Medical Scientist Training Program

Student Handbook

2022-2023
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Part I: Program Information

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1800 Sherman Avenue, Suite 4-500
Evanston, Illinois 60208
847-467-6165
equity@northwestern.edu

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Part II: Program Requirements

During each phase of training, the MSTP has defined clear and tangible academic milestones and requirements that every MSTP student must meet. These are outlined in detail in the subsequent pages of this handbook.

1. MSTP Enrollment Agreement

Upon matriculating into the program, all students must sign an enrollment agreement. In addition to the phase-specific expectations, MSTP students must meet the conditions of this agreement during all stages of training. Students will remain in good standing in the program if they follow these guidelines, and if any of the conditions specified below are not met, financial support from the program may be withdrawn.

- Register as a full-time student each term as required.
- Maintain good academic standing with satisfactory academic progress toward the M.D. and Ph.D. degrees, including participation in program courses and activities such as the MSTP College Curriculum; MSTP Grand Rounds; MSTP Continuing Clinical Education Programs; and the annual MSTP Student-Faculty.
- Keep the academic record free of incomplete grades.
- Inform the MSTP Director of other sources of support not provided by the program.
- Refrain from remunerative work unless approved in writing by the MSTP Director.
- Adhere to all regulations and policies as stipulated by The Graduate School and the Feinberg School of Medicine.
- Complete and submit the MSTP Individual Development Plan on an annual basis.

2. Laboratory Rotations

Students conduct one research rotation during the summer before the M1 year and two rotations during the summer after the M1 year. Each rotation should be at least four weeks in length. Students decide on their thesis labs after having completed an MSTP minimum requirement of three rotations (or fewer with special permission from the MSTP director). An additional fourth rotation can be completed with the permission of program leadership (see Section IV, 1.10 and 2.3).

3. Advising and Progress Meetings with Program Leadership

All MSTP directors hold an open-door advising policy and encourage students to contact them for all types of support. In addition to these informal meetings, the program also schedules a series of formal meetings between students and leadership at various stages throughout the training. These meetings serve as both These meetings are required for all students and scheduling will be initiated by the MSTP office (see Section III).

4. Required MSTP Courses and Activities

All students except those in the Clinical Phase of training (M3s and M4s) are required to register in
The Graduate School every Fall, Winter, and Spring Quarters for MSTP 401: MSTP College Curriculum and MSTP 402: MSTP Grand Rounds (see Section IV, 2.2). All students are also required to participate in the annual Student-Faculty Retreat (see Section VI, 2.1). Students must fully participate in these activities, and those who do not meet participation requirements will be subject to a reduction in the amount of their M4 Residency Award.

5. Clinical Continuing Education Programs
The MSTP requires all students to participate in clinical activities during the Research Phase of training. Clinical engagement during this period is designed to help them maintain the skills they gained during the Preclinical Phase of training, improve their ability to communicate with patients, and facilitate the transition from the PhD back to the clinic. To meet this requirement, students are required to attend eight Education-Centered Medical Home sessions each year for the duration of their graduate training. Students seeking additional clinical engagement, and especially the opportunity to improve their inpatient skills, can also elect to participate in the PRISMS Inpatient Program (Program to Retain Inpatient Skills for MSTP Students) in addition to their ECMH (see Section IV, 3.7.5).

6. Fellowship Application Requirement
All MSTP students are required to submit an application for an NRSA during the first or second year of graduate school. To facilitate this requirement, students in the M2 year are required to participate in a grant-writing course led by MSTP Associate Director Melissa Brown, PhD. At the end of the course, students have a complete draft of a proposal that they can further refine and submit for funding with their thesis advisers during the G1 year. Students receive one monetary bonus from the MSTP for submitting an NRSA application and another for a successful application (see Section IV, 3.7.3).

7. Presentation and Publication Requirements
The MSTP requires students to publish at least one peer-reviewed first-author research article (not a review) prior to returning to the Clinical Phase of training. MSTP students are also expected to present their research findings at least annually in a formal setting, such as a departmental seminar series, scientific conference, or an MSTP Research in Progress Talk (see Section IV, 3.7.4).

8. Responsible Conduct of Research (RCR) Training
During the first year of their graduate training, all MSTP students are required to enroll and complete one of the RCR courses offered by their graduate program of choice (see Section IV, 3.2). The NIH also requires that all trainees of programs supported by a T32 training grant must receive RCR training no longer than every four years. To comply with this rule, MSTP students are required to take an RCR refresher course before returning to clerkships. Students will receive a reminder of this requirement prior to their return.

9. Return to Clinic Meetings and Rewarming Activities
Prior to returning to clinic for the M3 year, MSTP students are required to attend the Return to Clerkships meeting with the Office of Medical Education; complete all required rewarming activities, including Introduction to the Profession 2; and satisfy all PhD requirements before their return (see Section IV, 3.10).

10. Graduate Program Requirements
During the Research Phase of training, MSTP students are expected to fulfill all the requirements of a graduate student as outlined by their PhD program with respect to courses, department seminars and workshops, laboratory activities, and other departmental obligations. This includes, but is not limited to: participation in journal clubs, retreats and seminars, both departmental and campus-wide (e.g., Lectures in the Life Sciences on the Chicago campus, major scientific symposia, etc.); responsible conduct of
research training; and various other professional development activities. Each program may differ in their requirements and may have specific requirements for MSTP students (see Section IV, 3.1).
Part III: Student Advising and Support

MSTP students can access a number of advising resources to support them as they move through the various phases of the training program. The Northwestern MSTP expects each student to take the initiative to utilize the full range advising and personal development resources available to them during their time in the program. This section outlines the MSTP advising system that is available in addition to those provided by the Feinberg School of Medicine (FSM), The Graduate School (TGS), and individual graduate programs.

1. Program Leadership

The Director and Associate Directors each play a large role in guiding students throughout every stage of the program, and each director provides a unique perspective and skill set that enhances the training environment and the advising students receive. They work as a team to ensure the success of MSTP students by meeting regularly with them throughout the year in both formal, structured advising meetings as well as in less-structured individual and group interactions. The program has several formal advising initiatives in place to track student progress and proactively address any issues that may arise during training. These are described below, and students are required to participate in these activities throughout their time in the program.

1.1. MSTP Advising Meetings with Directors

All students are required to attend regular advising meetings with MSTP directors to proactively monitor progress and address any issues with training. These meetings, all scheduled and monitored by program staff, are listed in the chart on the following page. As mentors are included in many of these conversations, these meetings also provide an opportunity for MSTP leadership to ensure that mentor-mentee expectations regarding training are aligned and that mentors understand the particular needs of their physician-scientist trainees.

1.2. MSTP Individual Development Plan (IDP)

MSTP students are required to complete an annual IDP and submit it to the MSTP office each year. The IDP addresses specific challenges students faced during the year, satisfaction with their progress, plans to address their strengths, and opportunities for improvement during the coming year. The IDP also asks students to reflect on the mentoring team they have established and to identify new mentoring relationships they can build. Students are allowed to review the IDP with a mentor of their choice.

1.3. MSTP Director Rounds

Time to degree is a concern for all MD-PhD programs, with the PhD phase of training often introducing the most variability in this measure. The MSTP runs "MSTP Director Rounds," a program based on the idea that personal interaction with students is beneficial to program/student relationships and will have a positive effect on reducing time to degree. The program entails a meeting with the MSTP Associate Director twice a year. During the meeting, the Associate Director gathers information about the student’s general well-being and perception of their progress, including milestone progress and timeline for committee meetings, publications, and defense. Following the meeting, the Associate Director meets with the advisor to review the student’s plan and the advisor’s perception of progress. If a significant conflict between the student and advisor is
discovered, a meeting is held with the student, advisor, and MSTP leadership to reach an agreement on a path forward.

List of Required MSTP Advising Meetings with Program Directors

<table>
<thead>
<tr>
<th>When</th>
<th>What</th>
<th>With Whom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring/Summer before M1</td>
<td>Selecting 1st Summer Rotation</td>
<td>MSTP directors</td>
</tr>
<tr>
<td>Fall of M1 year</td>
<td>M1 cohort orientation/welcome</td>
<td>MSTP directors</td>
</tr>
<tr>
<td>Winter/Spring of M1</td>
<td>Selecting 2nd and 3rd summer rotations</td>
<td>MSTP directors</td>
</tr>
<tr>
<td>Fall and Winter of M2</td>
<td>Thesis advisor selection meetings</td>
<td>MSTP directors</td>
</tr>
<tr>
<td>Spring of M2</td>
<td>MSTP Transition to Grad Phase Meeting</td>
<td>MSTP directors</td>
</tr>
<tr>
<td>Summer of M2/Start of G1</td>
<td>G1 Mentor Meetings</td>
<td>MSTP directors and thesis advisor</td>
</tr>
<tr>
<td>Fall of G3+ years</td>
<td>Return to Clerkship Meetings</td>
<td>MSTP directors and thesis advisor</td>
</tr>
<tr>
<td>January of RTC year</td>
<td>Return to Clerkship orientation and</td>
<td>FSM deans and AWOME staff, FSM registrar, MSTP</td>
</tr>
<tr>
<td></td>
<td>scheduling meetings</td>
<td>directors</td>
</tr>
<tr>
<td>January of RTC year</td>
<td>MSTP-specific clerkship informational</td>
<td>FSM deans and AWOME staff, FSM registrar, MSTP</td>
</tr>
<tr>
<td></td>
<td>sessions</td>
<td>directors</td>
</tr>
<tr>
<td>February of RTC year</td>
<td>Individual Meetings with FSM Registrar</td>
<td>FSM Registrar’s Office</td>
</tr>
<tr>
<td>March/April of RTC year</td>
<td>MSTP clinical rewarming program meetings</td>
<td>Dr. Caprio, Office of Medical Education, and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MSTP directors</td>
</tr>
</tbody>
</table>

2. **MSTP College Mentors**
   Each MSTP student is assigned to one of five MSTP Colleges. Each college is led by faculty mentors, the majority of whom are physician scientists. These mentors meet regularly with the members of their college to discuss research projects, recent high-impact papers, grant writing workshops, or life as a physician-scientist. They are also available to assist with rotation and thesis lab selections, review progress, and discuss student IDPs.

3. **Medical School College Mentors**
   All medical students are placed in a college system at Northwestern that is headed by a clinician who serves as the college mentor for ~40 students. College Mentors meet with students on a regular basis to review their progress and portfolios of clinical competencies as well as to offer support to students throughout their medical school experience. Mentors meet monthly with the office of medical education deans to discuss student progress during the first two years of medical school. The MSTP Director and/or Associate Director attend these meetings to stay informed about the progress of students in the Preclinical Phase and to advocate on their behalf.

4. **Thesis Advisor and Committee Members**
   Arguably the most important advisor an MSTP student will have is the thesis advisor, with whom
students work closely during the Research Phase of training. The thesis advisor has a tremendous impact on a student’s future, as productivity during the Research Phase is a major determinant of long-term commitment to and success in research.

Each student has a Thesis Committee of four or more faculty members who also advise the student during the Research Phase of training and assure that the student is reaching “normal milestones.” MSTP students are required to meet with their committees every six months. The biannual reports of the thesis committee are submitted to the MSTP office to monitor progress during the Research Phase of training. Associate Director Dr. Brown advises on the thesis committee selection process. Students are required to have at least one physician scientist on their committee or another faculty member who can advocate for the dual-degree pathway and can communicate the student’s unique needs and training time considerations.

5. MSTP Peer Mentors
The MSTP recognizes the critically important role peer (e.g., student to student) mentoring plays during graduate training and encourages students to build relationships with fellow students across all phases of the program. The MSTP does this through formal programs such as the MSTP Big Sib-Little Sib Program, which helps incoming students transition into the program by pairing them with a student mentor in the G1 cohort who shares similar research interests. Other programs, such as the MSTP Lunch Buddies program that provides money for groups of students in different cohorts to share a meal together, also help promote peer-to-peer interactions and mentoring relationships. The annual MSTP Passing of the Wisdom, during which graduating M4s share the lessons they have learned during their training with students in the program, is another such opportunity for students to learn from their colleagues.

The following resources are University-wide sources of support that the program encourages students to utilize.

6. Student Counseling Service
The Northwestern Division of Student Affairs Counseling and Psychological Services (CAPS) program offers services designed to assist students mainly through individual and small group interventions, in overcoming obstacles and in achieving their academic and other personal developmental goals. The staff also emphasizes with students the importance of taking time to take care of their emotional and psychological health and to find balance in their lives. Housed within the Division of Student Affairs and with offices on both the Evanston and Chicago campuses, CAPS serves as the primary mental health service in aiding students in overcoming their developmental, emotional, and/or psychological hurdles. More information can be found on their website here.

7. Feinberg School of Medicine Office of Diversity and Inclusion
The Feinberg ODI works with Feinberg students, residents, staff, and faculty to further their mission to achieve a campus environment of belonging and inclusion for all. Through mentoring programs, community partnership, recruitment initiatives and inter-campus cooperation and collaboration, they strive to help facilitate success in every domain. The ODI office suite in Morton also includes a lounge space open to students. More information can be found here.

8. The Graduate School
The Graduate School provides a number of useful resources that MSTP students can access once they are in the Research Phase of the program. For example, a part of the TGS student activity fee goes towards providing an attorney to assist students with legal issues such as landlord, traffic, credit,
or debt problems and to support the community building grant activities. TGS also provides extensive support around professional development, student well-being, and conflict resolution. More information can be found on their website here.

9. **The Graduate School Office of Diversity and Inclusion**
   The Graduate School’s Office of Diversity and Inclusion (ODI) focuses on the recruitment and support of underrepresented populations to foster an inclusive environment and facilitate community engagement. They organize a number of professional development and social activities to support students as they transition to the PhD and throughout their graduate training. More information can be found here.
# Part IV: Program Overview

MSTP students at Northwestern earn their MD from the Feinberg School of Medicine (FSM) and the PhD degree from The Graduate School (TGS) in one of four participating Northwestern schools: the Feinberg School of Medicine, Weinberg College of Arts and Sciences, McCormick School of Engineering and Applied Sciences, and the School of Communication. MSTP students earn these degrees by proceeding through three interrelated phases of study, as illustrated below. Students begin their training with the Preclinical Phase of the program, which includes the FSM M1 and M2 curriculum and the USMLE Step 1 exam. They then proceed to the Research Phase of the program, during which students fulfill the degree requirements of whichever graduate program they choose to earn the PhD degree. Finally, after receiving the PhD, students transition to the Clinical Phase of the program, culminating in the MD degree and Step 2 of the USMLE.

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**MSTP Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training

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**TGS Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training

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**MSTP Grand Rounds**

- MSTP Colleges Curriculum
- MSTP-Specific Events (Student-Faculty Retreat, Coffee Talks, Student Presentations, Seminar Series)
- MSTP Advising Meetings and Annual IDP Reviews

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**TGS Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training

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**FSM Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training

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**TGS Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training

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**FSM Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training

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**TGS Advising Meetings and Annual IDP Reviews**

- Responsible Conduct of Research and Rigor and Reproducibility Training
1. Pre-M1/Program Onboarding Information

Students who accept an offer of admission will receive an email containing the following information from the MSTP Program Coordinator in May to initiate the onboarding process.

1.1. MSTP Financial Aid Package

The MSTP financial aid package includes an annual stipend ($35,196 in 2022-2023) that will increase annually consistent with increments within the University Fellowship system; full tuition for the duration of training; a one-time moving allowance of $1000; funds to help students participate in conferences and other professional development activities; and an M4 Residency Award to help offset the cost of travel, residency applications, and exams and training materials during the M3 and M4 years. The MSTP covers student health insurance, disability insurance, as well as health insurance for any student’s children. The MSTP does not cover health insurance for spouses. The MSTP will also cover the cost of dental insurance during the Preclinical and Clinical Phases of the program, and during the Research Phase for students in graduate programs that do not already subsidize this cost for their students. Students should enroll in the dental insurance plan and then submit their receipts to the MSTP Program Coordinator to be reimbursed (see also Section VI).

1.2. Northwestern Email Account and Net ID

Matriculating students receive a Net ID, which is a student’s electronic identity at Northwestern. The most common format of a NetID is a combination of three letters (often related to the student’s name) and three numbers. Net ID Assignments are sent via email. The email provides instructions for the NU Validate process and setting up a NU email account. Students must complete the NU Validate process before they will be assigned an NU email account. Once the email account is set-up, students are granted access to CAESAR (http://www.northwestern.edu/caesar/), the online student information portal.

1.3. Northwestern WildCARD

All students, faculty, and staff are issued a campus WildCARD, the official Northwestern photo identification card. After you arrive and have registered as a full-time student, you will be able to get your Wildcard by visiting the WildCARD offices in Abbott Hall on the Chicago campus or in the Norris University Center on the Evanston campus. Students are able to submit WildCARD photos online to expedite this process. Your WildCARD can be used to gain access to University buildings, shuttles, and events; to purchase food through vending machines and much more. U.S. Bank checking account holders can also use their cards as ATM/debit cards.

1.4. Transcripts

Students must submit one individually sealed final official transcript showing the receipt of the bachelor’s degree and any other final transcripts showing additional coursework and/or programs completed. Transcripts should be sent to the Office of MD Admissions, either electronically to med-admissions@northwestern.edu (preferred) or via regular mail to:

Northwestern University Feinberg School of Medicine
Office of MD Admissions
310 E. Superior St.
Morton 1-606
Chicago, IL 60611

1.5. Payroll

The MSTP Program Coordinator will prepare payroll paperwork to ensure that students begin to receive a stipend effective the first day they begin their pre-M1 research rotation. Students who
receive permission from the program director to forgo a pre-M1 research rotation will start to receive a stipend effective the first date of the M1 curriculum. All MSTP student stipends are paid on a monthly basis and disbursed on the last business day of each month.

To complete the Payroll registration process, incoming students will need to complete the documents listed below and return them to MSTP Program Coordinator Joyce Tamanio (j-tamanio@northwestern.edu) for submission. These forms can be accessed through the links below or in the pre-matriculation checklist in the Applicant Portal. Students should complete these and all other required forms as soon as possible to ensure there is no delay in receiving their first stipend check.

- **Personal Data Form** (should be completed and returned as soon as students know their start date)
- **Direct Deposit Application**
- **Federal W4 tax form**
- **Illinois W4 tax form**

1.6. **E-Verify**

E-Verify is an Internet-based system operated by the Department of Homeland Security (DHS), U.S. Citizenship and Immigration Services (USCIS) that allows employers to verify the employment eligibility of their employees, regardless of citizenship. Northwestern is enrolled in the E-Verify program to comply with federal regulation so it is extremely important that all students in the MSTP follow the instructions below to complete both Sections 1 and 2 of the E-Verify process in a timely manner.

- **Section #1** must be completed on or before the day students begin their first pre-M1 rotation. Students begin by logging onto the website below and creating a username and password. [https://northwestern.i9servicecenter.com/Login.aspx](https://northwestern.i9servicecenter.com/Login.aspx)
  - After a student has created a Username & Password they should fill in:
    - Start Date: Enter the date of the first day in lab.
    - School/Area: Feinberg School of Medicine
    - Depart/Ctr: 4581 MED-Finance/Budget/Payroll
    - Click Start I-9

- **Section #2** must be completed in person on or before the third day of the first research rotation in the Payroll Office located on the 8th floor of Abbott Hall on the downtown Chicago campus. This requires students to bring original ID(s) to verify their identity and employment eligibility. There is a complete list of acceptable documents at the end of Section #1, but typically a US Passport is used. If that is not available, a driver’s license AND social security card (both are required) are also commonly used.

1.7. **Registration for Courses**

New students are required to register for MSTP 590: Research for three units of credit through The Graduate School (TGS) during the Summer Quarter before M1 year to maintain proper registration. New students can register for TGS courses via the CAESAR system beginning the first day of Summer Quarter. This registration must be completed by the end of the first week of the quarter regardless of when they will begin their research rotation. Students should contact MSTP Program Coordinator Joyce Tamanio (j-tamanio@northwestern.edu) with any issues related to course registration.
1.8. Northwestern University Student Health Insurance Plan

The cost of premiums to enroll in the Northwestern University Student Health Insurance Plan (NU-SHIP) is covered by the MSTP while students are in the Preclinical and Clinical Phases of the program and by The Graduate School while students are in the Research Phase. The MSTP also pays for disability insurance coverage throughout the program. The MSTP will also reimburse students for the cost of the dental insurance premium during the Preclinical and Clinical Phases of the program.

Proof of health insurance is required for all Northwestern students at the time of matriculation and annually thereafter. Incoming students are required to log into CAESAR to either enroll in NU-SHIP for the summer before M1 or decline coverage. Failure to complete the Coverage Selection Form will result in automatic enrollment in NU-SHIP.

Students can decline enrollment in NU-SHIP if they can provide proof of their current enrollment in another plan, such as that of a parent or a spouse. Complete instructions on how to do so and other insurance FAQs can be found here.

This initial enrollment is effective through August 31st. Students will be required to go through the annual open enrollment process to elect (or deny) coverage starting September 1st for the M1 year. As students will have matriculated into medical school by this point, they will be considered dual-degree students and cannot enroll in NU-SHIP via CAESAR. Instead, they must submit their completed Coverage Selection Form directly to student.insurance@northwestern.edu or via fax to 847-491-4268. The MSTP Program Coordinator will share this form with students during the annual open enrollment period. For more information on this process and NU-SHIP coverage, see Section IV, 1.6.

1.9. U-Pass and Student Activity Fees

A CTA University Pass (U-Pass) is a discounted fare card that replaces cash and other transit cards for all CTA fares and does not require a transfer or surcharge for unlimited rides. MSTP students will receive a U-Pass for each quarter they are enrolled in graduate school and/or every academic year they are enrolled in medical school.

During any quarters in which MSTP students are enrolled full-time in The Graduate School, it is their responsibility to opt in or out of the TGS U-Pass Program as applicable and pay the TGS Activity Fee of $125 per quarter. The majority of this fee covers the cost of the U-Pass. All medical students are automatically enrolled in the CTA U-Pass program. Medical students pay a yearly activity fee of $467 to cover this cost. Students will first receive their U-Pass during medical school orientation activities. Linda Daniels from the Office of Medical Education will contact students with more detailed information on where they can collect their U-Passes during this time.

1.10. Pre-M1 Summer Laboratory Rotations

The first pre-M1 research rotation usually begins in late June or early July and must be completed by the time the M1 curriculum begins the first week of August. Research mentor matching for this rotation begins with the interview and Second Look process, during which students meet with 8-10 faculty with similar research interests. Students typically choose one of these faculty members for their first research rotation, but they are also welcome to reach out to any other faculty members on campus whose research interests align with their own.

Students should contact Associate Director Lindsey Martin with any questions about arranging a research rotation or selecting a rotation mentor. Students must also notify Dr. Martin of their rotation
choice as soon as they come to an agreement with the faculty member.

After each rotation, students complete and submit a Rotation Report Abstract to the MSTP Associate Director. The student and advisor also complete a Rotation Evaluation that comments on overall performance, work ethic, experience, and lab environment.

1.11. Taxes
Due to the possible financial implications, the MSTP Office does not provide tax advice to students. Students should refer to the following information from The Graduate School for more information: https://www.tgs.northwestern.edu/funding/taxes/.

1.12. MSTP Student-Faculty Retreat
Incoming students are strongly encouraged, but not required, to attend the MSTP Student-Faculty Retreat, which is held annually in mid to late July in the Chicago area. The retreat provides an excellent opportunity for new students to meet their colleagues and learn more about the program before the start of their M1 year. Students who cannot attend should contact MSTP Associate Director Lindsey Martin to notify the program of their absence.
2. Preclinical Phase: Years 1 and 2 (M1 and M2)

During the Preclinical Phase of the program, students develop the biomedical science foundation for medicine by completing the first two years of the Feinberg School of Medicine (FSM) curriculum. This consists of a three-phase integrated course of study that emphasizes the real-world applications of medicine and is designed to help students develop into evidence-based clinicians who provide safe and quality care as part of an interprofessional team.

It is important to develop the study habits that allow mastery of the material and solid performance on the exams, while still allowing plenty of free time for personal development. MSTP students are expected to perform well in medical school courses. Any failing grades may be addressed by the program directors who will work with students to determine the cause and provide support to ensure future success.

During the M2 year, students also undertake the important process of identifying an adviser, laboratory, and graduate program for their research training. Students are expected to have come to a decision and notify the MSTP no later than Winter Quarter of the M2 year. All adviser, laboratory, and graduate program decisions must be approved by the MSTP Director.

2.1 Description of the Feinberg School of Medicine Curriculum

An overview of the FSM curriculum can be found here. The curriculum is divided into Phase 1, which consists of Phase 1a (M1) and Phase 1b (M2). Phases 2 (M3) and 3 (M4) are each one year in length, for a total of four years of training. FSM recognizes the special needs of MSTP students to graduate in a timely manner and have adjusted the requirements for the M3 and M4 years to expedite graduation (see Section IV, 4.1).

2.2 Required MSTP Courses during the Preclinical Phase

In addition to their medical school coursework, M1 and M2 students are required to register for and participate fully in MSTP 401: College Curriculum and MSTP 402: Grand Rounds, as described below. Students must register in The Graduate School for these courses every Fall, Winter, and Spring Quarters. They are also expected to participate in all other MSTP-specific activities that do not conflict with the medical school curriculum.

2.2.1 MSTP 401: MSTP College Curriculum

This course divides the entire MSTP student body into five colleges, each comprised of roughly 28 students across all stages of training. Each college is assigned four faculty mentors, the majority of whom are physician-scientists, and 2-3 PSTP fellow mentors. These mentors advise students in the college, help plan college-specific sessions, and occasionally lead weekly sessions. Graduate students on the Evanston campus have their own Evanston-based college.

The course meets most Fridays from 12:00-1:00pm during Fall, Winter, and Spring Quarters. Students are required to attend. During these sessions, students meet with their colleges and assigned mentors or with the entire MSTP as a whole to discuss various topics relevant to the training and professional development of physician scientists, including research projects, the process of publishing and reviewing scientific papers, rigor and reproducibility, grant-writing skills, communication and presentation skills, and other issues related to well-being and identity.

2.2.2 MSTP 402: MSTP Grand Rounds

This course integrates clinical medicine with research and provides continuing clinical education to research-phase students. Twelve sessions are held each year, and students in all years of training are required to register for MSTP 402 every quarter and to attend all sessions. The goals
of this course are to acquaint students with unsolved problems in modern medical research; help provide continuous exposure to clinical medicine; and help students develop effective presentation skills. Every student presents at least twice in this course during their training, once during the Research Phase and again during the Clinical Phase. Physician-scientists and clinical faculty are invited to serve as preceptors for each session to add insightful commentary after the student presentations are completed.

2.2.3 Registration Policies and Procedures

It is imperative for students to register for the required courses as outlined above to avoid discontinuation from The Graduate School (TGS) during the Preclinical Phase. If a student fails to register, they are solely responsible for applying for readmission and paying the applicable reinstatement fee as outlined here.

Students during the Preclinical Phase should not register for any other courses through The Graduate School. Registration for additional courses will accrue a tuition charge through TGS that the MSTP will not cover, and students will be solely responsible for paying this charge. Students who wish to take TGS classes during this phase should reach out to course instructors about the possibility of auditing a course without officially registering for it. Students can reach out to the MSTP Office for more information about this process.

2.3 Laboratory Rotations During the Preclinical Phase

Students must complete two four-to-five week research rotations during the summer between the M1 and M2 years. Mentors for the second and third research rotations can be identified through the MSTP Blitz Talks. Organized as part of the MSTP Colleges Curriculum, Blitz Talks are short, 4-to-5-minute talks given by research faculty to M1 students four times a year, each followed by a Q&A session. These talks provide an overview of the breadth of research at Northwestern and give students an opportunity to identify and connect with faculty they may want to work with in the future.

Students who do not wish to complete three research rotations, or who would like to do an additional fourth research rotation, can only do so with the permission of the MSTP director and associate director. An additional fourth rotation can be completed at the end of the M2 year after the completion of the Step 1 examination with the permission of program leadership.

2.4 Additional Laboratory Research during the Preclinical Phase

MSTP leadership strongly encourages students to focus fully on the medical school curriculum during this phase of training to ensure they develop the knowledge, professionalism, and effective study habits required to be a successful physician. As a result, MSTP students are generally discouraged from engaging in laboratory research during the M1 and M2 years outside of the three required research rotations. Students who wish to engage in research during the academic year may only do so with the permission of the MSTP director. Permission will only be given to begin work in the laboratory after January of the M1 year once a student has demonstrated that they can successfully manage the medical school curriculum and pass medical school exams.

2.5 Identifying a Thesis Adviser during the M2 Year

Following the completion of research rotations, students meet and discuss potential thesis advisors with the MSTP directors and come to a final decision in the M2 year.

2.5.1 Timeline

Associate Director Lindsey Martin meets with all M2 students after they complete their final research rotation to discuss potential thesis advisers and graduate programs. Students are responsible for speaking with potential advisers to ensure that there is appropriate funding to
support them for the duration of their graduate training. Thesis advisers should be selected in Fall Quarter of the M2 year, and ideally no later than Winter Quarter; students who need more time to make a decision should meet with MSTP leadership to discuss their options.

Associate Director Martin should be notified as soon as an agreement has been reached with a faculty member, and all decisions must be approved by the MSTP director. Once approved, the MSTP Office will contact the adviser and obtain their signature and the signature of their department chair for the MSTP Financial Agreement. This document confirms that the future adviser agrees to assume all funding for the student during their graduate training and serves as the final step in the MSTP thesis adviser selection process.

2.5.2 Faculty Eligibility
To be eligible for appointment as an MSTP thesis adviser, a faculty member must meet all of the following requirements:

- hold an appointment as graduate faculty in The Graduate School with an affiliation with a PhD-granting program at Northwestern. Students participating in an NIH partner program must also have a faculty co-mentor at Northwestern;
- possess a strong and established record of funding; junior faculty without a strong record of funding may serve as a mentor, but co-mentorship with a more senior investigator may be required. Both the PI and the PI’s department chair must agree to financially support the student for the duration of their graduate training;
- demonstrate a record of training graduate students in a supportive, inclusive, and safe environment; senior faculty co-mentors may be required if students wish to work with otherwise qualified junior faculty members who do not have a sufficient training record;
- understand the physician-scientist training path and agree to abide by the MSTP mentor-mentee ground rules and expectations;
- participate in faculty mentor training facilitated by the Training Grant Support Office every five years; and
- ensure that trainees receive regular instruction in responsible conduct of research principles, including rigorous and unbiased experimental design, methodology, analysis, interpretation, and reporting of results, both formally through courses and informally through everyday lab interactions.

2.6 Choosing a Graduate Program
MSTP students select advisors and thesis committee members from over 300 graduate faculty members in 14 departments and four schools at Northwestern University. Because each professor may be a member of several graduate programs and the qualifying exam structures are similar across programs, students typically choose a program based on preferred course offerings. The MSTP has established partner relationships with eight graduate programs. These partner programs include four department-based PhD programs—Chemistry, Biomedical Engineering (BME), Materials Science and Engineering (MSE), and Chemical and Biological Engineering (ChBE)—and the following four umbrella PhD programs with faculty from multiple departments:

- Interdisciplinary Biological Sciences (IBiS) Program and the Driskill Graduate Program (DGP) in the Life Sciences. These programs are based in Evanston (IBiS) and Chicago (DGP) and include faculty working across all areas of life science, from fundamental mechanisms of biological processes, macromolecular structure and function, molecular biology and genetics, cell and developmental biology, biochemistry, microbiology, immunology, physiology, biotechnology,
nanotechnology, engineering, and bioinformatics. Many faculty study these fundamental processes as they pertain to a variety of human diseases, including cancer, heart disease, neurologic disease, reproductive disease and infectious disease.

- **Northwestern University Interdepartmental Neuroscience (NUIN) PhD Program.** A university-wide program devoted to normal and abnormal function of the nervous system at all levels.

- **Health Sciences Integrated PhD (HSIP) Program.** HSIP offers doctoral student training across multiple disciplines within the health sciences, spanning from informatics and program evaluation to implementation science and outcomes research. PhD students have the opportunity to focus on their choice of four tracks: health and biomedical informatics; health services and outcomes research; healthcare quality and patient safety; and social sciences and health. Integration across these programs provides the flexibility for doctoral students to receive rigorous interdisciplinary training in the core content needed for population and health research in the 21st century.

As partner graduate programs, these eight programs offer significant accommodations to MSTP students to ensure that they can move through the Research Phase in a timely manner (see Section IV, 3.1). Students who wish to join PhD programs outside of the partner relationships established here must notify Associate Director Lindsey Martin by Fall Quarter of the M2 year at the latest; in these cases, the MSTP office will work with graduate programs to ensure that students also receive course and teaching load reductions as applicable.

A first-author publication is required to graduate by most PhD Programs, and the MSTP requires a first-author publication to advance to the Clinical Phase of training. An exception to this requirement may be made in rare cases, but only after students and their research advisors meet with program directors to generate a detailed plan to meet the publication requirement.

2.7 USMLE Step 1 Exam

After the conclusion of M2 classes, all MSTP students are required to take the USMLE Step 1 exam. Students who wish to delay the exam may only do so with the permission of the AWOME deans and the MSTP Director, and they must work with the MSTP directors to come up with a timeline to retake the exam. Depending on their timeline for taking or retaking the exam, AWOME may ask students to go before the Student Promotions Committee to approve their timeline. Students who do not pass the Step 1 exam will be subject to MSTP policies on Satisfactory Academic Performance (see Section V).

2.8 Clerkships Prior to the Start of the PhD

In accordance with guidelines set by the Office of Medical Education, the MSTP will only permit students to do clinical clerkships prior to the start of the Research Phase of the program in rare circumstances. Students who wish to do a clerkship must first meet with the AWOME deans to discuss their plans and secure their approval. Students must then notify the MSTP director and secure his approval. These students will be required to complete the five-day Introduction to Phase 2 course at the end of April before they can begin a clerkship.

2.9 Requirements for Satisfactory Academic Progress

During the Preclinical Phase, MSTP students must meet all Feinberg School of Medicine requirements and remain in good academic standing as defined by FSM in order to remain in good standing with the MSTP. Any failure to meet these requirements or remain in good academic standing will result in failure to make Satisfactory Academic Progress (see Section V).
2.10 Summer Financial Support
The MSTP provides students with a stipend and all other MSTP financial support during the summers between the M1 and M2 year and during the summer after the M2 year. The MSTP encourages students to take time off during the summers, but the expectation is that students will spend substantial time engaged in research or other activities related to their training. Students who need to take extended time off in the summer should notify the MSTP Associate Director in advance.

MSTP financial support for M2 students concludes on August 31st after the M2 year. On September 1st, a student’s PhD adviser becomes fully responsible for their stipend, tuition, and health insurance. This change in funding support officially marks a student’s transition from the Preclinical Phase to the Research Phase of the program. The MSTP office communicates with students’ advisors and academic departments their behalf to make this financial transition seamless.

2.11 Transfer to Graduate Programs
The MSTP Office initiates the official transfer of students to the Research Phase of training during Winter and Spring Quarters of the M2 year. It does so by notifying graduate programs and The Graduate School of students’ decisions regarding their thesis adviser and PhD programs. Students are required to work with their individual graduate programs, including the Director of Graduate Studies as necessary, to ensure that they are included in all incoming student orientation activities; receive all necessary course waivers and exceptions as relevant; and gain access to necessary department resources including department listservs. Students who delay their decisions regarding thesis advisers and programs may find that they miss some of the early program-specific onboarding activities for new students, and thus are encouraged to make those decisions as soon as possible.

2.12 Rising G1 Student Orientation
MSTP directors hold an orientation for all rising G1 students during the annual MSTP Student-Faculty Retreat. During this session, directors provide advice, discuss program expectations, and answer any questions students may have as they transition to this phase of training. Attendance at this orientation is mandatory for all rising G1 students, and those who cannot attend should notify program directors in advance.

Some graduate programs also hold an MSTP-specific orientation for rising G1 students during the summer before they start classes. Students should contact graduate programs to learn about the new student orientation activities they should attend.
3. **Research Phase: Years 3-5/6**

The goal of the Research Phase is to seek out and take advantage of every opportunity to develop into an exemplary scientist with strengths in experimental and non-experimental research skills. Skills in the latter category include manuscript review skills, knowledge of how to prepare a grant or manuscript for submission, and how to prepare and deliver research presentations to a variety of audiences in a variety of different contexts.

3.1. **Graduate Coursework**

During the Research Phase, students complete the requirements of the graduate program of their choosing to receive the PhD. Students are also responsible for meeting the Graduate School residency requirement of eight quarters of coursework at the full tuition level. This can be a combination of courses and 590 Research registrations. Students should work with their graduate program to ensure this requirement is met.

Course and other program requirements vary according to the graduate program. Significant course credit is given to MSTP students so that the course requirements are minimal. This is accomplished by granting students course waivers based on the completed first two years of the medical school curriculum: students are awarded credit for 6 of the 9 required courses for PhD candidacy in the Life Sciences; up to 4 of the 9 courses for Chemistry, depending on placement test results; 9 of the 15 courses for Engineering, and 8 of the 16 required courses for HSIP. Qualifying exams across programs are similar and involve written research proposals with an oral defense. Students can consult with MSTP Associate Director Lindsey Martin to learn more about the specific requirements for MSTP students. They should also reach out to graduate program leadership and reference program handbooks to learn more about this information.

Course schedules are made available in CAESAR shortly before the beginning of each quarter. Students should choose their graduate courses in consultation with their thesis advisor and the graduate program’s director or curriculum track advisor so that they will develop ample background knowledge to conduct research as well as pass the qualifying exam. Coursework in areas not directly related to the thesis research is also encouraged.

3.2. **Responsible Conduct of Research Training**

Responsible Conduct of Research (RCR) training is a formal requirement of every graduate program curriculum, and students must complete the RCR training provided by their graduate program during the first year of PhD training. Students in life science programs must complete courses offered by either the Driskill Life Sciences Graduate Program (DGP), the Interdisciplinary Biological Sciences Graduate Program (IBiS), or the Northwestern University Interdepartmental Neurosciences (NUIN) Graduate Program; students in engineering programs must complete the course offered by the McCormick School of Engineering; and students in Chemistry must complete the course offered by the Department of Chemistry, and students in HSIP must complete one of their course options. Students should also check with their graduate programs to confirm that they have the most up-to-date information about program RCR requirements.

- IBIS 423: Ethics in Biological Research
- DGP 494: Colloquium on Integrity in Biomedical Research
- NUIN 490: Responsible Conduct in Neuroscience Research
- GEN_ENG 519: Responsible Conduct of Research Training
- CHEM 519: Responsible Conduct of Research Training
For HSIP:

- HSR 480: Ethical Issues in Health Service Research
- PUB_HLTH 441: Ethical Issues in Clinical Research
- NUCATS Taking Responsibility for the Responsible Conduct of Research

The NIH requires that all trainees of programs supported by a T32 training grant must receive RCR training no longer than every four years. As a result, MSTP students are required to take an RCR refresher course before returning to clerkships to remain in compliance with this rule. Students may choose to take one of the courses listed above or an MSTP-specific RCR Refresher course as available. The MSTP may withdraw financial support during the M3 and M4 years for students who fail to stay up-to-date on their RCR training during this period.

3.3. Teaching Requirements
MSTP students are required to fulfill the teaching assistantship requirements of their chosen graduate program. Students consult with their thesis advisor and the graduate program director or faculty advisor to determine the best course of action to fulfill this requirement.

3.4. Qualifying Examinations and Advancing to Doctoral Candidacy
All graduate programs require students to pass a qualifying exam to advance to doctoral candidacy. MSTP students in DGP, IBiS, and NUIN take their qualifying exam at the end of the first year of graduate study. Because the departmental engineering programs (Chem, BME, ChBE, and MSE) and HSIP require students to complete more coursework, MSTP students in these programs typically complete their qualifying exams during the second year of graduate school.

3.5. MSTP Thesis Committee Requirements
Following successful advancement to doctoral candidacy, MSTP students should form their thesis committee and present a thesis prospectus according to the requirements proscribed by their graduate program. The MSTP requires all students to meet with their thesis committees every six months. After each meeting, students and committee chairs are required to submit the MSTP Thesis Committee Report Form to MSTP Associate Director Lindsey Martin. The MSTP will send regular reminders to students as they approach the six-month committee meeting mark throughout their training.

3.6. MSTP Publication Requirements
The MSTP requires students to publish at least one peer-reviewed first-author research article (not a review) prior to returning to the Clinical Phase of training. MSTP graduates in the past ten years have published an average of three first-author publications and seven middle-author publications, for a total of ten publications during the Research Phase of training. While the publication requirement may vary among the Northwestern University graduate programs, the MSTP holds this as a uniform policy for all MSTP students. Students who do not meet this requirement may only return to clinic with special permission from MSTP leadership (see Section IV, 3.10.6).

3.7. Required MSTP Courses and Activities during the Research Phase
MSTP students are required to participate in the following courses and activities during their graduate training in order to remain in good standing with the program.

3.7.1. MSTP Required Courses
All students in the Research Phase are required to register for, and fully participate in, MSTP Grand Rounds and MSTP College Curriculum every Fall, Winter, and Spring Quarters. Students who do not meet the participation requirements will receive a reduction
in the amount of their M4 Residency Award.

3.7.2. MSTP Grant Submission Requirement
All MSTP students are required to submit an application for an NRSA during the first or second year of graduate school. Students receive a monetary reward upon submission of a fellowship application and another for a successful application resulting in a funded fellowship (see section.

To facilitate this requirement, students in the M2 year are required to participate in a grant-writing course led by MSTP Associate Director Melissa Brown, PhD. The course helps students develop and draft a complete NRSA predoctoral fellowship through didactic sessions devoted to understanding all aspects of the NRSA application process; writing portions of a proposal, with an emphasis on the research proposal and training plan; developing a timeline for submitting the proposal; and presenting and critiquing the scientific proposal. In the final session, students give a public presentation and defense of their proposals before faculty advisers and fellow MSTP students. At the end of the course, students have a complete draft of a proposal that they can further refine and submit for funding with their thesis advisers during the G1 year, and Dr. Brown continues to meet one-on-one with students as they work toward submitting.

3.7.3. MSTP Presentation Requirement
MSTP students are expected to present their research findings at least annually in a formal setting, such as a departmental seminar series, scientific conference, or an MSTP Research in Progress Talk. They should also attend local, regional, national and international scientific conferences as well as the American Physician Scientists Association (APSA) Annual Meeting at least once during the Research Phase. Students can contact the MSTP Office and apply for the MSTP Travel Award to help offset the costs of attending academic conferences.

3.7.4. Continuing Clinical Education Requirement
The MSTP requires all students in the Research Phase of training to continue to participate in clinical activities. Clinical engagement during this phase is designed to help them maintain the skills they gained during the Preclinical Phase of training, improve their ability to communicate with patients, and facilitate the transition from the PhD back to the clinic. To meet this requirement, students are required to attend eight Education-Centered Medical Home sessions each year for the duration of their graduate training.). Students should work with the ECMH to which they were assigned during their M1 year. Students who need to switch their ECMH assignments should contact Dr. Martin, and whether or not a student can switch ECMH assignments is at the discretion of AWOME. These students will receive credits towards the FSM clinical requirements upon their return to clerkships for this experience. The MSTP Office tracks ECMH participation to ensure this requirement is met, and program leadership will contact students who are falling behind with their attendance.

Students seeking additional clinical engagement, and especially the opportunity to improve their inpatient skills, can also elect to participate in the PRISMS Inpatient Program (Program to Retain Inpatient Skills for MSTP Students) in addition to their ECMH. This hospitalist-based program is led by two clinicians and provides students with the opportunity to shadow on rounds, enhance physical exam skills, and perform a complete history and physical on one hospitalized patient per session. Students also participate in morning-report style meetings where the team works through an unknown
case together, and each student has the opportunity to further practice a full presentation and receive individualized feedback from a hospitalist attending. Students will receive information each fall on how they can sign up for PRISMS sessions.

3.8 Satisfactory Academic Progress
MSTP students are required to make satisfactory progress toward the completion of their PhD. The MSTP uses the biannual thesis committee meetings, advising meetings with thesis advisers, and the annual MSTP IDP to monitor this progress. Any failure to meet the standards of satisfactory progress toward degree completion set by the student’s graduate program, or any action that results in dismissal from the laboratory or graduate program, will be subject to review by the MSTP leadership and dismissal from the MSTP will be considered.

The Graduate School policies on adequate academic progress and dismissal (exclusion) from The Graduate School can be found here. More information can also be found in Section V.

3.9 Conflict Resolution and Changing Advisors
Students who encounter challenges with their mentors are encouraged to contact MSTP directors as soon as the conflict arises for assistance and guidance. Conflict resolution between students and faculty generally falls under guidelines set by The Graduate School, which can be found here. MSTP directors will work with students individually to ensure they understand these guidelines and are connected with University resources that can help.

If a situation arises in which it is necessary for students to change advisers and leave the laboratory, students should notify the MSTP directors immediately. Directors will work with students on a case-by-case basis to advise them on the best way forward to continue on in the program. It is imperative for students to contact MSTP directors about issues as soon as possible to ensure they continue to make satisfactory academic progress and do not fall behind in their training.

3.10 Completion of the PhD and Returning to Medical School
Once students reach the end of the Research Phase of training, they should prepare for the return to medical school and the start of the Clinical Phase of the program. This section outlines the timeline for that return and the requirements students must meet in order to be allowed to return to clinic by the MSTP and the Office of Medical Education. Students who do not meet these requirements in full may lose tuition and stipend support from the MSTP during the M3 and M4 years.

3.10.1 Window for the Return to Clinic
Students may return to medical school for the M3 year during the months of May, June, or July of any given academic year. This return window ensures that they will have time to complete all M3 curriculum requirements before the submission of residency applications the following year. Students who wish to return outside of this window may only do so with the permission of the deans of the Augusta Webster, MD, Office of Medical Education (AWOME) and the MSTP director.

3.10.2 Meetings with MSTP Leadership
Students in the third year of graduate training and beyond are required to update the MSTP Office annually, either through a formal Return to Clinic meeting or through another meeting with program leadership, on their timeline for completing the PhD and returning to the M3 year. It is the responsibility of students to proactively communicate any changes in this timeline to the MSTP Office to ensure that the transition back to medical school is as seamless as possible. Students are encouraged to set up an individual meeting with
Associate Director Lindsey Martin to discuss their timeline for completing the PhD and returning to clinic in detail.

3.10.3 PhD Completion Requirement
MSTP students must complete all requirements for their PhD degree, including the thesis defense, final revisions of the thesis, and publication of at least one peer-reviewed first-author research article (not a review), prior to starting their first clerkship. Students may have their PhD degree formally conferred after they start clerkships, but all requirements for the degree must be fulfilled. Exceptions will only be made in very rare cases outlined in the Return to Clerkship Exceptions policy (see Section IV, 3.10.6).

3.10.4 Thesis Defense Information and Transfer of Funding
All information regarding the completion of a student’s thesis, private defense date, and public thesis seminar with the title of thesis is required to be submitted to MSTP Associate Director Lindsey Martin and MSTP Program Coordinator Joyce Tamanio before a student can advance to the Clinical Phase of training.

Once this information is received, the MSTP Office will work with the student’s graduate department to ensure the transfer of financial responsibility for tuition and stipend is made in an expeditious manner. Students are required to initiate this process by notifying their departmental business administrator about their anticipated date of return and copying the MSTP Program Coordinator so they may facilitate the transition on the student’s behalf. Students supported by an individual NRSA grant must reach out to their research administrator and copy MSTP Program Coordinator Joyce Tamanio about their transition to ensure that all of the appropriate paperwork is processed around the continuation of their award. As the MSTP does not administer individual NRSA awards, and these awards will continue to be administered by graduate departments during the Clinical Phase of training.

3.10.5 Required Return to Clinic Meetings and Rewarming Activities
The following section chronologically outlines a series of meetings, orientations, and rewarming sessions that occur each year as part of the MSTP return to clinic activities and are mandatory for all MSTP students returning to clinic. Students who do not participate in these activities for any reason will only be allowed to return with the prior approval of the AWOME deans and the MSTP director.

- **Fall Quarter**: students in the G3+ phase of the program meet with their advisor, the MSTP Director, and the MSTP Associate Director to discuss return to clerkship timing and how it will affect their graduation date. As necessary, the MSTP Associate Director will schedule an individual meeting with each student to discuss their timeline in more detail. The MSTP Associate Director will then share this information with AWOME to initiate the return to clinic process.

- **Mid-January**: Those students who indicate that they will return to clinic must attend the annual Return to Clerkships meeting with the AWOME and MSTP leadership, typically held in mid January. This meeting addresses the logistics of returning to the clinic, the forms required for returning, and a discussion of the clinical rewarming program for MSTP students. It also provides an opportunity for students to ask medical school leadership questions about their return.
• **Late January-February:** Following the Return to Clerkships meeting, students are required to meet with AWOME deans for individual counseling to discuss ideas about their specialty of choice, how that might impact the return timeline, and the process of scheduling clerkships. Students are also encouraged to schedule a meeting with the MSTP director once they have discussed their plans with AWOME leadership. Those planning on pursuing a non-traditional residency (i.e., surgical subspecialty) may need to schedule a joint meeting with the MSTP director and the AWOME deans for counseling.

• **Late January-February:** Students must schedule a meeting with the Feinberg School of Medicine registrar to discuss their individual schedules for their return. MSTP students participate in the Phase II clerkship lottery with the Feinberg rising M3 class. The MSTP coordinates with the FSM registrar to ensure returning students have a proper scheduling window available in the lottery that aligns with their anticipated return date. There is some flexibility in arranging a personalized clerkship schedule post-lottery through the FSM registrar, however this is dependent on available space.

• **February:** AWOME begins the process of clinical rewarming for MSTP students, and all students must undergo this assessment and rewarming before returning to clinic. This program, facilitated by faculty in the Department of Medicine, entails an extensive combination of assessments and mentored patient workups and presentations. Students attend a review of the physical examination followed by a “pre-test” assessment of the student’s clinical skills. This evaluation includes a complete head-to-toe examination with a standardized patient. The course instructors then design an individualized refresher course consisting of review sessions in the Clinical Education Center and sessions with a clinical attending physician who works with two returning students at a time to practice three skills: (i) performing a complete history and physical examination on a hospitalized patient, (ii) presenting the workup to the attending physician, and (iii) preparing a written assessment and plan. Students receive constructive feedback at each step of the rewarming process. The final assessment involves two focused visits in an exercise similar to the second-year medical student clinical skills assessment with standardized patients. AWOME assists in the logistics of properly registering students for access to the hospitals, patients, and listservs.

Students who have not participated regularly in the MSTP’s Continuing Clinical Education programs during the Research Phase of training, including those participating in NIH partner programs and those who have taken a postdoctoral gap year (or two) after the PhD, may be asked to complete additional rewarming requirements to ensure they are prepared for return.

• **Last week of April:** All returning students are required to participate in the Intro to the Profession 2 Orientation held from 8:00-5:00pm every day during the last week of April. This session is mandatory, and students who do not participate can only return to clinic with the permission of AWOME.

• **May-July:** MSTP students return to clinic.
Return to Clinic Exceptions Policy

Although students have three-month window for returning to clinical clerkships, timing the transition can be difficult. To provide flexibility for students having difficulty completing PhD and publication requirements for reasons beyond their control, and to ensure that students apply their time most effectively toward completing the program, special circumstances for returning to clinical clerkships will be considered by the MSTP directors on a case-by-case basis. The two special circumstances students can petition regarding are students wishing to return without an accepted first-author manuscript and students wishing to return without having defended the PhD. The requirements for successful petitions in these instances are detailed below.

1. **Students wishing to return to clinical clerkships without having an accepted first-author manuscript.** The following requirements must be met for this petition to be successful:
   A. The student and their advisor must meet jointly with the MSTP Director and Associate Director prior to returning to clinics to discuss the situation.
   B. The student and advisor should be able to affirm that there is no further benchwork expected.
   C. If a student wishes to return without an accepted first-author paper, the following conditions (C.1-C.4) must all be met one week before returning to clinic:
      C.1. The student has successfully defended the PhD and completed all PhD requirements except the first-author paper;
      C.2. The student has re-submitted a first-authored paper to the same journal following revisions in response to a prior review;
      C.3. The student’s thesis advisor has provided MSTP leadership with written assurance that no further experiments are likely to be required of the student for publication (based on prior reviews), and that the review outcome will be communicated to the MSTP as soon as available.
      C.4. If the above conditions are met, the student will be permitted to begin clinical rotations. When the reviews are received, if only minor changes are necessary, the student may continue in clinics and has a two-month period to gain final acceptance of the manuscript. After this time, or if the reviews require the student’s further experimentation, the student must return to the lab to complete the required work at the conclusion of their current clerkship rotation.

2. **Students wishing to return to clinical clerkships without having defended their PhD.**
   If a student wishes to return, but owing solely due to time conflicts of committee members is unable to defend the PhD before the desired return date, the following requirements must all be met at least one week before returning to clinic for this petition to be successful:
   A. The student must have a first-authored paper accepted, have completed all lab work, and have submitted their written thesis to their committee.
   B. The delayed committee meeting must be formally scheduled and must occur within one month of starting clerkships. A longer period may be granted for surgery or medicine clerkships.
   C. The student must obtain written assurance from the clinical clerkship director that the scheduled defense time does not conflict with clerkship requirements.
   D. The student’s thesis advisor must provide MSTP leadership with written assurance that the thesis has been submitted to all committee members and there are no further experiments likely to be required to defend the PhD based on the prior consensus of the thesis committee.
E. If only minor writing changes are necessary following the defense, the student may continue in clinics and will be given an additional one month to gain final approval of their thesis. After that time or if further experimentation is required following the defense, the student must cease clinical work at the conclusion of their present clerkship rotation to complete the required work.
4. Clinical Phase: Years 7-8 (M3 and M4)

After the completion and successful defense of their doctoral dissertations, MSTP students return to the Feinberg School of Medicine to complete the Clinical Phase of their medical school education. The primary goal of clinical training is to acquire the basic skills of medicine in preparation for residency training, which is where the substantive clinical learning occurs. Many students continue research on a part-time basis as befits their training as a physician-scientist. The program encourages each student to thoughtfully craft their schedule of clerkships, flex time, and other activities to achieve their own objectives for this important phase of training.

4.1 Feinberg School of Medicine Requirements for MSTP Students

Hospital-based clerkships are required of all students in the junior year (Phase 2/M3) year of the Feinberg curriculum. These clerkships include: Medicine, Surgery, Neurology, Psychiatry, Primary Care, Obstetrics and Gynecology, and Pediatrics. During the senior year of the curriculum (Phase 3/M4), students are required to take the Medicine, Pediatrics, or Surgery Sub-internship (4 weeks), Physical Medicine and Rehabilitation (2 weeks), Intensive Care Unit Clerkship (4 weeks), Emergency Medicine (4 weeks) and one elective (4 weeks). This can be completed in 14.5 contiguous calendar months.

The FSM waives an additional 16 weeks of required senior elective clerkships for MSTP students. This waiver provides MSTP students with flexibility to choose when they return to clinic and to continue to engage in research after their return. Additional flex time built into the M4 year allows students to take a few senior electives and interview for residency while still matching with their medical school class and receiving the MD degree “on time” in May of the following year.

4.2 MSTP Requirements during the Clinical Phase

Students are required to participate in MSTP Grand Rounds throughout the Clinical Phase of training. Participation in the MSTP College Curriculum, the MSTP Student-Faculty Retreat, and other program events is strongly encouraged, but not required due to students’ clinical obligations. Students who would like to attend an event that conflicts with their clinical activities should contact the MSTP Office. The Office will contact clerkship directors and coordinators on behalf of the student to see if they can be excused.

4.3 USMLE Step 2 Exam

All students will be required to sit for the USMLE Step 2 examination by the end of November of the academic year in which they will graduate. Sitting by the end of November will allow additional time for planning and communicating scores with programs.

4.4 Preparing for the Residency Match

During the M3 and M4 years there are multiple class sessions provided by the AWOME to discuss the application process. Information on these classes and other available resources can be found here. This website will provide the most up to date information on registering for Match Services, letters of recommendation, the MSPE, and medical school transcripts and photographs.
4.5 MSTP Graduation Activities
During graduation week, the MSTP Office organizes a Senior Lunch at a local restaurant for the graduating students to discuss their views on the entire training process. The MSTP Office also the Passing of the Wisdom session in the weeks before graduation, during which they reflect on their training and give advice to their junior colleagues. An MSTP Graduate Reception is also held to honor the graduates. All students and faculty are invited, as are the graduates’ families. A brief program permits the MSTP Director and Thesis Advisors to comment on the graduates’ accomplishments and toast their futures and allows the graduates to acknowledge those who have helped them to achieve their goals. This provides a nice finishing touch to the rigorous seven-/eight-year training process. Finally, FSM commencement is held at Navy Pier, constituting the final participation of graduates in the MSTP course of training.

4.6 Satisfactory Academic Progress
MSTP students are required to complete all clinical requirements with a passing grade in no more than 24 months. Students who do not meet this requirement will be subject to the policies on satisfactory academic progress outlined in Section V.

4.7 Additional MSTP Financial Support during the Clinical Phase
The MSTP provides funds to offset the costs of exams and study materials. Students should reach out to the MSTP Program Coordinator to be reimbursed for these expenses. A M4 Residency Travel Award will be provided during September of the M4 year to help offset the cost of residency applications and interviews.
Part V: Satisfactory Academic Progress

It is the philosophy of the MSTP that students should devote their full attention to the training path made possible by the program as befits their responsibilities and commitments as future physicians and scientists. All MSTP students are recipients of a substantial scholarship based on merit. Each student receives a stipend, tuition, health insurance, professional development funds, and other benefits totaling over $400,000 during the Preclinical and Clinical Phases of the program. This scholarship is a tangible recognition of the confidence the MSTP has in the potential of each student. MSTP leadership is charged with ensuring that scholarship recipients are able to fulfill this potential and promise. Continuation in the MSTP and receipt of this scholarship are dependent upon satisfactory academic progress toward the MD and PhD degrees as outlined in the following sections.

1. Feinberg School of Medicine Satisfactory Academic Progress

All MSTP students in the Preclinical and Clinical Phases of the program must meet all Feinberg School of Medicine (FSM) requirements as described in the FSM policies and procedures found here and make satisfactory academic progress toward the MD. Any failure to meet these requirements or to make satisfactory academic progress may result in formal action by the MSTP (see below).

1.1. MSTP-Specific Requirements for FSM Phase 1 Satisfactory Academic Progress

Students in FSM take a series of written tests on didactic material during the first two years in order to assess competency in key areas intended to prepare them for clinical medicine. These tests are ultimately “pass-fail”, but students are assigned a Z-score based upon performance relative to the class. Students are also evaluated subjectively in other curricular activities in Phase 1.

During Phase 1 of the FSM curriculum, a Z-score of -1.75 to -2.25 indicates a marginal understanding of the material. This scoring range typically earns a marginal pass grade and reflects performance below the 5th percentile of the class. A Z-score less than -2.25 is typically considered a failing score and reflects performance below the 2nd percentile. While only a failing score requires the test to be remediated, both outcomes are worrisome indicators that the student may not be acquiring the knowledge necessary for advancing in the curriculum. The Senior Associate Dean for Medical Education may refer students who demonstrate “a pattern of examination failures” in the Phase 1 curriculum to the Student Promotions Committee (SPC). Failure to successfully remediate a Block (Foundations Block, Cardiovascular-Respiratory-Renal Block, etc.), will require the student to come before the SPC. Generally, an SPC referral for sustained poor academic performance results in the student being required to repeat the academic year. The Augusta Webster, MD, Office of Medical Education (AWOME) Deans may also require a student to repeat an academic year due to poor performance. In this case, a student may request a referral to the SPC, however these referrals again generally result in the student being required to repeat the year. The SPC may also recommend exclusion (dismissal) from the FSM or allow the student to progress to the next phase of the curriculum depending on the student’s circumstances. Students have the right to appeal SPC decisions to the Student Appeals Committee (see the FSM student handbook).

MSTP Satisfactory Academic Progress during Phase 1 of the curriculum is defined as not being required by the Deans or the SPC to repeat an academic year (Phase 1a or Phase 1b) due to poor academic performance.
1.1.1. MSTP FSM Phase 1 Poor Performance
MSTP students performing in the bottom 5% of the class (or marginally passing or failing assessments) during Phase 1 of the curriculum are considered by the MSTP to be exhibiting poor performance.

1.1.2. MSTP FSM Phase 1 Poor Performance Intervention
There are many reasons for poor performance, and each student will be evaluated on a case-by-case basis. The program will do its part to encourage improvement by following up and advising students who are not performing at a “passing” level. The goal of all intervention is to help MSTP students who are performing poorly to get back on track.

Students exhibiting poor performance on a single test must meet with the MSTP Associate Director to discuss potential reasons for poor performance. This meeting should generate a study and remediation plan and consider whether extra-curricular activities (in the MSTP and FSM) should be curtailed. The student should also meet with their college mentor, who may have additional advice. In some cases, meeting with the Associate Dean of Student Programs and Career Development will be suggested or required to address issues that are not helped through changing study habits. Through the AWOME, FSM has several programs for educational assistance that have benefitted FSM students in the past.

Students with a Z-score placing them in the bottom 5-16% of the class (typically Z-scores between -1.0 to -1.75) are also encouraged to meet with the Associate Director to discuss study habits that may improve performance.

Students performing in the bottom 5% of the class (or who earn a marginal pass or fail) on a second test will be required to meet with both the directors to re-evaluate potential reasons for poor performance. Consultation with the Associate Dean of Student Programs and Career Development will be required to explore educational support possibilities, such as meeting with a tutor regularly. Regular meetings with the Assistant Director may be required to discuss the student’s progress and whether or not performance-improving strategies are helping. Extra-curricular activities will be reviewed and may be limited to encourage focus on studying and gaining a “passing” understanding of the required material. The student in such a situation will be counseled that future poor performance may result in formal action by the MSTP (see below).

1.1.3. MSTP FSM Phase 1 Academic Warning
If a student performs in the bottom 5% of the class (or earns a marginal pass or fail) on three “over all” assessments (e.g. Foundations Part 1 Exam Overall, Foundations Part 2 Exam Overall, Pulmonary Exam Overall) in an academic year during FSM Phase 1a or 1b, they will be given a formal Academic Warning letter stating the student’s poor performance may result in having to repeat the academic year and the potential MSTP consequences (see below). These students will meet jointly with the MSTP Directors to discuss their performance and mutually determine the reasons for poor performance and identify any possible new strategies on how to improve performance. Regular meetings with the Assistant Director will be required to discuss student’s progress and whether or not performance-improving strategies are proving effective. These meetings will help ensure that the MSTP and student are coordinating their efforts to explore all available options to help the student improve their performance.

1.1.4. Leave of Absence During Phase 1
A student whose academic performance is deemed by the Senior Associate Dean of
Medical Education as satisfactory may elect to take a leave of absence from FSM and return to the MSTP following the leave without consequence. If a leave of absence is taken after a student's poor academic performance results in the AWOME Deans or SPC requiring the student to repeat the academic year, the student will be placed on MSTP probation when they return to FSM. MSTP students on Leave of Absence will not receive MSTP stipend support.

1.1.5. MSTP FSM Phase 1 Probation
If a student is required to repeat an academic year because of poor academic performance, they will have failed to make satisfactory academic progress according to the MSTP and will be placed on probation by the program. The student will be notified by a formal letter of their probationary status with regards to the MSTP. The letter will describe the following terms of probation:

- MSTP students on FSM Phase 1 Probation will not receive tuition or stipend support from the MSTP for the duration of the repeated academic year.
- If the student maintains good academic standing, defined as not marginally passing or failing three overall assessments (e.g., Foundations Part 1 Exam Overall, Foundations Part 2 Exam Overall, Pulmonary Exam Overall) during the repeated academic year, the probationary period will end at the completion of the repeated year. The student will then return to good standing in the MSTP and their tuition scholarship and stipend will be reinstated.
- If a student takes a leave of absence from FSM during the probationary period, the student will continue their probation status when they return to FSM.
- If a student marginally passes or fails three overall assessments during the probationary period or is excluded (dismissed) from FSM, the student will also be excluded (dismissed) from the MSTP.
- If an MSTP student who has already been placed on FSM Phase 1 Probation is required to repeat an academic year for a second time due to poor academic performance, the student will be excluded (dismissed) from the MSTP.

1.2. MSTP-Specific Requirements for Satisfactory Academic Progress on USMLE Exams
Students are required to receive a passing score on the USMLE Step 1 exam in order to advance to Phase 2 of the FSM curriculum. A passing score according to national standards is required on the STEP 2 exam in order to graduate from the Feinberg School of Medicine.

**MSTP Satisfactory Academic Progress regarding USMLE Exams is defined as passing each USMLE Step exam in no more than three attempts.**

1.2.1. MSTP FSM Poor Performance on USMLE Exams
Failing the USMLE Step 1 or 2 exams is considered poor performance by the MSTP.

1.2.2. MSTP FSM Poor Performance on USMLE Exams Intervention
If a student fails a USMLE exam for the first time, the student will meet with the MSTP directors to establish a study plan, determine a timeline for retaking the exam, and discuss what study aids will be required to prepare the student to retake the exam and pass. Plans to retake
exams must be approved by the AWOME deans and the MSTP director.

1.2.3. MSTP FSM Poor Performance on USMLE Exams Academic Warning and Dismissal
Students will receive a formal Academic Warning letter if they fail a USMLE for the second time. This letter will explain that if the student fails the exam for a third time, they will be excluded (dismissed) from the MSTP. Students who fail a USMLE Step exam three times will be excluded (dismissed) from the MSTP.

1.3. MSTP Specific Requirements for FSM Phase 2 and 3 Satisfactory Academic Progress
MSTP students are supported with tuition scholarship and stipend in Phase 2 and 3. During this time students are graded in their clinical clerkships using “shelf” boards and other criteria.

MSTP Satisfactory Academic Progress during FSM Phase 2 and 3 is defined as successfully completing all clinical clerkships required of an MSTP student with a passing grade in no more than 24 months.

1.3.1. MSTP FSM Phase 2 and 3 Poor Performance
Receiving a failing grade (“Pass pending remediation”) in a clinical clerkship is considered poor performance.

1.3.2. MSTP FSM Phase 2 and 3 Poor Performance Intervention
The first time a student receives a failing grade (“Pass pending remediation”) in a clinical clerkship, the student will meet with the AWOME deans and the MSTP director to confirm a remediation plan to repeat the clerkship.

1.3.3. MSTP FSM Phase 2 and 3 Academic Warning
Students will receive a formal Academic Warning letter if they fail (“Pass pending remediation”) a single clinical clerkship or are at risk for not finishing Phase 2 and 3 within the 24 month time limit due to not completing the clerkships to required for graduation. The letter will explain that if more than 24 months are required to complete Phase 2 and 3 of the FSM curriculum, a student will lose tuition and stipend support for the MSTP for the additional time necessary to complete the requirements.

Students who require more than a total of 24 months to complete Phase 2 and 3 of the FSM curriculum, will not receive an MSTP tuition scholarship or stipend for the additional time required to graduate from FSM.

2. The Graduate School Satisfactory Academic Progress
All MSTP students in the Research Phase of the program must make satisfactory academic progress as outlined by The Graduate School here. Failure to do so may result in formal action by the MSTP.

2.1. Graduate Program Satisfactory Academic Progress
All MSTP students in the Research Phase of the program must make satisfactory academic progress towards the PhD degree as described in their Graduate Program’s handbook or website. These criteria may be in addition to those described by TGS.

2.2. MSTP-Specific Requirement for Research Phase Satisfactory Academic Progress
The Graduate School describes specific criteria for Satisfactory Academic Progress and exclusion (dismissal) from TGS. While other graduate programs may or may not be as explicit as TGS with their specific criteria, TGS will have the final say in the process of exclusion (dismissal) from both
MSTP Satisfactory Academic Progress during the Research Phase is defined as continuing to make progress toward a PhD, unless on a leave of absence, and not being excluded (dismissed) from a graduate program and/or TGS.

2.3. Research Phase Poor Performance Intervention
A student in danger of failing to make satisfactory academic progress while in the Research Phase of training should notify the MSTP Associate Director immediately. The Associate Director will work with the student and advocate on the student’s behalf to properly remediate the situation.

Any student that fails to continue making progress toward a PhD, unless on a leave of absence, or is excluded (dismissed) from a graduate program and/or TGS will be excluded (dismissed) from the MSTP.

3. Exclusion (Dismissal) from the MSTP
Students will be formally excluded (dismissed) from the MSTP, forfeiting further stipend and tuition scholarship from the program, in any of the following circumstances:

- If a student on MSTP FSM Phase 1 Probation marginally passes or fails three overall assessments during a repeated academic year
- If a student has already been on MSTP FSM Phase 1 Probation and is required to repeat a second academic year due to poor academic performance
- If excluded (dismissed) by the Feinberg School of Medicine
- If excluded (dismissed) from a graduate program and/or The Graduate School
- If a student fails a USMLE exam three times.

3.1. Notification of Exclusion (Dismissal) from the MSTP
Students will be notified in writing that they are excluded from the MSTP within five business days of the determination, and the notification will include an effective date of exclusion and a clear statement of the reason(s) for exclusion. The MSTP will also notify TGS and FSM of this decision and include a copy of the exclusion letter.

3.2. Exclusion (Dismissal) from the MSTP and Continuation in FSM or TGS
Students that are excluded from the MSTP are not automatically precluded from continuing their course of training in the Feinberg School of Medicine or The Graduate School unless a student is specifically excluded by those schools.

4. Appealing an MSTP Probation or Exclusion (Dismissal) Decision
Probation and exclusion (dismissal) from the MSTP will require the consensus of all program directors. A student has the right to appeal an MSTP decision that results in probationary status or exclusion to the Feinberg School of Medicine Vice Dean for Education.

4.1. MSTP Appeals Process
A written request for appeal must be made to the Feinberg School of Medicine Vice Dean for Education within two weeks of the date of the MSTP decision and must indicate the basis for the appeal. The Vice Dean for Education may disallow the appeal if these conditions are not met.

The Vice Dean for Education will arrange for an ad hoc MSTP Appeals Committee to review the
student’s written appeal, meet with the student, and recommend action to the Feinberg School of Medicine Dean. The MSTP Appeals Committee will review earlier actions and recommendations of the MSTP to ensure that deliberations were conducted fairly and equitably, the conclusions reached were justified, and any actions imposed were appropriate.

4.2. MSTP Appeals Committee

The MSTP Appeals Committee will consist of three members of the FSM faculty familiar with the MSTP and an MSTP Student Council representative. The appealing student has the right to appear before the MSTP Appeals Committee to present his or her case and may be accompanied by a support person who is a member of the Northwestern community (e.g., close friend or faculty adviser), but not a practicing attorney. This person may be present for support at the hearing but cannot directly address the appeals committee.

Following its review, the MSTP Appeals Committee will recommend either that the Dean sustain the original decision of the MSTP or modify the MSTP’s decision.

The Dean may accept, reject, or modify the recommendation of the MSTP Appeals Committee. In considering the recommendation of the MSTP Appeals Committee, the Dean also may wish to examine related documents and meet with the student and/or others. The Dean then will notify the student of the appeal decision directly.
Part VI: Program Administrative Matters and Activities

1. Financial Information

1.1. Managing Student Accounts

Although tuition and health insurance costs are covered by the MSTP and/or graduate department, it is still imperative that students take responsibility for their own student accounts. There are some charges that students are responsible for and failure to pay them may result in late fees and account holds imposed by the Office of Student Accounts. Some of the charges that students are responsible for include the following:

- Student Activity Fee (covers the cost of the CTA U-Pass)
- Health Requirements Late Fee
- Wildcard Replacement Fee
- Parking Permit Fee
- NU Library Late Fee
- TGS Reinstatement Fee (for students who do not maintain proper registration in The Graduate School. See Section 2.2.4)

Students are also responsible for any tuition or other charges they accrue as a result of improper registration, and they must contact the MSTP Office as soon as they become aware of these charges. Students who have questions about how to properly register for courses should reach out to the MSTP Office.

Student accounts can be accessed using the CAESAR (http://www.northwestern.edu/caesar/) system. CAESAR can also be used to make online payments, change billing addresses, allow guest access to bills and financial information, apply for student loans and request refunds. Guides to common tasks students can perform in CAESAR can be found here.

1.2. MSTP Financial Aid Package

The MSTP financial aid package includes an annual stipend ($38,500 in 2023-2024) that will increase annually consistent with increments within the University Fellowship system; full tuition for the duration of training; a one-time moving allowance of $1000; a one-time technology allowance of $1500; funds to help students participate in conferences and other professional development activities; funds to pay for the cost of registration for the USMLE Step 1 and Step 2 exams; $600 to support the purchase of study materials for students preparing to return to clinical and the M3 year; and an M4 Residency Award to help offset the cost of travel and residency applications during the M3 and M4 years.

The MSTP covers student health insurance, disability insurance, as well as health insurance for any student’s children. The MSTP does not cover health insurance for spouses.

The MSTP will cover the cost of vision and dental insurance during the Preclinical and Clinical Phases of the program, and during the Research Phase for students in graduate programs that do not already subsidize this cost for their students. Students should enroll in the vision and dental insurance plans and then submit their receipts to the MSTP Program Coordinator to be reimbursed.
1.3. Additional Funding Resources
Throughout their training, MSTP students are eligible to receive and/or apply for additional funding opportunities through the MSTP, the Feinberg School of Medicine, The Graduate School, and their graduate department. A list of some of these opportunities are found below. Students should reach out to administrators in these various schools and programs to ensure that they are aware of all funding opportunities.

1.3.1 MSTP-Specific Funding Opportunities
- Poster Printing Costs: M1 and M2 students can reach out to the MSTP Office for assistance with the costs of poster printing. Students in other stages of the program should work with their thesis advisers and departments to subsidize these expenses.
- MSTP Travel Award: A $500 award to offset the cost of attending conferences and other professional development activities during the Research Phase. Students can reapply for this award each year and should simultaneously apply for the TGS Travel Award (also $500) to cover costs above and beyond those covered by the MSTP award. Students who wish to apply should reach out to the MSTP Program Coordinator for more information. M1 and M2 students who would like financial assistance to attend a conference should reach out to the MSTP Office to see if they are eligible for funding.
- MSTP Heller Award: A one-time $2500 award for students to help support attendance of special courses, major conferences, or other educational or professional development opportunities in their field that would aid in scientific development. A letter describing the nature of the activity and its relevance for a student’s thesis project or career development is required and will be reviewed by MSTP directors for approval. Students who would like to apply for this award should reach out to the MSTP Program Coordinator for more information.
- MSTP Emergency Funds: the MSTP has a fund to support students who are experiencing financial hardship. This support is intended to assist students with an unexpected, short-term financial emergency and typically is not related to students' financial aid awards nor the direct costs associated with attending Northwestern University. Students can contact MSTP Associate Director Lindsey Martin to learn more about how the program can support them.

1.3.2 The Graduate School Funding Opportunities
- A full list of internal fellowships and grants administered by The Graduate School at Northwestern can be found here. MSTP students should apply for the Conference Travel Grant and, as appropriate, the Dependent Care Professional Development Grant to offset the costs of conferences during the Research Phase.
- The Graduate School also provides a Graduate School Childcare Grant that can help offset the cost of caregiving for dependent children.
- Students can apply for additional financial assistance, including emergency loans, here.

1.3.3 Feinberg School of Medicine Funding Opportunities
- Students can apply for one emergency loan per term, maximum $500, through the Feinberg School of Medicine. More information can be found here.

1.4. Funding during the Preclinical Phase
Student funding during the M1 and M2 years is managed by the MSTP Office and includes the monthly stipend payment, full tuition scholarship, and health, dental, and disability insurance premium payments. During the M1 and M2 years students are either funded through the MSTP
NIH T32 NRSA training grant or through the Feinberg School of Medicine (FSM) institutional funding.

1.5. Funding during the Research Phase
During the Research Phase, tuition and stipend payments are the responsibility of the thesis advisor. These payments are typically managed by the academic department’s business administrator on behalf of the advisor, not by the MSTP Office. It is important for students to monitor their own accounts and to be in touch with their departmental business administrator in order to resolve any issues that may arise during this time. MSTP students continue to be supported by an annual stipend throughout their graduate training at the standard MSTP rate.

1.5.1 MSTP NRSA Bonus Award
MSTP students receive two awards for the submission and successful receipt of an NRSA fellowship. The combined amount of these two awards equals 10% of a student’s annual stipend at the current stipend rate. Students receive an award equal to 1% of the stipend upon submitting a grant application. The remaining 9% is awarded to students once they receive a Notice of Award for a successful application.

NRSA bonus awards can only be processed when students provide the MSTP Program Coordinator with documentation that the award has been submitted and a Notice of Award that the project will be funded. It is the responsibility of students to share this information with the MSTP Office so that these funds can be disbursed in a timely fashion.

1.5.2 Other Funding Sources during the Research Phase
Students are eligible to be appointed to training grants and other fellowship opportunities during their PhD years. The MSTP director will write a letter of recommendation for all students who apply for internal and external fellowships, and students should work with the MSTP Office to coordinate the drafting and submission of this letter. If students are appointed to any other training grant or individual fellowship, they should notify the MSTP Program Coordinator. Stipend and tuition will continue to be supplemented when necessary by the student’s thesis advisor.

1.5.3 Teaching Assistantships
MSTP students are required to fulfill the teaching assistant (TA) requirement of their chosen graduate program and should consult with their Thesis Advisor and the graduate program Director or Faculty Advisor to determine how to do this. Most programs require students to serve as TAs for at least one quarter as this is an important aspect of graduate training.

1.6 Paid Employment during Training
Per the Enrollment Agreement signed when students matriculate into the program, MSTP students cannot engage in any remunerative work without written prior approval by the MSTP director. To receive approval, students must contact the MSTP director and associate director with a description of the opportunity for their review, and a clear explanation justifying the need for this work. The approval will be contingent on maintaining good academic standing in medical school and during the PhD phase (as defined throughout this handbook and to be determined by the MSTP director and associate director). This approval may be rescinded in the event that the student falls out of good academic standing in medical or graduate school. MSTP in general discourages students from conducting paid work, and in case of approval, the amount of paid work will not be allowed to be more than three hours per week. These rules do not apply to TA requirements specified by PhD
1.7 Funding during the Clinical Phase

Student funding during the M3 and M4 years is administered by the MSTP Office. The office will work with students’ graduate departments to ensure a seamless transition. In the case that a student has a fellowship that includes support during the clinical years, that fellowship will continue to be administered by the graduate department who will work with the MSTP to ensure that all funds are taken advantage of appropriately.

The MSTP provides funds to offset the costs of exams and study materials. Students should reach out to the MSTP Program Coordinator to be reimbursed for these expenses. A M4 Residency Travel Award will be provided during September of the M4 year to help offset the cost of residency applications and interviews.

1.8 Northwestern University Student Health Insurance Plan (NU-SHIP)

Proof of health insurance is required for all Northwestern students at the time of matriculation and annually thereafter. Students are required to complete the Coverage Selection Form each year during the open enrollment period to either enroll in or waive NU-SHIP. Information on open enrollment periods can be found here. Failure to complete the Coverage Selection Form during this period of time will result in automatic enrollment in NU-SHIP.

MSTP students who have not yet received the PhD are considered dual-degree students and must submit their completed Coverage Selection Form directly to student.insurance@northwestern.edu or via fax to 847-491-4268. The MSTP Program Coordinator will share this form with students during the annual open enrollment period. MSTP students who have already received the PhD may submit their Coverage Selection Form online via CAESAR.

If students are covered by their parents or spouse, they do not have to enroll in NU-SHIP. In order to decline this coverage, they must provide a photocopy of their current enrollment in another plan. Returning students do not need to submit a Coverage Selection Form if they wish to keep their insurance selection from the previous academic year, and their prior selection will “roll over” to the next academic year based upon their continued class registration. However, they are encouraged to continue to submit the form every year to ensure they receive their new insurance ID cards in a timely manner.

After the enrollment period closes, a student’s insurance selection will remain on file through August 31st of the following year unless they experience a qualifying life event necessitating a mid-year change.

The MSTP covers the cost of NU-SHIP and dental insurance during the Preclinical and Clinical Phases of the program, and The Graduate School provides a subsidy to cover the cost of NU-SHIP during the Research Phase of the program as long as students maintain enrolled in three credits of TGS registration. Many graduate programs cover the cost of dental insurance during the Research Phase, and the MSTP will reimburse students for the dental insurance premium if their program does not. The MSTP pays for disability insurance coverage costs throughout a student’s time in the program.

The MSTP Office will provide students with information about how to enroll in NU-SHIP and reminders to enroll during the open enrollment periods, but it does not administer insurance plans or provide additional information about coverage. Students who have questions about coverage...
should visit the Student Health Insurance website or contact the Student Health Insurance Office. More information regarding benefits can also be found at www.aetnastudenthealth.com. Click on “Find Your School” and enter 812845 as the Policy Number.

1.9 University Fellowship & Scholarship Regulations

All students receiving financial support administered by the University must be registered full-time and in good standing as appropriate to their specific phase of training described throughout this handbook. This is consistent with the TGS policy regarding recipients of University assistance found here.

1.10 Taxes

Due to the possible financial implications, the MSTP Office does not provide tax advice to students. Students should refer to the following information from The Graduate School for more information: https://www.tgs.northwestern.edu/funding/taxes/.

2. MSTP Activities

This section provides information about regular MSTP programming events.

2.1 MSTP Annual Student-Faculty Retreat

The central event of the MSTP annual programming calendar is the two-day Student-Faculty Retreat, typically held on a Friday and Saturday in mid-July. While the format varies slightly from year to year, Retreat programming always involves a combination of scientific and social activities. One constant feature is that students in the Research and Clinical Phases of training present their work in either oral or poster presentations. Two talks by physician-scientists are another feature of the event—one keynote address from an established physician-scientist that discusses their research and clinical work and training path, and another talk, typically delivered by a Northwestern MSTP alumnus, that focuses on what a physician-scientist career looks like in a particular industry or setting. Each Retreat features a State of the Program address by the MSTP director, presentations from MSTP Student Council and other student groups, and breakout sessions that focus on various topics in research and clinical medicine. Dinners and recreational activities for students and faculty are organized each evening.

Planning for the annual Retreat, including speaker invites, recreational activities, and breakout groups, is determined by the MSTP Retreat Committee. This committee is comprised of members of the MSTP Student Council, students from the program, and MSTP directors and staff.

All students are required to attend the Retreat each year. Students who cannot attend must notify the MSTP Office in advance and request an excused absence. Excused absences include illness, family emergency, presentations at other major conferences or scientific events, or conflicts with M3 and M4 clerkship obligations (see below). Unexcused absences from the Retreat will result in a $500 reduction in the M4 Residency Award for each day a student does not attend.

Clinical Phase students (M3s and M4s) whose clerkships prevent them from attending are encouraged to work with the MSTP Office to see if they can receive permission from their clerkship directors to attend all, or some of, the Retreat events. As requested, the MSTP Office will reach out directly to clerkship directors on behalf of students to request an excused absence from clerkship responsibilities.
2.2 MSTP Coffee Talks with the Directors
Coffee Talks provide students with a casual opportunity to discuss issues relevant to the MSTP and physician-scientist training more broadly with the MSTP directors. Past sessions of the Coffee Talk have discussed the program training plan and time-to-degree statistics, PSTPs and residency applications, and developments in MD-PhD training at the national level.

2.3 MSTP Diverse Perspectives of Physician-Scientists Series
The MSTP Diverse Perspectives of Physician-Scientists Series is a forum that organizes meetings among scientists, physician-scientists, and current program trainees. The event is focused on facilitating discussions on diversity within science and medicine; the series aims to provide current students with exposure to the plethora of perspectives, backgrounds, and experiences of current professionals. Since the beginning of the forum in 2015, several renowned scientists and physician-scientists have presented to MSTP students as part of the annual Distinguished Guest Lecturer for the DPPS. These speakers have discussed various topics, including: identifying a scientific mission and career trajectory, advice on ways to address health disparities, and promoting more inclusion of underrepresented groups in academic leadership. The selection of the annual distinguished guest lecturer is organized by the MSTP Student Council.

2.4 MSTP Women’s Forum
The Women’s Forum is a series of conversations between researchers and current trainees that address the experiences of women in science and medicine. Women’s Forum events are designed to facilitate discussions between faculty and students from the MSTP, as well as other trainees pursuing careers in medicine and/or science. Among the Women’s Forum programming events is the annual Distinguished Guest Lecture, for which students invite a nationally-renowned speaker to the Chicago campus to speak with students from the MSTP and neighboring institutions. The Forum encourages speakers to discuss their career, including specific topics such as their academic training, selection of their career path, research, and experiences outside of their academic work. Past topics have included networking and mentorship, activism in science, and overcoming adversity in work and personal life. The selection of the annual distinguished guest lecturer is organized by the MSTP Student Council.

2.5 MSTP Fireside Chats
Fireside Chats are casual conversations between distinguished physician-scientists at Northwestern and MSTP students, typically hosted at the home of the MSTP director. These sessions allow students to connect with faculty in a relaxed setting and to learn more about the physician-scientist training path.

2.6 MSTP Visiting Scholar Series
MSTP students invite world-class physician-scientists to visit Northwestern to give a formal research seminar to the community and to meet informally with MSTP students over lunch or dinner. At the event, the scholar describes his/her career course, including the reasoning behind career decisions and advice on how MSTP students might approach them. Although there are many research seminars on the three campuses, the MSTP Visiting Scholar Conference brings all the students together in a social setting and allows them to learn first-hand the varied paths to successful careers in academic medicine.

2.7 Inter-Chicago MSTP Activities
The Northwestern MSTP works with other Chicago-area MSTPs (University of Chicago, Loyola University, University of Illinois at Chicago) to coordinate professional development and social events. This includes an annual dinner, lecture, and social organized by students and a conference
organized once every three years that brings together all MSTP students at these institutions. The MSTP Student Council selects one or two students each year to serve as the representatives to the Inter-Chicago MSTP group.

2.8 National MD-PhD Conferences
Northwestern MSTP students participate in the Annual National MD-PhD Student Conference, held in Colorado and hosted by the University of Colorado MD-PhD students, as well as the American Physician Scientist Association (APSA) National Conference held in conjunction with the joint meeting of the American Society for Clinical Investigation and the American Association of Physicians. These conferences provide a forum for interaction with MSTP students from throughout the country. Northwestern students have won awards for best oral presentation and best poster and have also received travel awards to participate in these motivating meetings.

The MSTP pays the conference registration fee for any student who would like to attend the annual APSA meeting, and the MSTP Program Coordinator will send out an email to invite students to attend the conference with instructions on how to register. The program also pays for two students to attend the Annual National MD-PhD Student Conference in Colorado each year. The program will send out an email to all students to invite those who would like to attend to notify the MSTP Office. In the case that more than two students indicate that they would like to attend, a decision about attending will be made based on seniority, with preference given to those in the later stages of the Research Phase and those who have not already attended the conference.

3. Outreach and Service Opportunities
The MSTP encourages all students to participate in outreach and service opportunities during their training. Some programs that MSTP students frequently work with are described in more detail below.

3.1 PRomoting Inner-city youth in Science and Medicine (PRISM)
PRISM is a mentorship program conceived and launched by MSTP students and funded by the MSTP. It aims to increase the scientific and medical knowledge of high school students from underserved communities while also providing them with exposure to careers in science and medicine. The program pairs MSTP student mentors with Chicago-area high school student mentees. Mentors and mentees meet twice a month throughout the academic year at the Robert R. McCormick Boys and Girls Club in the Uptown neighborhood of Chicago. During these sessions, students participate in modules that integrate didactic learning with laboratory experimentation, medical and scientific field trips, and career information sessions.

3.2 Science in Society
Science in Society supports high-needs, high-potential communities and works to strengthen STEM learning and mentorship opportunities for K-12 youth, teachers, and community groups. The center’s various initiatives, including the afterschool Science Club for middle school students, build long-term partnerships with community organizations and educators to collaboratively deliver inquiry-based science engagement for communities in need. More information can be found here.

3.3 The Glen and Wendy Miller Family Buddy Program
The Buddy Program, run by the Mesulam Center for Cognitive Neurology and Alzheimer’s Disease, pairs first-year medical students with people living with early-stage dementia for a mutually-enriching experience over the course of an academic year. The program provides a mentorship opportunity and social engagement for persons with Alzheimer’s dementia and other
forms of cognitive impairment. Additionally, the program offers an opportunity for both the person with dementia and family to share their experiences with the illness, while giving medical students the opportunity to get to know someone with dementia outside of the clinical setting. The Buddy Program is also open to pre- and post-doctoral students conducting lab research who may not have the chance to meet a person for which their research may one day benefit. More information can be found here.

3.4 Additional Opportunities at Northwestern University
Northwestern University coordinates numerous other opportunities for students. Some of those opportunities can be found on the following pages:

- Community Engagement through the Feinberg School of Medicine
- Volunteerism and Community Outreach through The Graduate School
- Weekly Volunteering Opportunities through Student Affairs
- Community Engagement Programs through Student Affairs
- Programs through the Center for Civic Engagement
- Volunteering Opportunities through the Northwestern Prison Education Program