical departments, strengthening our translational goals. A major centerpiece is a new translational research building, the Hess Center for Science and Medicine, that increased our research capacity by 30% and supported the recruitment of >200 new faculty, of whom 77 have joined the MSTP training faculty. In parallel, the numbers of highly qualified applicants to our MSTP have steadily increased. Our students achieve at a high level, as measured by publications, receipt of independent fellowship support, and matching in top residency programs. ISMMS has an outstanding record in the recruitment and retention of a diverse body of medical and graduate students. The MSTP has implemented a new program-specific integrated curriculum and also features courses that facilitate smooth transitions from preclinical to PhD and then from PhD to clinical training. Our MSTP also provides significant flexibility in the path through the program and opportunities for tailoring to the needs of the student. The Dean has invested considerable resources to build and strengthen the MD/PhD Program. In this application, we request funding to continue the MSTP beyond year 40. The MD/PhD Program at ISMMS provides an outstanding foundation for its students to develop successful careers as physician-scientists.

Please reference the T32 Training Grant in all publications that arise from research that took place during your training.

Grant #: 1T32GM146636

Forms

Graduate School Forms:
https://icahn.mssm.edu/education/students/registrar/graduate-forms

Publications

Acknowledgement of MSTP support in publications
All publications arising from MSTP training should acknowledge the T32 training grant: **1T32GM146636**.

Housing

https://icahn.mssm.edu/education/students/housing

Benefits

Training length

Academic Difficulty

In order to provide support in a timely manner for students in academic difficulty, a system is in place that tracks a student's performance across all four years of medical school. Based on a student's performance, a student may remain in Satisfactory Academic Status, may be designated as Monitored Academic Status, or may be put in Serious Academic Status (see section on Academic Status below).

Academic Progress

Academic Progress refers to the satisfactory completion of academic requirements, institutional requirements, and licensing examinations within the required timeframe. Please review the Yearly Requirements and Graduation Requirements Sections to learn more about Yearly Requirements to Progress and Graduation Requirements.

All students in the MD program are expected to complete eight (8) semesters, but students can take no more than 12 semesters (one-and-a-half times the accredited program length) of enrolled credit to complete the degree. A student who requires enrollment in more than 12 semesters is considered to not be making Satisfactory Academic Progress (SAP). Students must meet SAP in order to remain eligible for federal student loans and financial aid for that time period. A scholarly year (or years) and decelerated years (doing one year of academic requirements over 2 calendar years), will count as periods of enrollment (i.e., a scholarly year would count as 2 semesters of enrollment, and one decelerated year over two academic years will count as 4 semesters of enrollment.). A leave of absence is a period of non-enrollment and does not contribute to the total number of semesters. Extended Scholarly Status is a period of non-enrollment and does not contribute to the total number of semesters. A Scholarly Year does count as an enrolled status and does contribute to the number of semesters.

Each student is assessed at the end of each year by Student Affairs and Enrollment Services to ensure that the student is meeting SAP.

Students must pass all Year 1 courses to move onto Year 2, and pass all Year 2 courses and pass USMLE Step 1 to advance to Year 3. Third-year clerkships must be taken and completed in Year 3 in order to advance to Year 4.

A student who fails a Year 1 course can remediate the course over the summer between Year 1 and 2. A student who fails a Year 2 course can remediate the course between the end of Year 2 and the beginning of Year 3. A student requires permission from Student Affairs and the course director to remediate a course at any other time. A student who fails three (3) or more courses in a year may be required to repeat the entire year, at the discretion of the Promotions Committee.

Please review the Yearly Requirements to Progress and Graduation Requirements Sections to learn more.

Academic Standing

Academic Progress is related to Academic Standing. A student will be considered in “Good Standing” if they meet the following requirements:

- Is not in Serious Academic Status (see Academic Status section below) or academic probation (see Academic section of Graduate School Handbook).
- Passes licensing examinations by graduation.
- Pays all bills on time including tuition, fees and, if applicable, housing.
- Meets school standards and deadlines for health assessments, immunization status, PPD testing, BLS training, and other requirements as determined by Student Affairs.

A student who fails to meet one or more of the components above will be placed on registration hold preventing a student from advancing to the next year of training, from receiving an official copy of their transcript or from receiving a letter of recommendation from the administration. Please see the Registrar section of this handbook for a more detailed explanation of holds.

Academic Status

At the Icahn School of Medicine, academic status falls into three categories: Satisfactory Academic Status, Monitored Academic Status, and Serious Academic Status.

If a student is not meeting Satisfactory Academic Progress they will be at risk of not being eligible for federal student aid.

The bottom five percent of students passing each course will be internally designated as having a *marginal pass*. The grade is recorded as a *pass* on the transcript and the designation of *marginal pass* is NOT reflected on the transcript or MSPE. A student’s Faculty Advisor will reach out to him or her in the event of a marginal grade on an examination or in a course to determine the significance of the grade and the need for support. A student with three or more marginal course passes will be considered in Monitored Academic Status.Satisfactory Academic Status means that a student has met all course/clerkship requirements or has successfully remediated any course/clerkship failures or other issues pertaining to academic performance as detailed in the following sections.

Satisfactory Academic Status

Satisfactory Academic Status means that a student has met all course/clerkship requirements or has successfully remediated any course/clerkship failures or other issues pertaining to academic performance as detailed in the following sections.

If a student is not meeting Satisfactory Academic Progress, they will be at risk of not being eligible for federal student aid.

The bottom five percent of students passing each course will be internally designated as having a marginal pass. The grade is recorded as a pass on the transcript and the designation of marginal pass is NOT reflected on the transcript or MSPE. A student's Faculty Advisor will reach out to him or her in the event of a marginal grade on an examination or in a course to determine the significance of the grade and the need for support. A student with three or more marginal course passes will be considered in Monitored Academic Status.

Monitored Academic Status

Students will be considered in Monitored Academic Status in the event of any one of the following:

- A course failure in Years 1 or 2.
- Three marginal performances in an academic year. Marginal is defined as falling in the bottom five percent of passing grades.
- A failure of USMLE Step 1 or Step 2 CK.
- Failure of two NBME subject examinations in Year 3 clerkships.

Students in Monitored Academic Status will be notified in writing of this determination and will be required to meet with their Faculty Advisor and the Director of Programs and Resources for Academic Excellence to help plan appropriate interventions, and if necessary meet with the financial aid office to understand the impact on any federal and intuitional aid. This status is an internal designation only and will not be noted on the transcript or the MSPE. Students who meet one of the criteria for Monitored Academic Status as specified above will be advised to prioritize studying for courses, but will not be required to relinquish school-related extracurricular activities. Students are permitted to take a Scholarly Year but must remediate any failures before starting the time away from the standard curriculum.

For Year 1 students in Monitored Academic Status, participation in summer research activities will depend on the nature and timing of any necessary remediation. Students should meet with their Faculty Advisor and the Medical Student Research Office to plan their projects.

Students in Monitored Academic Status can return to Satisfactory Academic Status if they complete one semester in Year 1 or 2, or six months of clerkships in Year 3 or Year 4 without any evidence of the above criteria, or, if they are in Monitored Academic Status for a failure on a USMLE exam, they pass it on the second attempt. A student who was once in Monitored Academic Status in Year 1 or 2 will return to that status if he or she has an additional marginal grade in Year 1 or 2.

Serious Academic Status

Students will be considered in Serious Academic Status in the event of any one of the following:

- Two course failures in an academic year during Year 1 or 2.
- A repeated failure of a Year 1 or 2 course.
- A failure on USMLE Step 1 or Step 2 CK on a second attempt.
- A Year 3 or 4 clerkship failure.
- Failure of three NBME subject examinations in Year 3 clerkships.
- Multiple occurrences of unprofessionalism or one serious occurrence as determined by the Office for Student Affairs

Students in Serious Academic Status will be required to appear before the Promotions Committee, will be subject to its decisions and will be notified in writing of this determination (see Promotions Committee section for more information). This status will not be noted on the transcript or the MSPE unless mandated by the Promotions Committee, but students risk being placed on financial aid probation if they are unable to demonstrate that they can maintain Satisfactory Academic Progress.

Remediation may include tailored and/or external remediation programs (at the student's expense), and/or repetition of the semester or year (tuition required).

Students in Serious Academic Status will not be permitted to participate in any Icahn School of Medicine extra-curricular activities. Year 1 students in Serious Academic Status will need to discuss the timing of remediation and summer research with their Faculty Advisor and the Medical Student Research Office. Students in Serious Academic Status are not considered to be in "Good Standing" (see above) and therefore will not be permitted to take a Scholarly Year.

While in Serious Academic Status, clerkship directors will be notified of their changed academic status, referred to as 'forward fed' (see below).

In addition, any student in Serious Academic Status who experiences an additional course or clerkship failure must be presented again to the Promotions Committee. Failure of remediation may be grounds for dismissal.

Students will remain in Serious Academic Status until they complete remediation and complete one semester in Year 1 or 2, or six (6) months of required clerkships in Year 3 or 4 without any course or clerkship failures or marginal course grades, or if they pass a USMLE exam on the third attempt. Students will be changed to Monitored Academic Status and from Monitored Academic Status to Satisfactory Academic Status as specified above.

Remediation

Students will be granted designated time for remediation for coursework or exams as required. Students must pass a remediation in order to be promoted to the next academic year.

Students who fail two courses in Year 1, two courses in Year 2, a remediation of a course, a clerkship, or any USMLE exam more than once will be required to appear before the Promotions Committee to determine timing and type of remediation. This plan may require a student to take an Administrative Leave of Absence (see section on Major Life Events and Personal Circumstances for more information).

Clearance to return from a remediation plan is required. Students will be required to complete any outstanding compliance needs in order to return.

Years 1 and 2 Policy

A student who fails a course must undergo a remediation or an equivalent course, as determined by the Course Director. The student must achieve a Pass in the remediation or equivalent course by August 1 in order to progress on to the next academic year. Remediation of courses typically occurs during the summer and must be planned in conjunction with the Course Director, Curricular Affairs and Student Affairs. Participating in research during the summer is dependent on the timing and extent of any remediation. A failure in a course is listed as “F” on the transcript. Once the student has successfully remediated the course, it is listed as “FP.”

Students who fail to pass the remediation for a failed course will be in Serious Academic Status and may be required to appear before the Promotions Committee.

Years 3 and 4 Policy

Students who fail a shelf exam are required to remediate the shelf exam during a specified make-up date in July, or by special arrangement during vacation or elective time. Students may not make up a shelf exam for a clerkship while they are taking another clerkship or during FlexTime on a clerkship. All failures must be remediated before the student can do a required Year 4 course or clerkship.

A failure on a NBME shelf exam is listed as a “C” on the transcript. Once the student has successfully remediated the shelf exam on the second attempt, the clerkship grade is listed as a “P” or “HP”. Students who fail a shelf exam are not eligible for a grade of Honors.

Repeat failure of the shelf will result in a failing grade in the clerkship.

Students who fail a clerkship are required to appear before the Promotions Committee, who will decide timing and type of remediation.

A failure in a clerkship is listed as “F” on the transcript. Once the student has successfully remediated the clerkship, it is listed as “FP.”

USMLE Step Exams Policy

Medical students who have failed to pass one of the USMLE Step exams are required to stop clerkship or course activities and dedicate a period of study and retake the exam before they will be able to continue to the next phase of their education. Students will work with Curricular Affairs and Student Affairs to determine the nature and timing of this remediation.

To receive a Doctor of Medicine from ISMMS, students must pass USMLE Step 1, USMLE Step 2 CK and Step 2 CS, each within a maximum of three attempts.

Forward Feeding

Information regarding a student’s marginal or failing academic performance and any documented issues related to professionalism may be forwarded from Student Affairs to a course or clerkship director at the discretion of the Senior Associate Dean of UME and Student Affairs and/or the Promotions Committee. Students in Serious Academic Status will be forward fed as long as they remain in that status. Forward-fed information will be of a general nature to alert the course or clerkship director to be aware of any issues that may arise with the student. Personal information will not be forwarded except when requested by the student. The student will be notified that this transfer of information is taking place. Information will flow from Student Affairs to course or clerkship directors, not between course directors or clerkship directors.

Forward feeding allows for monitoring of a student’s performance and to provide support and remediation as necessary. The student should receive regular feedback throughout the new course or clerkship.

The forwarding of any material to a subsequent course or clerkship directors will continue as long as monitoring is necessary for educational purposes. There will be no mention of any of the forwarded information in the student’s evaluation from that clerkship.

It will be documented in the student’s internal school file that information has been forwarded and to whom and specifically what information. This will not be reflected on the transcript nor will this be mentioned in the Medical Student Performance Evaluation (MSPE).

Assessment and Grading

The Course or Clerkship Director is responsible for clearly delineating and communicating at the outset of the learning experience the criteria utilized for assessment and evaluation of student performance.

Grading

Grading in Years 1 and 2 is on a Pass/Fail basis. A student who does not complete a course will receive an Incomplete. Types of situations where a student may not complete a course include illness or family emergencies. The Incomplete will change to a Pass or Fail once the student has completed the course. A student who receives a failing grade in a course will follow a remediation plan devised by the Course Director. Successful remediation of a failing grade results in a final grade of FP (Fail remediated to Pass).

Course Directors will identify the bottom five percent of passing students. Students in this score range will be designated internally as having received a “marginal pass” for tracking and monitoring purposes only. **Marginal grades are considered a full Pass on the transcript**. However, marginal grades are tracked by Student Affairs as part of an early warning system for students at risk of academic difficulty. As part of this system a student’s Faculty Advisor will reach out to him or her if he or she receives a marginal grade on an examination or in a course. A student who has three marginal passes in an academic year will be placed on Monitored Academic Status. See section on Academic Status for a full description.

A student who fails a course in Year 1 must remediate the course before starting Year 2. A student who fails a course in Year 2 must remediate the course before taking USMLE Step 1 and starting Year 3. The remediation process is determined by the Course Director.

The Icahn School of Medicine at Mount Sinai transcript will reflect a complete and accurate grading history for all courses in the School.

Flexibility through the program

Resources for Families

This information was compiled in August 2017 by Jenny Diaz and was originally posted on the WiMSTP website. Information about childcare options was kindly provided by the ISMMS Parents' group. Please contact WiMSTP with any updates or corrections.

https://webcommons.mssm.edu/womeninmstp/resources-2/resources-for-families/

Pre-conception/family planning

Where to go: Students with private insurance (such as Aetna student insurance) can be seen at Faculty Practice Associates (FPA) OB/Gyn. Students with Medicaid cannot be seen at FPA and have to go to hospital OB/Gyn or elsewhere.

Contraceptives:

- As of August 2017, oral contraceptive pills are fully covered by insurance with no copay under the Affordable Care Act
- As of August 2017, the Sinai employee pharmacy, *which does not bill insurance for students*, also provides oral contraceptive pills with no copay

Getting pregnant: You may want to see your OB/Gyn when you are first thinking about getting pregnant (even if you are still using contraception) to discuss any concerns you have, discuss nutritions/vitamins, and/or consider genetic testing

Pregnancy

Prenatal vitamins: The employee pharmacy, *which does not bill insurance for students*, charges $15/month for prenatal vitamins

- Your insurance may cover prenatal vitamins at a lower copay. In this case, get this prescription filled elsewhere
- Other medications are often CHEAPER through the employee pharmacy than through insurance
- You may wish to designate a health care proxy if you don't have one already.

Preparing for a new child

Parental leave policies

Medical School: see handbook
Under "Personal Leave of Absence"

- Year 1-2: You may use excused absences for up to 2 weeks. After that you will likely be on a LOA. LOA may be up to a year, but can be converted to a scholarly year at any time. Courses have prerequisites so this limits your scheduling options. See also "Flexibility of Year 1 and 2 ".
- Year 3-4: If you miss more than 2 days of a rotation, you may need to make it up. You may use up to 8 weeks of excused absences, your schedule permitting. You may need to reschedule clerkships. After 8 weeks, you may use LOA up to one year, but you may return to clerkships or convert to a scholarly year anytime before that.
- Note (*this is not explicitly stated in the policy*): between years 2-3, you may have the option to begin year 3 as late as October and complete your clerkships on a modified schedule. Speak to MedEd if you are interested in this.

- See also “Decelerated Year”.
- You may continue to purchase and be on Aetna student insurance during LOA

Graduate School: see handbook

Under “Parental Leave”

- Discuss your leave with your thesis advisor 4-5 months in advance
- Maternity leave (childbirth and adoption): 8 weeks of leave provided, which can be before/after delivery. You may extend this to 12 weeks with 4 weeks vacation time, followed by unpaid leave. Housing and insurance are NOT provided by the school during unpaid leave. You may add medical leave if needed. Academic milestones may be postponed for up to 12 weeks.
- Paternity leave (childbirth and adoption): 2 weeks provided.
- Coursework:
    - PhD or MD/PhD: Speak to your MTA director(s) about whether you should register for required coursework that you expect to miss
    - MD/PhD in MD1-2 or PhD phase: Speak to Talia Swartz about whether you should register for Medical Scientist Grand Rounds

Financial aid

- MD/PhD students typically do not receive financial aid, since tuition and stipend are already covered. However,MD/PhD students MAY BE ELIGIBLE for financial aid when the cost of attendance is greater than the package provided by the school due to a dependent.
- MD/PhD students in this situation may be eligible for federal student loans, but NOT for Mount Sinai institutional aid.
- Financial aid offers may be made or adjusted for the following items associated with a child:
    - Rent higher than the school’s typical estimate ($10,587/year as of August 2017)
    - Child’s health insurance (see below for options)
    - Regular childcare (see below for Sinai daycare)
    - Babysitting or irregular care is not included
    - Other costs (i.e. food, clothes) cannot be used to adjust financial aid

To apply for or adjust your financial aid:

1. Email Studentfinancialservices@mssm.edu
2. Fill out the current FAFSA (or for the school year in which you will have your child)
3. Submit the school’s financial aid application from Student Financial Services
4. Submit documentation of expenses, such as a rent statement, health insurance bill, or daycare invoice

Health

Healthcare for your child

- If your child will have private insurance, such as the Aetna student insurance, you may wish to choose a pediatrician ahead of time.
- If you are getting care at Mount Sinai FPA OB/Gyn, choose an FPA pediatrician before birth and have the pediatrician's name with you when you check in to deliver at Mount Sinai. The team caring for you will contact your pediatrician and ask them to see your baby while you are in the hospital
- If your child will be on public insurance such as Child Health Plus or Children's Medicaid, they cannot be seen at FPA and will need to go to Pediatrics Associates instead if they are getting care at Mount Sinai. These pediatricians cannot see your baby while you are in the hospital for delivery, so an FPA pediatrician will be assigned instead. Call 212-659-8559 after birth to schedule an appointment for your child with Pediatrics Associates.

Breastfeeding and pumping

- The Affordable Care Act requires that insurers cover breastfeeding support and supplies.
- Mount Sinai Lactation Services has multiple lactation pods around the medical center.
- Mount Sinai has two pumping rooms in Annenberg.
- Room 234 on the MC level of Annenberg in the same hallway as the Employee Pharmacy. It is available 24/7 but you need a code to enter. Contact Medical Education (212-241-6691) or WiMSTP for the code.
- There is a second lactation room on the main floor of the lobby to the left of the elevator bank designated for floors 1-10. This room is also available for use 24 hours a day, however you must reserve it by calling the Medical Education front desk at 212-241-6691, Monday to Friday, 8:30 am – 5:30 pm to receive the security code
- If you do not have your own pump, Medela pumps are provided in the rooms. You can find more information about how to use the pumps here.
- More information about nursing moms in the workplace can be found here.

Childcare

- You may wish to begin applying for childcare as soon as possible if you think you might need it, as waitlists can be quite long.
- Parents often apply for waitlist positions at Child Care Centers before giving birth, as some waitlists can officially span up to 2 years. However, persistent calls made to the Child Care Center(s) of interest on a monthly basis, show a strong level of interest and can often lead to shorter waits than initially advertised.
- For children newborn through 5 years old age, there are three main types of child care services available; (i) child care centers, (ii) family child care, and (iii) in-home care

- **Child Care Centers (day care center, child care center, early childhood program)**
  Child care centers usually group children by age and have a classroom-like environment. Although, center-based programs usually provide a full day of care, part-day or part-week programs might also be offered by some centers. Staff to child ratio regulations depend on the age of child. The average cost for full time care in Upper East Side ranges from $1,800- $3,000/month. The cost is usually more for younger children since they require more care and staff. Whereas some centers follow a school calendar (September to June), some are open year-round. Please be advised that child care centers in NYC area have long waitlists up to a yearlong. Below is a small listing of some child care centers in Upper East Side area.

  - **Mount Sinai Kids (Imagine Early Learning Center)**:Mount Sinai Kids is a private center on 97th St between Park Ave and Madison Ave serving children ages 2 months to 5 years of Mount Sinai employees as well as families from the surrounding communities. Mount Sinai partially subsidizes the cost of daycare for employees and students.
    - The waitlist is quite long, so apply as soon as possible
    - You must go on a tour and submit a $25 fee to get on the waitlist. Tours are available on Wednesdays
    - Only full-time care is available, not part-time
    - Siblings of current attendees are given priority
    - As of August 2017, Imagine tuition for children of Mount Sinai employees or students:
    - $2000/month for full tuition
    - $1845/month if your income is less than $150,000/year
    - 60 East 97th Street, New York, NY 10029
    - Phone: 212-410-2077
  - **Sunshine Learning Center**
    1595 Lexington Avenue, New York, NY 10029
    Phone: 212-444-2026
  - **Preschool of America**

Location1:
1190 Park Avenue, New York, NY 10028
Phone: 212-410-1100

Location2:
1501 Lexington Avenue, New York, NY 10128
Phone: 212-987-3700

- **Goddard School**

1725 York Ave, New York, NY 10128
Phone: 212-860-5306

- **Manhattan Schoolhouse**

1624 First Avenue, New York, NY 10028
Phone: 212-772-2066

- **The House of Little People**
  Location1:
  122 E 91st St, New York, NY 10128
  Phone: 212-369-2740
  Location2:
  129 East 90th St, New York, NY 10128
  Phone: 212-860-8116
- Bright Horizons
  245 E 92nd St, New York, NY 10128
  Phone: 212-369-9626
- **Lexington Children's Center**
  115 E 98th St, New York, NY 10029
  Phone: 212-423-9727

Family Child Care In family child care, a caregiver provides care for small groups of children in the caregiver's own home. In NYC, family child care services are licensed and regulated by the NYS Office of Children and Families. This type of care is given to children aged 8 weeks to 12 years. Staff to child ratio depends on age and provider's own children under age of 12 also taken into consideration. In some family child cares (group family child care), caregiver might have assistants. The average cost ranges from $250-$450/week. Below is a small listing of family child care services and links for online searching.

- Jelly Bean Group Family Day Care
  516 E 84th Street #1E, New York, NY 10028
  Phone: 917-409-0496
- **Jody's Shining Stars Inc.**
  1660 Madison Avenue, New York, NY 10029
  Phone: 212-369-8333
- **My Three Angels Group Daycare Corp.**
  219 East 97th Street, Apt. 14G, New York, NY 10029
  Phone: 212-722-8987
- You can search through following links based on school district or zip code:
  https://apps.netforge.ny.gov/dcfs/
  https://ocfs.ny.gov/main/childcare/ccfs_template.asp
  https://a816-healthpsi.nyc.gov/ChildCare/SearchAction2.do
  www.care.com

In-Home Care In-home care is provided by a caregiver (nanny or babysitter) in your home. Caregivers may either "live-in" in your home or "live out". Full-time nanny costs $500-$1,000/week on average, and part time nanny cost $15-$20/hour. When hiring a full-time caregiver you should also keep in mind the expenses of taxes and health insurance. You can find a nanny through an agency, by searching online, through your friends or colleagues, or looking for flyers in the neighborhood.

The following links are some sources to search a nanny or babysitter online:

- www.care.com
- www.urbansitter.com

Nanny sharing is another popular way for childcare in New York city. It is cheaper than having a full-time nanny and still has advantages of in-home care. You should first find a family who would be interested in nanny sharing. Below are some links related to nanny-sharing:

- http://www.parkslopeparents.com/Nanny-101/the-psp-step-by-step-guide-to-a-successfulnanny-share.html
- https://mommybites.com/newyork/find-a-nanny-share/
- http://shareournanny.blogspot.com
- http://mysharednanny.com

Care for older children:

NYC 3-K

Universal Pre-K

Afterschool Programs, Holiday camps Although child care centers are cheaper than having a nanny, they don't cover school holidays. Also, if your child is attending a school/preschool you may need an afterschool program. You may check following links to discover some options:

- https://www.chessnyc.com
- https://nykidsclub.com
- https://www.theartfarms.com
- https://www.asphaltgreen.org/ues
- https://www.92y.org/program-areas/kids-family.aspx
- https://www.chelseapiers.com/programs/
- https://www.projectplaydate.org
- https://chessat3.com/nyc-chess-club/
- https://nychesskids.com/camps/

Summer camps Some child care centers are open year-round but some follow school calendar and are closed during the summer months. Following are some available summer camp options in Upper East area:

- http://www.oasischildren.com/our-camps/central-park/
- https://www.asphaltgreen.org/ues
- https://steveandkatescamp.com/locations/manhattan-upper-east-side/
- https://www.92y.org/program-areas/kids-family.aspx
- http://www.nory.co/summer/
- https://nykidsclub.com
- https://www.theartfarms.com
- https://www.chelseapiers.com/programs/
- http://www.carousellanguages.com

- https://bonjourny.com (West side)

Backup care When your regular daycare is unavailable (if your sitter calls out sick or if the daycare is closed), you may need a back-up care!

- You may call a babysitter through following options:
  - https://www.hellositter.com
  - https://smartsitting.com
  - https://www.brooklynmannyandnanny.com
  - http://www.nypinchsitters.com
- There are also some drop-in options: https://www.brighthorizons.com/programs/back-up-care

Connect with other parents

- Join the ISMMS Parents' slack
- Following are some facebook groups to connect other parents in the area:
  - Mount Sinai Parent
  - Moms of the Upper East Side (MUES)
  - NYC Moms – Upper East Side
- NYC Dads Group holds events and connects dads across the city

- Mommy Poppins provides an extensive event listing, as well as information about camps, classes, destinations to go with kids

Vacation

Mistreatment

The Icahn School of Medicine at Mount Sinai and the Graduate School of Biomedical Sciences are dedicated to providing students, postdocs, residents, faculty, staff members, and patients with an environment of respect, dignity, inclusion, trust, support, and protection of civil and professional discourse, free of mistreatment, abuse, or coercion, and 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 for 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 in a particularly vulnerable position due to the formative and dependent nature of their status.
Mistreatment interferes with the learning environment, adversely impacts well-being and the trainee-mentor relationship, and has the potential to negatively impact patient care and research.
At the same time, exemplary behaviors that demonstrate integrity, empathy, compassion, respect, and advocacy help create a learning and working environment we can all be proud of.

Mistreatment policy. You can find more information here:
https://icahn.mssm.edu/education/students/handbook-policies/misconduct-policy
All student grievances should be filed through the feedback form or report any form of grievance (it includes Title IX), mistreatment, or misconduct:
https://icahn.mssm.edu/about/leadership/report-misconduct

Disability

https://icahn.mssm.edu/education/students/disability

The goal of Disability Services at the Icahn School of Medicine at Mount Sinai is to provide a physically and educationally accessible educational environment so that each student is viewed on the basis of ability, not disability.

Our Student Disability Services Office (SDS) staff work with all students in the School of Medicine and the Graduate School to facilitate equal access for students with disabilities by coordinating reasonable accommodations through a variety of support services (including access modification, learning related technology, and extended test times).

Individually designed accommodation plans and services are determined based on the documented needs of each student in conjunction with their program requirements and are created to match the specific disability-related need of each student with those program requirements in mind.

Submitting an Application for Accommodation and Services

Students seeking accommodations and services are required to complete three steps; complete the Application for Accommodations and Services, submit documentation of their disability and meet with staff from SDS. Since accommodations cannot be granted retroactively it is important that you plan ahead and include a minimum of two weeks to process accommodation requests.

Students with self-identified concerns or problems related to academic performance or learning may contact SDS to review their situation.

Christine Low, LCSW-R
Director, Disability Services
Tel: 212-241-4785
christine.low@mssm.edu

Leave of absence

Withdrawal from the Program

Intellectual property

Travel funds

According to the Graduate School of Biomedical Sciences, each PhD and MD/PhD student is eligible for Travel Award consideration once per academic year. Awards range from $200 to a maximum of $600. You may access the Graduate School Travel Award form here. The Graduate School Travel Award form will require the approval of your PI and others, so you'll want to initiate the form well in advance of your travel and conference dates.

In addition to the Grad School travel award form, you **must** submit a travel request *at least two weeks* prior to departure on Sinai Central. You will find the travel request form under Finance, then click Transactions, click New, and then click Travel Request. Your department/lab administrator should be able to assist you with the travel request. Upon approval of the request, you will receive a notification with further instructions. You may request a cash advance for a conference registration, but it must be done with your travel request in Sinai Central. Please note, cash advances are rare and determined by the Finance Department. With that, the student should be prepared to pay and submit for reimbursement.

Those seeking financial support for conferences and meetings, please refer to the Graduate School of Biomedical Sciences Handbook and Student Council. You can find more information on the Grad School Travel Award in the Student Handbook and via the Travel Award Application. And you can learn more about conference funding through the Student Council here. The MSTP has a small budget for physician-scientist conferences, such as APSA or Keystone. Please note: Mount Sinai requires those who plan to submit for reimbursement for travel expenses to initial a travel request. This must be done on Sinai Central under Finance/ Transactions/ New/ Travel Request.

Resources

Anti-racism Resources

Resources for Accountability and Actions for Black Lives
Anti-Racism Resources

JEDI initiative

The MSTP JEDI initiative encourages dialogue and fosters an environment seeking justice, equity, diversity, and inclusion. MSTP JEDI was co-developed by students and MSTP leadership to create a culture and climate that supports students from all backgrounds and all perspectives. Our goal is to identify drivers of inequity in the ways that individuals experience their education and training. We seek to partner to break down barriers that limit the ability of each trainee to thrive. Events take place each month and involve a series of interactive sessions:

- **JEDI Chats for Change** - modeled on the original version of Chats for Change https://changenow.icahn.mssm.edu/chatsforchange/, part of the Icahn School of Medicine at Mount Sinai's Racism and Bias Initiative – to engage in thoughtful dialogue on issues of race and bias in health care. Topics have included scientific racism, This is all of our work, and how racism impacts biomedicine.
- **JEDI Fireside chats** - interactive sessions based on subjects selected by students in which students from different phases of the program can speak about topics related to various aspects of their identity. Topics have included: intersectionality, anti-Asian racism, and being a BIPOC student in the MSTP
- **JEDI journal club** - student led program-wide journal club to discuss a topic in how issues of race and bias impact individuals in training and practice as physician scientists.
- **21-day equity challenge** - it is said that it takes about three weeks to form a new habit, so Dr. Eddie Moore developed the 21-Day Racial Equity Challenge to help us cultivate self-awareness and intentionality to effect social change. At ISMMS MSTP, we spend 21 days in January learning, reflecting, and challenging ourselves. Learn privately or share your insights on social media (we'll be tweeting daily from @SinaiMSTP using #ISMMSMSTP21DayEquity. Feel free to follow, retweet, or use your own. Here's a template.

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Wellness and Mental Health Resources

24/7 Resources

Crisis Textline

https://www.crisistextline.org/ Need support? Text HOME to 741741 for free, 24/7 crisis counseling. We're here for you.

24/7 Mental Health Support and Crisis Hotline

Call at any time: **212-241-2400 (or 1-866-339-7725)**

Psychiatrist on-call

For emergency mental health services, contact the psychiatrist on-call through the page operator at 212-241-5581, call the Psychiatric Emergency Service at 212-241-5637, or go to the Emergency Room.

Office of Well-Being and Resilience

Director: Jonathan Ripp, MD, MPH, Senior Associate Dean for Well-Being and Resilience and Chief Wellness Officer at the ISMMS
Website links to many resources

Mount Sinai Center for Stress, Resilience, and Personal Growth

Mobile App: Wellness Hub The Center for Stress, Resilience and Personal Growth is offering a free and confidential app to all Mount Sinai Health System (MSHS) faculty, staff, students, and trainees. In this app, you can complete surveys about your overall well-being, receive feedback and recommendations instantly, connect to resources, and build your personal resilience. New content will be pushed to the app regularly. The app is now available for iOS. To obtain a download link, please email the Center at MS-CSRPG@mountsinai.org.

STMH (Student Trainee Mental Health)

All students (medical and graduate) and trainees (residents, clinical fellows, and postdoctoral fellows) have access to confidential mental health services through the Student and Trainee Mental Health Program. The program offers a wide range of mental health services including initial consultation, psychotherapy, counseling, medication management, and referrals. Students and trainees most commonly seek treatment for adjustment difficulties, burnout, depression, anxiety, and attentional symptoms.

STMH services are free for all students and trainees, regardless of their insurance plan. There are no out-of-pocket costs such as co-pays, deductibles, and co-insurance. STMH will bill your

insurance directly and an explanation of benefits might be generated from the insurance carrier—but this is not a bill. If you receive a bill from Mount Sinai for our program's services, please bring it to the attention of STMH administrative staff. If you are seeking long-term services, or would prefer to see a provider outside Mount Sinai, STMH can perform an initial assessment, then provide suitable referrals. Any treatment outside the Student and Trainee Mental Health Program will require payment according to your insurance plan or a fee negotiated with the outside provider.

You may request an initial appointment by calling **212-659-8805**, or by sending an email to **STMH@mssm.edu**. Phone calls to the Student and Trainee Mental Health Team are always confidential. Students can also set up an initial appointment through the online scheduling system in MARC.

The STMH intake appointment can take a long time to schedule (up to 1-3 months). Once you have a regular provider with STMH, you can arrange to have more regular appointments.

If you need immediate help or help outside of regular STMH hours, there are 24/7 resources listed above, including a 24/7 Support and Crisis Hotline number 212-241-2400 (or 1-866-339-7725) and a Crisis Textline: Text HOME to 741741 for free.

THAW (Trainee Health and Wellness Committee)

Trainee Health and Wellness is a team of academic researchers founded in 2017 to address the wellness needs of the trainees (graduate students and postdocs) under the umbrella of the Graduate School at the Icahn School of Medicine. THAW members are passionate about improving trainee wellbeing throughout their academic training.

IcahnBeWell (IBW)

IBW is a program dedicated to improving the well-being of every student at the Icahn School of Medicine at Mount Sinai. They host events and share resources to support all aspects of wellness. To learn more about what IBW does, check out their student organization website here.
Largely (entirely?) a medical student-focused and -driven group.