Medical Scientist Training Program

Student Handbook

2014-2015
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Medical Scientist Training Program

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Part II: Advising

The MSTP aims to provide students with ample access to the advising resources needed along each and every step of the training program. The following outlines the MSTP advising system that is available in addition to Feinberg School of Medicine (FSM) and graduate program resources.

1. Program Leadership
The Program Director, Associate Directors and Assistant Director each play a large role in guiding students throughout every stage of the program. They work as a team to ensure the success of MSTP students by providing regular direction throughout the year and by serving as advocates for MSTP students across the university. They also meet regularly with students throughout the year. Associate Director Dr. Rice is committed to making sure students reach the appropriate milestones on time throughout the graduate phase of training and works proactively to ensure students have the resources they need to do so. The Assistant Director maintains an open-door advising policy to identify any issues and provide guidance to students in any stage of training. He assists with major transitions (beginning graduate phase, returning to medical school and preparing for residency) and utilizes resources across campus to ensure needs are being met. Additionally, the Assistant Director coordinates the MSTP annual MSTP Student Progress Report submission process.

2. MSTP Class Advisor
Each MSTP entering class is assigned a class advisor who helps the Directors guide students throughout their time in the program. The Class Advisor establishes long-term relationships with the students and meets annually with them to assist with rotation and thesis lab selections, review progress, complete the annual MSTP Student Progress Report, and offer general advice. A listing of the current class advisors is below:

<table>
<thead>
<tr>
<th>Class Entry Year</th>
<th>Class Advisor</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>Phyllis Zee, MD, PhD</td>
<td>Neurology</td>
</tr>
<tr>
<td>2013</td>
<td>Puneet Opal, MD, PhD</td>
<td>Neurology</td>
</tr>
<tr>
<td>2012</td>
<td>Seth Corey, MD, MPH</td>
<td>Medicine - Pediatrics - Hematology</td>
</tr>
<tr>
<td>2011</td>
<td>Dane Chetkovich, MD, PhD</td>
<td>Neurology</td>
</tr>
<tr>
<td>2010</td>
<td>Richard Longnecker, PhD</td>
<td>Microbiology – Immunology</td>
</tr>
<tr>
<td>2009</td>
<td>Robert Holmgren, PhD</td>
<td>Biochemistry, Molecular Biosciences</td>
</tr>
<tr>
<td>2008</td>
<td>Warren Tourtellotte, MD, PhD</td>
<td>Pathology</td>
</tr>
<tr>
<td>2007</td>
<td>Alan Hauser, MD, PhD</td>
<td>Microbiology – Immunology</td>
</tr>
<tr>
<td>2006</td>
<td>John Kessler, MD</td>
<td>Neurology</td>
</tr>
<tr>
<td>2005</td>
<td>William Schnaper, MD</td>
<td>Pediatrics</td>
</tr>
</tbody>
</table>

2.1. Advising Schedule and Reviews
Each class will meet with their MSTP Class Advisor at least once a year, usually in late spring, and review their
3. **Medical School College Mentor**
The College Mentors meet with students on a regular basis during the medical school years of the program and serve as a guide and confidante to students throughout their medical school experience. Additionally, the MSTP Directors provide additional guidance on medical school courses, and the residency application process, and they advise students on selecting and negotiating research residency positions.

4. **Research Advisor**
Arguably the most important advisor an MSTP student will have is the thesis advisor, with whom students meet frequently during the research phase of training. The thesis advisor has a deep impact on a student’s future, since productivity during the research phase is a major determinant of long-term commitment to and success in research.

Additionally, each student has a Thesis Committee of four or more faculty members who advise the student during the research phase of training and ensure milestones are met. The annual report of the thesis committee is included in the Annual MSTP Student Progress Report.

4.1. **Identifying an Advisor Timeline and Procedure**
See Part IV, Section 3.4.

4.2. **Changing an Advisor**
See Part IV, Section 3.4.1

5. **Clinical and PSTP Advisors**
A clinical advisor is assigned by the FSM who meets with the student on a regular basis during the clinical years of the program. The Directors also help each student assemble a small advisory committee of physician-scientist faculty and PSTP residents and, typically, the Department Chair in the clinical specialty. The Physician Scientist Training Program (PSTP) is a novel, postdoctoral version of the MSTP for MD-PhD and research MD residents and fellows. PSTP fellows from different specialties are recruited together and join in monthly group activities focused on career development. They constitute an increasingly important source of advising for Northwestern MSTP students and also serve as clinical preceptors for the MSTP Grand Rounds course.

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. Please refer to the CAPS website for more information: [www.northwestern.edu/counseling/index.html](http://www.northwestern.edu/counseling/index.html).
Part III: Program Requirements

The key expectation of each student admitted to the Northwestern MSTP is that they take full advantage of all Northwestern resources and couple that with personal responsibility to achieve optimal success. During each individual phase of combined training there are clear and tangible academic and/or research milestones every MSTP student must meet. These are outlined in more detail for each phase of training in subsequent pages of this handbook. In addition to the phase-specific expectations, MSTP students must meet the following conditions in all stages of training. If any of the conditions specified below are not met, financial aid may be withdrawn.

1. Remaining in Good Standing

   Students will remain in good standing in the program if they follow these guidelines:

   1. Register as a full-time student each required term.
   2. 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 annual MSTP Student-Faculty Retreat (see Part V: Satisfactory Academic Progress).
   3. Keep the academic record free of incomplete grades.
   4. Inform the MSTP Director of other sources of support not provided by the Program.
   5. Refrain from remunerative work unless approved in writing by the MSTP Director.
   6. Adhere to all regulations and policies as stipulated by The Graduate School and the Feinberg School of Medicine.
   7. Complete and submit the MSTP Progress Report on an annual basis.

2. Laboratory Rotations

   Students conduct research rotations during the summer before the M1 year and during the summer after the M1 year. Students will decide on their thesis labs after having completed an MSTP minimum requirement of two rotations or the required number of rotations specified by the students chosen graduate program. For every rotation, a rotation summary abstract that describes the research project is due two weeks after rotation completion to Dr. Peterson (j-peterson@northwestern.edu) and to the rotation advisor.

3. Required Courses and Activities

   Students are required to register in The Graduate School for the MSTP 401 course during the first two years of medical school and for the MSTP 402 course every year. Students are also required to attend the Student-Faculty Retreat every year.

   3.1. MSTP 401 - Topics in Molecular and Translational Medicine

   MSTP 401 - Topics in Molecular and Translational Medicine (aka “MSTP Journal Club”) meets most Fridays, 1-2:15 PM (M2) and 2:15-3:30 PM (M1). This 2-year course helps students become familiar with historical and
contemporary topics in molecular and translational biology, as well as develop grant-writing, peer-review and presentation skills. Students in their first 2 years of medical school are required to register in The Graduate School for this course every quarter and attend every scheduled class.

3.2. MSTP 402 - Grand Rounds
MSTP 402 - Grand Rounds typically meets monthly on Wednesday evenings from 5:30 - 6:45 PM. The goals of this course are to acquaint students with some unsolved problems in modern medical research, help provide continuous exposure to clinical medicine throughout student training, and help students give presentations. Students are required to register in The Graduate School for this course every quarter and attend all sessions of this evening course during all years of training. Students will present at this conference at least once during the research and clinical phases of training.

3.3. MSTP 590 - Research
Students are required to register for MSTP 590 - Research for three units of credit during the summer quarters before and after the M1 year only to maintain proper registration.

3.4. Registration
It is important to register for these courses each quarter to avoid discontinuation from The Graduate School (TGS). If this does occur, students are responsible for applying for readmission and paying the applicable reinstatement fee. The following webpage provides more information on readmission.
http://www.tgs.northwestern.edu/academics/academic-services/readmission/index.html

3.5. MSTP Student-Faculty Retreat
This two-day overnight retreat involves a combination of scientific and social activities that usually is held at a resort outside of Chicago. While the format varies slightly from year to year, a constant feature is that all students in the research and clinical phases of training present their work in either oral or poster presentations. The students also invite two physician-scientists as keynote speakers. Each gives a brief research talk and discusses his/her career path. Recreational activities round out the weekend.

Unexcused absences from the retreat will result in a $500 deduction in the M4 residency interview travel award.

4. Graduate Program Requirements
MSTP students are expected to fulfill all of the requirements of any graduate student with respect to laboratory, graduate program and departmental obligations. Examples include: 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.). Each program may differ in their requirements and may have specific requirements for MSTP students.

4.1. Student Seminars
MSTP students are expected to present their research findings at least annually in a formal setting, such as a departmental seminar series or a scientific conference. 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. In addition, if there are special courses or other educational opportunities that would aid in scientific development, the MSTP may be able to contribute to the cost of these activities.
4.2. Responsible Conduct of Research Course (RCR)
MSTP trainees at Northwestern are required to take one of three Research Ethics Responsible Conduct of Research (RCR) courses offered by the three major life science PhD programs (DGP, IBiS, and NUIN) during the PhD phase of their training. The RCR course is a formal requirement of the PhD program curriculum and it must be satisfactorily completed by the end of the third year of PhD training (end of the second year for MSTP students). MSTP students not directly affiliated with one of the main life science PhD programs (i.e., BME, CHEM, ChBE) must complete one of the offered RCR courses prior to the end of their second year in the PhD phase of training. These courses are:

**NUIN 490 Responsible Conduct in Neuroscience Research** – Offered twice per year; once on the Evanston campus and once on the Chicago campus.

**IBiS (Biol Sci) 423 Ethics in Biological Research** – Offered once a year on the Evanston campus.

**DGP 494 Colloquium on Integrity in Biomedical Research** – Offered once a year on the Chicago campus.

NIH requires that all trainees of programs supported by a T32 training grant must receive RCR training no longer than every 4 years. MSTP students will be required to take an RCR refresher course before returning to clerkships to remain in compliance with this rule. Students will be reminded of this requirement prior to returning to clerkship and enrollment in the refresher courses will be coordinated through the MSTP office.

5. Annual Progress Reports
MSTP students are required to submit an MSTP Annual Student Progress Report to the office each year. One week prior to meeting with their MSTP class advisor, each student should submit five items to the MSTP office.

1. An updated NIH biosketch.
2. An updated CV.
3. MSTP Student Milestones document.
4. A Graduate Phase Progress Report. Progress reports submitted to a graduate program can be used for part or all of the MSTP progress report here, so as to not duplicate efforts.
5. A brief statement regarding their progress in clinical training and maintenance of clinical skills.

6. Fellowship Application
MSTP students are required to apply for an external fellowship. Students will receive a monetary reward for a successful application resulting in a funded fellowship.

7. First Authored Paper
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. While the publication requirement may vary among the NU graduate programs, the MSTP holds this as a uniform policy for all MSTP students.
8. Return to Clerkships Form
MSTP students are required to complete the Return to Clerkships Form and have it signed and complete all PhD requirements before they begin clerkships.

9. 22.5 months of funding of clinics
The MSTP will support 22.5 months total time spent in clinical clerkships. This includes all required and elective clerkships, as well as time spent studying for step 2, residency interviewing, and time spent doing research during M3 and M4 years.
Part IV: Program Overview - Milestones, Phases, and Timeline overview

1. Overview of the Course of Study
MSTP students at Northwestern complete both doctoral degrees at Northwestern, earning the MD from the Feinberg School of Medicine and the PhD degree from The Graduate School in one of five participating Northwestern colleges—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 fulfill the degree requirements of whichever program they choose for the graduate phase of training.

MSTP students proceed through three interrelated phases illustrated in the table below. Most students complete the “2 + 3½ + 1½” course of study comprising the preclinical phase of training during the first two years, followed by Step I of the USMLE, Introduction to Clinical Clerkships and a summer in the hospital completing one or two clinical clerkships. The next phase of training is the research phase for three or more years to fulfill the requirements for the PhD degree. Finally, students complete the clinical phase of training comprising five quarters of hospital-based clinical clerkships and Step 2 of the USMLE.

<table>
<thead>
<tr>
<th>MSTP Course of Study</th>
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<tbody>
<tr>
<td><strong>Feinberg School of Medicine</strong></td>
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<tr>
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Northwestern University Feinberg School of Medicine
Medical Scientist Training Program
2. Pre-M1/Before you Arrive

2.1. MSTP Financial Aid Package
The MSTP financial aid package includes an annual stipend ($29,000 in 2014-2015) that will increase annually consistent with increments within the University Fellowship system; full tuition for the duration of training; and a one-time moving allowance of $500. The MSTP program will also cover the NU student health insurance and disability insurance costs for the duration of training.

2.2. Northwestern Email Account and Net ID
Students will 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 will be sent via email. The email will provide 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 will be granted access to CAESAR (http://www.northwestern.edu/caesar/), the online student information portal.

2.3. Transcripts
Students should request three final official transcripts from all colleges and universities that they have attended. Each institution should send three official transcripts (one transcript per sealed envelope) directly to the MSTP Office by August 1st. The final transcripts from a student’s baccalaureate-granting institution must show the name of the bachelor degree they received and the date. The transcripts will be distributed for the students to both the Feinberg School of Medicine and The Graduate School. Transcripts should be submitted to the address below:

Northwestern University MSTP
Attn: Rebecca Lamarre
303 East Chicago Avenue
Morton Building 1-670
Chicago, Illinois 60611

2.4. Payroll and NU E-Verify
The Program Manager will prepare the payroll paperwork to start paying a student’s stipend effective the day they begin their first pre-M1 summer research rotation. To complete the Payroll registration process, students will also need to fill out the documents below. Students should return these documents to the MSTP Office so that they can be submitted along with their MSTP Payroll forms.

1. Personal Data Form, which should be returned by PDF/Fax at the earliest convenience.

2. Direct Deposit Application

3. New W-4 if a student would like additional taxes taken out.

All required Payroll forms can be found at the following link:
http://www.northwestern.edu/hr/new-employees/payroll-forms.html

2.5. 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 rotations.** Students begin by logging onto the website below and creating a username and password.  
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/Center: 4581 MED-Finance/Budgt/Payroll  
Click Start I-9

Section #2 must be done in person **on or before the third day in the lab** and will require students to bring their original ID(s) to verify their identity and employment eligibility. This can be done in the MSTP office or in the Payroll Office. There is a complete list of acceptable documents at the end of Section #1, but typically a US Passport (one document) is used and if that is not available, a drivers license AND social security card (both are needed) are also commonly used.

2.6. **Registration for Courses**
New students can register for The Graduate School (TGS) courses via the Caesar system beginning the first day of summer quarter. **Students will need to register for MSTP 590 Research for 3 credit units.** This registration will need to be completed by the end of the first week of the summer quarter regardless of whether students are beginning their rotations at a later date. Students should contact Becca Lamarre, Program Manager (r-lamarre@northwestern.edu) with any issues related to course registration.

2.7. **Proof of Health Insurance**
Proof of health insurance is required for all NU students at the time of matriculation and annually thereafter. New students are required to complete the online Coverage Selection Form (CSF) to either enroll in or waive the NU/Aetna plan. Failure to complete the online Coverage Selection Form will result in automatic enrollment in the NU/Aetna plan. If students are covered by their parents or spouse, they do not have to enroll in Northwestern University’s student health insurance plan. In order to decline Northwestern's student health insurance plan, they will have to 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. Their prior selection "rolls over" to the next Academic Year based upon their continued class registration. MSTP covers the cost of the student health plan during the medical school years and The Graduate School provides a subsidy during the PhD phase to cover this cost. The MSTP pays for disability insurance coverage costs throughout a student’s time in the program. For more information regarding benefits visit [www.aetnastudenthealth.com](http://www.aetnastudenthealth.com). Click on “Find Your School” and enter 812845 as the Policy Number.

2.8. **U-Pass and Student Activity Fees**
A CTA University Pass (U-Pass) is a discounted fare card that replaces cash/other transit cards for all CTA fares and does not require a transfer or surcharge for unlimited rides all day, every day. 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 pay the TGS Activity fee ([www.tgs.northwestern.edu/documents/grad-life/Activity%20Fee%20FAQ.docx](http://www.tgs.northwestern.edu/documents/grad-life/Activity%20Fee%20FAQ.docx)), of $110 per quarter, the
majority of which funds the U-Pass. The remaining cost contributes to expenses for legal services from an 
attorney to assist with issues such as landlord, credit or debt problems and traffic violations and to support the 
community building grant activities like TGS Night Out for all graduate students. All medical students are also 
automatically enrolled in the CTA U-Pass program. Medical students pay a yearly activity fee of $396 to cover 
this cost. When students arrive to Feinberg in the fall for orientation passes are distributed by Linda Daniels 
from the Office of Medical Education, l-daniels2@northwestern.edu. Linda will send an email with the date, 
time and location where students can pick-up their U-Pass.

2.9. Taxes
Because of possible financial implications, the MSTP Office does not offer any specific tax advice. Please refer 
to the following webpage published by the NU Office of Human Resources for more information. 
http://www.northwestern.edu/hr/payroll/tax/

Additionally, the following IRS webpage may be helpful: 
http://www.irs.gov/Individuals/Students

2.10. Pre-M1 Summer Laboratory Rotations
Students explore the range of research opportunities first by reviewing faculty research descriptions and then 
through conversations with the Directors and Class Advisor. Each entering student will have met with 10 or 
more faculty members during the interview and second visit. The initial summer rotation is often arranged with 
a faculty member met during the Second Look weekend. Final decisions about research rotations are made by 
each student jointly with the Directors and Class Advisor.

For every rotation, a rotation summary abstract that describes the research project is due 
two weeks after rotation completion to Dr. Peterson (j-peterson@northwestern.edu) and to the rotation 
advisor. In addition, students and rotation advisors will complete an MSTP Student Research Evaluation 
Survey. The Assistant Director will provide more details about the survey following the rotation.

2.11. MSTP Student-Faculty Retreat
Pre-M1 students, although not required, are all strongly encouraged to attend the Student-Faculty Retreat. This 
two-day overnight retreat involves a combination of scientific and social activities that is usually held at a resort 
outside of Chicago. While the format varies slightly from year to year, a constant feature is that all students in 
the research and clinical phases of training present their work in either oral or poster presentations. The 
students also invite two physician-scientists as keynote speakers. Each gives a brief research talk and 
discusses his/her career path. Recreational activities round out the weekend. The retreat provides an 
opportunity for the entering M1 class to meet their fellow classmate as well as the rest of the MSTP student 
body.
3. Medical School: Phase 1, M1-M2 (1st and 2nd years of study)

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 Directors who will work with students to determine the cause and provide support to ensure future success.

3.1. Feinberg School of Medicine Curriculum, Outline

The Feinberg School of Medicine (FSM) MD curriculum is described here: [http://www.feinberg.northwestern.edu/education/curriculum/index.html](http://www.feinberg.northwestern.edu/education/curriculum/index.html)

The basic outline of the curriculum is shown below. Phase 1 lasts two years and Phases 2 and 3 are a year in length each.

### Phase 1
- **Science in Medicine**
- **Health & Society**

### Phase 2
- **Clinical Medicine**

### Phase 3
- **Professional**

3.2. MSTP Courses

In addition to first and second year medical school coursework, M1 and M2 students will be responsible for registering for and participating in the following MSTP Courses each quarter:

3.2.1. **MSTP 401 - Topics in Molecular and Translational Medicine**

MSTP 401 - Topics in Molecular and Translational Medicine (aka “MSTP Journal Club”) meets most Fridays, 1-2:15 PM (M2) and 2:15-3:30 PM (M1). This 2-year course helps students become familiar with historical and contemporary topics in molecular and translational biology, as well as develop grant-writing, peer-review and presentation skills. For the M1 section of the course, a student pairs with a faculty preceptor whose research interests them. The student and preceptor jointly decided on the article to present. The M1 section provides an opportunity for students to interact with faculty and set up potential summer lab rotations.

The M2 section of Journal Club differs from the M1 section in that the M2 students present journal articles with their thesis advisors as preceptors. This provides the opportunity for students to begin working with their chosen PhD advisors on formulating their future thesis work. In the Winter/Spring of the M2 year, students will compose and present a mock NRSA grant proposal with the support of their thesis advisors. This exercise helps students develop grant writing skills and provides the foundation for their thesis proposal. In addition, the mock NRSA is commonly used as the basis for a submitted NRSA fellowship.

3.2.2. **MSTP 402 - Grand Rounds**

MSTP 402 - Grand Rounds typically meets monthly on Wednesday evenings from 5:30 - 6:45 PM. The goals of this course are to acquaint students with some unsolved problems in modern medical research, help provide continuous exposure to clinical medicine throughout student training, and help students give presentations.

3.2.3. **MSTP 590 - Research**

Students are required to register for this course for three units of credit to maintain proper registration during the summer quarters before and after the M1 year only.
3.3. Laboratory Rotations

Students conduct research rotations (4 week minimum length) during the summer before the M1 year and during the summer after the M1 year. Students will decide on their thesis labs after having completed a minimum of two rotations. Advising on this important process begins with acceptance of an offer of admission. Students explore the range of research opportunities first by reviewing faculty research descriptions and then through conversations with the Directors and Class Advisor. Each entering student will have met with 10 or more faculty members during the interview and second visit. The initial summer rotation is often arranged with a faculty member met during the Second Look weekend.

During the spring of the M1 year, students will begin meeting with faculty to choose Pre-M2 Summer rotations. The MSTP leadership will play an advisory role in helping students select rotations. Although the pre-M1 summer rotation is often arranged with a faculty member met during admissions season, rotations after the beginning of the M1 year are only arranged after the student has met face-to-face with several faculty members. Final decisions about research rotations are made by each student jointly with the Directors and Class Advisor.

For every rotation, a rotation summary abstract that describes the research project is due two weeks after rotation completion to Dr. Peterson (j-peterson@northwestern.edu) and to the rotation advisor. In addition, students and rotation advisors will complete an MSTP Student Research Evaluation Survey. While most students choose thesis advisors by the end of the summer between the first and second years and in some cases, even engage in research during the M1 and M2 years, occasionally a third rotation occurs in or after the M2 year.

3.4. Choosing an Advisor

Following the completion of lab rotations, MSTP students should discuss their options of a thesis advisor with the Assistant and Associate Director and come to a final decision by the end of the fall quarter of their M2 year. Once the decision is made, students should inform their prospective advisor of their decision and confirm the advisor is willing and able to let the student join their lab. The Assistant director will send a confirmation letter and a Financial Support Agreement Form to the newly chosen advisor. The form defines the stipend and tuition responsibility of the advisor to the student once the student enters the graduate phase of training. The advisor and chairman of their department are required to sign the form before a student begins in the lab.

Students are encouraged to get into the lab as much as possible once a thesis lab has been chosen. A number of NU MSTP students have been able to publish one or more papers by the end of the M2 year by doing research part-time (12-15 hours/week) throughout the M1 and M2 years. Students should use their own judgment about when to begin part-time research.

3.4.1. Changing an Advisor

If a situation arises in which a change in advisor becomes necessary, students should notify the Assistant Director immediately and the 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. If a student is unable to find an alternative advisor, the student may fail to make satisfactory academic progress towards their PhD and will be subject to consequences of doing so, see http://www.tgs.northwestern.edu/academics/academic-services/satisfactory/ and Part V of this handbook.
3.5. Choosing a Graduate Program

Every advisor is associated with one or more of the following participating umbrella or departmental PhD programs: The Driskill Graduate Program in Life Sciences (DGP), the Interdepartmental Biological Sciences Program (IBiS), the Northwestern University's Interdepartmental Neuroscience PhD Program (NUIN), Biomedical Engineering Program (BME), Department of Chemistry (CHEM), Department of Chemical & Biological Engineering (ChBE), or Department of Materials Science and Engineering (MSE). The student chooses a thesis advisor first, and if the advisor is affiliated with only one program, the student will join that particular program. If the chosen advisor is affiliated with more than one program, the student will then choose a PhD program to join based on preferred course offerings, number of course requirements (refer to graduate courses in section 4.1.1) and other training opportunities. After consulting with their thesis advisor, students will have to decide on one of the multiple programs the advisor is associated with and should notify the MSTP Assistant Director and the Director of the chosen graduate program as soon as this is decided.

3.5.1. Driskill Graduate Program (DGP) and Interdepartmental Biological Sciences Program (IBiS)

These programs are based primarily in Chicago (DGP) and Evanston (IBiS) and include faculty working in all areas life sciences research, from fundamental mechanisms of biological macromolecular structure and function, molecular biology and genetics, cell and developmental biology, biochemistry, physiology, biotechnology, nanotechnology and engineering. Many faculty members study these fundamental processes as they pertain to a variety of human diseases, including cancer, heart disease, neurologic disease, reproductive disease and infectious disease.

Web site:
DGP: http://www.biology.northwestern.edu/igp
IBIS: http://www.ibis.northwestern.edu

3.5.2. Northwestern University's Interdepartmental Neuroscience PhD Program (NUIN)

The NUIN Program is a university-wide program devoted to normal and abnormal function of the nervous system at all the levels described for IBiS and IGP.

Web site:
http://nuin.northwestern.edu

3.5.3. Biomedical Engineering (BME)

This university-wide program is devoted to the exciting and fast-moving field of biomedical engineering with its ever-changing boundaries. General areas of concentration include Neural Engineering and Rehabilitation, Cardiopulmonary and Vascular Engineering, Materials, Cells, and Tissues and Imaging and Biophotonics.

Web site:
http://www.bme.northwestern.edu

3.5.4. Department-Based PhD Programs

The participating department-based PhD programs are:

Chemistry
Web site:
http://www.chemistry.northwestern.edu
3.6. USMLE Step 1
After the conclusion of M2 classes, all MSTP students are required to complete the USMLE Part I at the end of April before beginning summer clerkship. It is recommended that students schedule the exam in the third week of April to allow for a break the following week.

3.7. Summer Clerkships
The completion of at least one clinical clerkship during the summer before beginning full-time graduate study is required. There are a number of reasons for doing clinical clerkships before beginning graduate study:

- to solidify clinical skills acquired during M1-M2 years
- to experience patient care from beginning (admission H & P) to end (discharge)
- to learn key M3 survival skills (how to do everything and where to find everything in the hospital)
- to gain experience for continuing clinical experience (Education-Centered Medical Home (ECMH), community clinics, morning report, inpatient work, etc.)
- to gain experience making clinical presentations
- to develop relationships with attending physicians with whom students can maintain clinical connections during the research phase
- to reduce the anxiety of returning from graduate studies
- to reduce time to complete clinical requirements upon return from graduate school, offering the possibility of returning as late as June while still allowing enough time to graduate the following May.

The five-day course, Introduction to Phase 2 will be given at the end of April/beginning of May. More details regarding this course is available from the Office of Medical Education.

3.8. Requirements for Academic Progress
All MSTP students must meet all Feinberg School of Medicine requirements and remain in good academic standing as defined by FSM to remain in good standing in the MSTP. Any failure to meet these requirements or remain in good academic standing will result in failure to make Satisfactory Academic Progress (See Part V: Satisfactory Academic Progress).

3.9. Summer Financial Support and Vacation Policy
The MSTP will pay students' FSM or TGS tuition, stipend, health and disability insurance all summer, including one week of vacation. Depending on the length of a student’s summer clerkship, the MSTP will continue to pay students’ stipend into the fall quarter for up to three months. Afterward, students' advisors will be fully responsible for their stipend in addition to TGS tuition and health insurance. MSTP will continue to pay students' disability insurance throughout their time in graduate school. The MSTP office will communicate with students' advisors and academic departments on their behalf to make the financial transition seamless.
4. The Graduate School and the Research phase

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. Students are expected to work with their advisors and independently to develop the non-experimental research skills of manuscript review, grant and manuscript preparation, and generation of research presentations for a variety of audiences with varying time limits.

Recent MSTP graduates have published an average of 3 first-author (range = 1-8) and 5 middle-author (range = 1-18) papers in three to four years of training. Keys to achieving these goals are:

- Careful choice of the research projects, typically including a low-risk project leading to solid publications in the specialty area and a higher risk project that may potentially be published in a more general journal if successful.
- Early and constant focus on publication-oriented experimentation.
- Hard work on the part of the student, including work on evenings and weekends.

Finally, regarding time to degree, the goal of the research phase is not to finish as quickly as possible. Rather, it is to accomplish a body of published work that serves as the commodity of science which reflects research accomplishment. Although we expect that this can be accomplished in 3-4 years, it may take longer if the three points given above are not followed.

4.1. Graduate School: G1 (3rd year of study)

The first year of the graduate phase will include both research and fulfilling graduate course work requirements.

4.1.1. Graduate Courses

Students will be responsible for meeting the program course requirements as well as the Graduate School residency requirement. MSTP students must complete the TGS residency requirement of eight quarters of coursework at the full tuition level. This can be a combination of courses and 590 research registrations.

Significant course credit is given to MSTP students so that the course requirements are minimal. MSTP students in DGP, IBiS, and NUIN receive six units of credit for coursework completed in the first two years of medical school and must complete at least three graded courses in TGS (versus the nine that are required for all other PhD students). Although students must take at least three courses in DGP, IBiS, or NUIN, they are encouraged to take more. Requirements in the chemistry and engineering programs are greater.

The course schedule is made available in CEASAR 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.

4.1.1.1. MSTP 402 - Grand Rounds

MSTP students in the graduate phase must continue to register in this course every fall, winter, spring, and summer quarter and attend all sessions of this evening course during all years of training. Graduate students will present at this conference at least once during the research phase of training.
4.1.1.2.  Responsible Conduct of Research

MSTP trainees at NU are required to take one of three Research Ethics Responsible Conduct of Research (RCR) courses offered by the three major life science PhD programs (DGP, IBiS, and NUIN) during the PhD phase of their training. The RCR course is a formal requirement of the PhD program curriculum, and it must be satisfactorily completed by the end of the second year of PhD training for MSTP students. MSTP students not directly affiliated with one of the main life science PhD programs (i.e., BME, CHEM, ChBE) must complete one of the offered RCR courses prior to the end of their second year in the PhD phase of training. These courses are:

NUIN 490 Responsible Conduct in Neuroscience Research – Offered twice per year; once on the Evanston campus and once on the Chicago campus.

IBiS (Biol Sci) 423 Ethics in Biological Research – Offered once a year on the Evanston campus.

DGP 494 Colloquium on Integrity in Biomedical Research – Offered once a year on the Chicago campus.

NIH requires that all trainees of programs supported by a T32 training grant must receive RCR training no longer than every 4 years. MSTP students will be required to take an RCR refresher course before returning to clerkships to remain in compliance with this rule. Students will be reminded of this requirement prior to returning to clerkship and enrollment in an RCR refresher courses will be coordinated through the MSTP office.

4.1.2. Qualifying Examination/advancing to doctoral candidacy

All graduate programs require students to pass a qualifying exam to advance to doctoral candidacy. The MSTP requires that all MSTP students in DGP, IBiS, and NUIN take their qualifying exam by the end of the summer after the first year in graduate school. This is due to MSTP requirements and the milestone deadlines set by TGS (see: http://www.tgs.northwestern.edu/academics/academic-services/satisfactory/). MSTP students begin their career in TGS when they begin their M1 year. TGS gives students 3 years to advance to candidacy, which equates to the end of the summer quarter of G1 year for MSTP students. For students in DGP and IBiS, the qualifying exams are usually scheduled for the spring and summer and are therefore conducive to the milestone timeline. The NUIN qualifying exams are typically scheduled for late summer and early fall, resulting in MSTP students advancing to candidacy very close to the 3-year milestone deadline. If possible, NUIN MSTP students should coordinate with the MSTP and NUIN Assistant Directors to ensure that they successfully complete the exam and all paper work is filled for advancing to candidacy prior to the beginning of the fall quarter of the G2 year. If this milestone deadline is breached, students will be placed on TGS probation. If a student is at risk of missing the milestone deadline, they should be prepared to submit a petition for extension of the deadline.

http://www.tgs.northwestern.edu/documents/academic-services/Petition.pdf

Because the Departmental and engineering programs (Chem, BME, ChBE, and MSE) require completion of 6-9 graduate courses, MSTP students in these programs typically complete their qualifying exams during the G2 year in graduate school. This results in MSTP students missing the TGS milestone deadline. Students in these programs should coordinate with the MSTP Assistant Director and the Director of Graduate Studies of their program to ensure they are not placed on probation for failing to submit the proper deadline extension paper work.

4.1.3. Thesis Committee and Thesis Proposal

Following successful advancement to doctoral candidacy, MSTP students should form their thesis committee and present a thesis prospectus according to the requirements described by their graduate program. The TGS
milestone deadline for thesis prospectus presentation for MSTP students is the end of the summer quarter of their G2 year. A student will be placed on TGS probation if they fail to meet this deadline and should inform the MSTP Assistant Director immediately if they are at risk of doing so and ensure they are not placed on probation for failing to submit the proper deadline extension paper work.

MSTP students must convene with their thesis committees at least annually and must submit a written summary of the meeting as part of the MSTP Annual Student Progress Report to the MSTP Office.

4.1.4. Annual Progress Reports
MSTP students are required to submit an MSTP Annual Student Progress Report to the office each year. During the graduate phase, MSTP progress reports will include the progress report that is submitted to the graduate program following a thesis committee meeting.

The MSTP annual progress report is due one week prior to meeting with their MSTP class advisor, and each student should submit five items to the MSTP office.

1. An updated NIH biosketch
2. An updated CV
3. MSTP Student Milestones document
4. A Graduate Phase Progress Report. Progress reports submitted to a graduate program can be used for part or all of the MSTP progress report here, so as to not duplicate efforts.
5. A brief statement regarding their progress in clinical training and maintenance of clinical skills.

4.1.5. Fellowship Applications
MSTP students are required to apply for an external fellowship. The aim of the mock NRSA developed during MSTP 401 is to serve as an initial draft of an NRSA that will be submitted during the research phase. Students will receive a monetary reward for a successful application resulting in a funded fellowship.

4.1.6. Teaching Assistantship
MSTP students are required to fulfill the TA requirement 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.

4.1.7. Clinical Activities
There are several opportunities for MSTP students to engage in part-time clinical activities during research training as part of their continuing clinical education. These activities are coordinated through the Office of Medical Education. The Education-Centered Medical Home (ECMH): (http://www.feinberg.northwestern.edu/education/curriculum/learning-strategies/index.html) is one such program, which offers an excellent opportunity to gain a clinical continuity experience during the research phase and is strongly encouraged for MSTP students.

4.2. Graduate School: G2 (4th year of study)
The second year of the graduate phase will focus mainly on dissertation research and for some students, finishing graduate course work requirements. Advancement to doctoral candidacy usually occurs following the completion of graduate course work requirements and successful completion of the qualifying exam.
4.2.1. **Student Seminars**

MSTP students are expected to present their research findings at least annually in a formal setting, such as a departmental seminar series or a scientific conference. 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. In addition, if there are special courses or other educational opportunities that would aid in scientific development, the MSTP may be able to contribute to the cost of these activities (see Part VI: Program and Administrative Matters, Section:1.10).

4.3. **Graduate School: Advanced Graduate year(s), G3+ (5th and possibly 6th years of study)**

The third year and beyond of the graduate phase will focus on dissertation research. Students will be required to publish at least one peer-reviewed first-author research article (not a review) and complete all PhD degree requirements prior to returning to the clinical phase of training.

4.3.1. **Progress Requirements**

MSTP students are required to make satisfactory progress toward the completion of their PhD. Thesis committee meetings and the annual MSTP progress report will be used to monitor the progress of students. Any failure to meet the standards of satisfactory progress toward degree completion set by the graduate program the student has joined resulting 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 (see Part V: Satisfactory Academic Progress).

TGS policy on adequate academic progress and dismissal (exclusion) can be found at:

http://www.tgs.northwestern.edu/academics/academic-services/satisfactory/

4.3.2. **Requirements for returning to medical school**

The design of the MSTP and all of the funding mechanisms that support it (T32, institutional support) is to facilitate training as a physician-scientist in the shortest amount of time possible. This profoundly benefits students, allowing them to move forward in their careers while still young. This also makes Medical Scientist Training Programs stronger, by producing effective trainees at earlier points in their lives and by preserving funding, thereby allowing more and better-supported trainees. FSM and TGS recognize the special needs of MSTP students to graduate as quickly as possible and have made accommodations to requirements to expedite graduation. For FSM, this is a 12 week reduction in requirements to graduate. MSTP students must complete 40 weeks of “M3” clerkships (Medicine, Surgery, Primary Care, Psychiatry, Pediatrics, OB/Gyn, and Neurology), 14 weeks of “M4” clerkships (Emergency Medicine, ICU, PM&R, Sub internship), and 4 weeks of elective. This can be completed in 14.5 contiguous calendar months.

For budget and programmatic reasons, the MSTP cannot provide stipend support for time in the clinical phase beyond 22.5 months. This includes time at FSM following completion of the PhD plus any time spent in clerkships before entering the graduate phase. If students elect to return to clinical phase at a time that will result in greater than 22.5 months in the clinical phase, the MSTP Directors will assist with fellowship applications and help students find suitable options for supporting themselves beyond 22.5 months.

4.3.2.1. **Prerequisites**

1. MSTP students should inform the office at least 10 months before planned return to establish mentoring and logistics of the transition.

2. Students must attend the annual Return to Clerkships meeting. This meeting will address the logistics of returning to the clinic and the forms required for returning. It also provides an opportunity for students to
ask questions of the MSTP and Augusta Webster, MD, Office of Medical Education (AWOME) leadership regarding the transition.

3. Following the Return to Clerkships meeting, students will schedule a meeting for individual counseling with MSTP director to discuss ideas about choice of specialty (it will inform the return timeline) and the process of scheduling clerkships. Those students planning on pursuing a non-traditional residency (surgical subspecialty) may need to schedule a joint meeting with the MSTP director and the AWOME Deans for counseling.

4. 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 clerkships. The Return to Clerkships Form must be completed and signed by all listed parties before students return to clinical clerkships.

4.3.2.2. Return Options
MSTP Students may choose from the following three pathways outlined below.

1. “Minimal” - Students return in January (beginning of Winter block). This allows 16 calendar months of required M3 and M4 rotations plus one elective and 1.5 months of flex time that can be used for residency interviewing and studying for the USMLE STEP 2 exam. This return maximizes research productivity and still provides full clinical training. It is appropriate for most MSTP students, and fulfills the goal of moving their career forward in as little time as possible, while fulfilling the programmatic goal of limiting time to degree; however, this option offers minimal time for residency interview travel and limits flexibility for schedule changes.

2. “Flexible” - This return is during the fall quarter (end-Sept. thru December) and permits supplementary time in the clinical phase. This time is useful for scheduling electives that will enhance residency applications (important for certain specialties), and allow time for interviews and board preparation.

3. “Maximal” - This return is prior to the fall quarter (July thru Sept.). Reasons justifying returns before the beginning of the Fall I clerkship block include a desire to do research in a specific clinical area or complete extra clinical electives that are specifically necessary for matching in certain specialties. Most specialties with competitive matches do not have a strong track record of supporting physician-scientist careers, but the NU MSTP will support this pathway under certain circumstances. Students returning before the fall quarter must have a written plan detailing planned scholarly activities and justifying the reasons for the early return that will be reviewed for approval by the Directors.

4. “Alternative” - Students may not be able to make the July-January window. As of 2013, FSM now allows graduation with an MD in December (but still attend commencement in May of the following year). Students choosing this option can pursue postdoctoral fellowships or potentially enter residency programs off-cycle for the December-June window following completion of the combined degrees.

4.3.2.3. Exceptions
Students who miss the July – January return window and do not take advantage of the December graduation can certainly begin clinical clerkships outside the window, but MSTP stipend support will be provided for a maximum of 22.5 months in the clinical phase. The return window shall be adjusted appropriately for the many students who have completed clinical clerkships (and with future curriculum changes), but will be limited to a total of 22.5 months. Students who elect to spend time in the clinical phase beyond 22.5 months will be responsible for securing funding for the additional time. There are several avenues available for support, and
the MSTP office will help with fellowship applications or arranging other support mechanisms outside the MSTP. Although the defined window will complicate plans for some students, there are several justifications for the rule. They include:

1. A defined window helps students to plan and encourages focus on meeting deadlines.

2. Extra time as a medical student in the clinical phase (beyond 22.5 months) is unnecessary for a student's career.

3. If extra time is logistically necessary, a student's career will benefit more from remaining in the lab (writing papers, contributing experimentally as a trained scientist) than from extra clinical time.

4. The program benefits from reduced time to degree; having no pressure to finish in a defined window will result in longer times to degree.

5. Funds available to support MSTP stipends are finite. Supporting unnecessary excess time in clinical phase will take away necessary funding for other students (i.e. reduce the number of positions).

4.3.2.4. Return Time and Specialty Consideration
A Medical School Performance Evaluation (MSPE) letter will be drafted by students in conjunction with the Office of Medial Education at the beginning of the M4 year that will excerpt comments from students' completed clinical rotations and end with a statement about their fitness for residency based upon class ranking. Currently, class ranking is based upon performance in the 40 weeks of M3 clerkships and electives. If students return in January, they will not have completed the M3 clerkships. The MSTP director and AWOME Deans meet and discuss how MSTP students who have not completed the 40 weeks of M3 clerkships are ranked and compared to the entire rising M4 class to ensure MSTP students are treated fairly. However, with January return there will still be less information in the MSPE than "regular" FSM students. Students will have the opportunity to update residency programs with completed clerkships before residency matching in January. Most importantly, an MSTP student's PhD will put them in a class of applicants that will be favorably ranked by most academic programs, regardless of the clerkship evaluation “deficiencies”. Most academic residency programs in most specialties recognize the particular value of MSTP students, as well as their unique timing issues affecting the MSPE, and the January return does not negatively affect the ranking of MSTP students by residency programs. However, the minimal curriculum will not be the optimal route for students applying for some competitive specialties. These include radiation oncology, dermatology, and certain surgical subspecialties.

4.3.2.5. Additional Points
1. The Return to Clerkships form must be signed and submitted to the MSTP Office before students advance to the clinical phase of training so that the transfer of financial responsibility for tuition and stipend can be made in an expeditious manner.

2. Dr. John Butter and other faculty in Internal Medicine have developed an extensive clinical re-warming program, involving a mixture of assessments and mentored patient workups and presentations. The Senior Curriculum Coordinator in the AWOME will coordinate this process. In addition, they will help students obtain a new hospital ID, and let them know how to subscribe to the appropriate medical student listservs.

3. The AWOME arranges clerkship schedules for MSTP students. After students have met with the MSTP director (and the AWOME deans if necessary), they will work with the AWOME to schedule clerkships. There
is some flexibility in arranging a personalized clerkship schedule but requests to alter a student's schedule must be justified. It is important for students to explore their clinical interests through part-time exposure to different specialties. There are a variety of ways of accomplishing this in each specialty. Depending on a student's specialty interest, it will be to their advantage to complete a clerkship or two before attempting the clerkship of greatest interest. Likewise, it is important that students complete the core clerkship in their specialty interest at Northwestern Memorial Hospital so that they can interact with the best and well-known faculty members who will write letters of recommendation on their behalf.

4. In preparation for a student's return to clerkships, senior MSTP students have found it useful to read a review of INTERNAL MEDICINE (e.g., “baby Harrison’s,” “baby Cecil” or Degowin and Degowin). This single specialty draws most from the M2 year. All other specialties are “new” to everyone.

5. The MSTP will support up to 22.5 months in the clinical phase as long as the student is engaged in clinical activity (including NU or away electives taken for credit). The MSTP cannot provide financial support for extended vacations, extended time in the lab, or time for writing papers or theses, etc.

6. Stipend support in the clinical phase depends on students making good progress toward the MD degree. Failing or incomplete grades will result in failure to meet Satisfactory Academic Progress and may result in the suspension of stipend support if greater than 22.5 months is required to complete clinical training.

7. Students should send an email message to Becca Lamarre (rlamarre@northwestern.edu) in the MSTP office listing the title, date, time and room number for their thesis seminar so that the MSTP office can announce it to the other MSTP students.
5. Medical school: Phases 2-3, M3-M4 (6th – 8th years of study)
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. However, students should remember that the goal of an MSTP student is to train as a physician-scientist. Many students continue research on a part-time basis during the clinical years, typically revising manuscripts or doing an experiment or two in response to reviewer criticisms. There is also plenty of time to write clinical case reports and clinical review articles. Each student will develop a personalized schedule of clerkships and other activities to achieve their own objectives for this important phase of training.

5.1. MSTP-Specific Requirements
Participation in MSTP Grand Rounds and activities (Retreat, Conferences, Roundtable Discussions and other events) are still required. Advanced notice provided to students’ clinical teams will help them arrange schedules appropriately to allow for participation in MSTP obligations.

5.2. Feinberg School of Medicine Requirements
FSM and TGS recognize the special needs of MSTP students to graduate as quickly as possible and have made accommodations to requirements to expedite graduation. For FSM, this is a 12 week reduction in requirements to graduate. MSTP students must complete 40 weeks of “M3” clerkships (Medicine, Surgery, Primary Care, Psychiatry, Pediatrics, OB/Gyn, and Neurology), 14 weeks of “M4” clerkships (Emergency Medicine, ICU, PM&R, Sub internship), and 4 weeks of elective. This can be completed in 14.5 contiguous calendar months.

5.3. USMLE Step 2
The MSTP requires that all students complete the USMLE Part 2 by December of the M4 year in order to continue receiving financial support.

5.4. Choice of Specialty
At the beginning of the M4 year, students will meet with the MSTP Director and discuss choice of specialty and the residency application process. At the meeting the director will review the student’s Medical Student Performance Evaluation (MSPE) and provide feedback on it prior to submission to the AWOME.

5.5. Preparing for the Residency Match
During the fourth year, there are multiple class sessions provided by the AWOME to discuss the application process. There is a great deal of information posted on the AWOME website (http://www.feinberg.northwestern.edu/AWOME/current-students/residency/index.html) to guide students. 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.

5.6. Residency Interviews
Residency programs will contact students to interview soon after the MSPE letter is released in September. Students should reserve at least one month for interviewing; December and January for the general match, November and December for early-match specialties; most programs don’t interview between Christmas and New Year’s.

5.7. Graduation Week
During graduation week, the Director, Associate Directors and Program Administration organize the Senior Lunch at a local restaurant for the graduating students to discuss their views on the entire training process. Also during the week, the seniors organize and lead a panel discussion, the Passing of the Wisdom, 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.
Part V: Satisfactory Academic Progress

All MSTP students are recipients of a substantial scholarship that is exclusively based on merit. Each student receives a stipend, tuition credit and benefits totaling over $320,000 during the medical school phase of their education. The MSTP scholarship is a tangible recognition of the trust placed in the potential of MSTP students. MSTP leadership is charged with ensuring that scholarship recipients live up to their potential and promise. It is the philosophy of the program that MSTP students should engage all of their educational opportunities with their full attention and commitment as a responsibility of their position and profession. Continuation in the MSTP and receipt of the scholarship while in the Feinberg School of Medicine are dependent upon participation in MSTP events and satisfactory academic progress toward the MD and PhD degrees.

1. Feinberg School of Medicine Satisfactory Academic Progress

All MSTP students in the medical school phases of the program must meet all Feinberg School of Medicine (FSM) requirements as described in the FSM student Handbook and Policies found on the following webpage: http://www.feinberg.northwestern.edu/education/current-students/index.html, 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 Assistant 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 Assistant 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 MSTP Assistant Director and Director 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 (see below).
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 and will be placed on MSTP probation. The student will be notified by a formal letter of their probationary status with regard to the MSTP. The letter will describe the following terms of probation:

MSTP students on FSM Phase 1 Probation will not receive tuition scholarship or stipend from the MSTP.

If the student maintains good academic standing, defined as not marginally passing or failing 3 overall assessments (e.g. Foundations Part 1 Exam Overall, Foundations Part 2 Exam Overall, Pulmonary Exam Overall), for the repeated academic year, the probation will end at the completion of the repeated year, the student will return to good standing in the MSTP, and tuition scholarship and stipend will be reinstated.

If a student takes a leave of absence from FSM during probation, the student will continue their probation status when they return to FSM.

If a student marginally passes or fails 3 overall assessments during the probationary period or is excluded (dismissed) from FSM, the student will be excluded (dismissed) from the MSTP.

If an MSTP student who has already been on FSM Phase 1 Probation is required to repeat an academic year for a second time for poor academic performance, the student will be excluded (dismissed) from the MSTP.

1.2. MSTP Specific Requirements for Satisfactory Academic Progress on USMLE Exams
A passing grade based upon national standards is required on Step 1 for advancing to Phase 2 of the FSM curriculum and is required on STEP 2 CS and CK exams to graduate from the FSM.

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 is considered poor performance.

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 Assistant Director and Director to establish a study plan and determine what study aids will be required to prepare the student to retake the exam and pass.

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 the USMLE twice, which 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 for a total of 22.5 months. 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 finishing Phase 2 and 3 of the FSM curriculum in no more than 22.5 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
If a student receives a failing grade (“Pass pending remediation”) in a single clinical clerkship for the first time, the student will meet with the Assistant Director and Director to determine a study plan and 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 22.5 month time limit due to not having completed the required clerkships to graduate. The letter will explain that if more than 22.5 months of clinical clerkships are required to complete Phase 2 and 3 of the FSM curriculum a student will lose their tuition scholarship and stipend support for the additional time required to graduate.

Students who require more than a total of 22.5 months to complete Phase 2 and 3 of the FSM curriculum, will not continue to receive 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 described by The Graduate School (TGS).
(http://www.tgs.northwestern.edu/academics/academic-services/satisfactory/)
Failure to do so may result in formal action by the MSTP (See below).

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:

DGP: http://www.biology.northwestern.edu/igp/current-students/student-handbook/
IBIS: http://www.ibis.northwestern.edu/forms/Program%20Guide.pdf
NUIN: http://nuin.northwestern.edu/program-and-curriculum/steps-to-the-phd/
BME: http://www.bme.northwestern.edu/graduate/phd/index.html
CHEM: http://www.chemistry.northwestern.edu/documents/graduate/chemistry-phd-handbook-2013.pdf
MSE: http://matsci.northwestern.edu/graduate/current/phd-student-handbook.html

These criteria may be in addition to those described by TGS.

2.2. MSTP Specific Requirement for Graduate Phase Satisfactory Academic Progress
TGS 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 the graduate program and TGS.
**MSTP Satisfactory Academic Progress during the Graduate 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. Graduate Phase Poor Performance Intervention

A student in danger of failing to make satisfactory academic progress while in the graduate phase of training should notify the MSTP Assistant Director immediately. The Assistant 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 MSTP) in any of the following circumstances:

- If a student on MSTP FSM Phase 1 Probation marginally passes or fails 3 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 FSM
- If excluded (dismissed) from a graduate program and/or TGS
- 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 on in FSM or TGS 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 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, 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 Benefits and Administrative Matters

1. Financial Information

1.1. Managing Your Student Account
Although tuition and health insurance costs will be taken care of by the MSTP and/or graduate department, it is still very important 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 (http://www.northwestern.edu/sfs/contact_us/index.html). Some of the charges that students are responsible for include the following:

- Student Activity Fee (covers the cost of the CTA U-Pass)
- Optional Dental Insurance Fee
- Health Requirements Late Fee
- Wildcard Replacement Fee
- Parking Permit Fee
- NU Library Late Fee

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. The following link provides guides to chart pathways to common tasks in CAESAR. http://www.northwestern.edu/sfs/online_services/caesar_howto.html.

1.2. Stipend
The MSTP financial aid package includes an annual stipend ($29,000 in 2014-2015) that increases annually consistent with increments within the University Fellowship system. MSTP students are paid on a monthly basis and receive pay on the last business day of the month via direct deposit set up through Northwestern’s Payroll Office. New MSTP students also receive a one-time moving allowance of $500 included in the September paycheck of the M1 year.

1.3. Funding during M1-M2 year
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 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.

1.4. Graduate School: Tuition and Stipend
During the graduate phase, tuition 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. Again, it is important for students to monitor their own accounts and to be familiar with their departmental business administrator in order to resolve any issues that may arise during this time. The MSTP office will also continue to monitor student accounts and send reminders about any missed payments, but this is ultimately the responsibility of the student. MSTP students continue to be supported by an annual stipend throughout the graduate phase at the standard MSTP rate. Depending on the student’s post M2 year summer activities, the MSTP will continue to pay students’ stipend into the fall quarter of their G1 year (up to three months). After that time, the stipend is the responsibility of the student’s advisor and is again managed by the appropriate
departmental business administrator.

1.4.1. Other Funding Sources During Research Training
There are training grants and other opportunities for which students will be eligible. When students apply to any fellowships, whether internal or external, the MSTP Director will write a strong letter of support when appropriate. If students are appointed to any other training grant or individual fellowship they should notify the MSTP Program Manager. Stipend and tuition will continue to be supplemented when necessary by the student’s thesis advisor.

1.4.2. 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 TA’s for at least one quarter as this is an important aspect of graduate training.

1.4.3. Paid Employment During Research Training
MSTP students must not engage in any remunerative work without written prior approval by both the MSTP and the thesis advisor.

1.5. Funding During M3-M4 Year
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.

A travel allowance of $2500 will be provided during the M4 year to help cover travel during residency interviews. The MSTP Program Manager will coordinate with students to ensure the award is provided in a timely manner.

1.6. Insurance
Proof of health insurance is required for all NU students at the time of matriculation and annually thereafter. New students are required to complete the online Coverage Selection Form (CSF) to either enroll in or waive the NU/Aetna plan. Failure to complete the online Coverage Selection Form will result in automatic enrollment in the NU/Aetna plan. If students are covered by their parents or spouse, they do not have to enroll in Northwestern University’s student health insurance plan. In order to decline Northwestern’s student health insurance plan, they will have to 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. Their prior selection "rolls over" to the next Academic Year based upon their continued class registration. MSTP covers the cost of the student health plan during the medical school years and The Graduate School provides a subsidy during the PhD phase to cover this cost. The MSTP pays for disability insurance coverage costs throughout a student’s time in the program. For more information regarding benefits visit www.aetnastudenthealth.com. Click on “Find Your School” and enter 812845 as the Policy Number

1.7. University Fellowship & Scholarship Regulations
All students receiving financial support administered by the University must be registered full-time. MSTP students are supported year-round and thus must be registered full time either throughout the year through FSM registration or all four quarters (including summer) of The Graduate School (TGS) academic year. This is consistent with the TGS policy regarding recipients of university assistance and more information can be found on their website:
1.8. Taxes
Because of possible financial implications, the MSTP cannot offer any specific tax advice. Please refer to the webpage ([http://www.northwestern.edu/hr/payroll/tax/](http://www.northwestern.edu/hr/payroll/tax/)) published by the NU Office of Human Resources for more information. Additionally, the following IRS webpage ([http://www.irs.gov/Individuals/Students](http://www.irs.gov/Individuals/Students)) may be helpful.

1.9. Emergency Loans
In the case of a financial emergency, MSTP students are eligible to receive a short-term emergency loan from the Office of Financial Aid. The emergency loan program is intended to assist students with an unexpected, short-term financial emergency. The emergency typically is not related to students’ financial aid awards nor the direct costs associated with attending Northwestern University. For more information about this program please visit the Financial Aid website: ([http://chicagofinancialaid.northwestern.edu/financial_planning/short_term_loans.html](http://chicagofinancialaid.northwestern.edu/financial_planning/short_term_loans.html)).

1.10. Travel to Conferences and Career Development Courses
The MSTP is supportive of student’s professional development endeavors and provides funds supporting students traveling to conferences and/or seminars to make presentations on behalf of the University. The MSTP may provide a grant of up to $500 once per academic year per student for this purpose. These funds are intended to supplement other university funding and students should simultaneously apply for a TGS travel grant ([http://www.tgs.northwestern.edu/financial-aid/fello-schola-grants/university-fello/travel/](http://www.tgs.northwestern.edu/financial-aid/fello-schola-grants/university-fello/travel/)). The MSTP travel grant application may be obtained by emailing the program manager.

The MSTP also offers a one time Heller Travel Award of $2500 to help support attendance of special courses or other educational opportunities that would aid in scientific development. A letter describing the nature of the activity to be attended and its relevance to a student’s thesis project or career development is required and will be reviewed by the directorship for approval.

2. Campus Services

2.1. Student Health
The University maintains a health service for students on the Evanston campus at Searle Hall, 633 Emerson Street and for students on the Chicago campus at the Northwestern Medical Faculty Foundation, 675 N. St. Clair St., Suite 18-200. All full-time students are eligible to use the outpatient services. Both the Evanston ([http://www.nuhs.northwestern.edu/evanston/default.aspx](http://www.nuhs.northwestern.edu/evanston/default.aspx)) and Chicago ([http://www-chicago.nuhs.northwestern.edu/](http://www-chicago.nuhs.northwestern.edu/)) offices have comprehensive websites that describe services, hours, and enable students to schedule appointments online.

2.2. CAPS
Northwestern University’s Counseling and Psychological Services (CAPS) provides counseling to individuals and groups as well as workshops and outreach programs. CAPS has a team of highly qualified and experienced mental health professionals who are dedicated to helping students work through developmental needs, emotional difficulties, adjustments, and crises. CAPS can also be helpful if students have a friend in need. CAPS also holds workshops covering topics such as stress management, mindfulness and drop-in meditation sessions. More information on CAPS can be found by visiting their website ([http://www.northwestern.edu/counseling](http://www.northwestern.edu/counseling)) or by calling 847-491-2151.
2.3. Office of Diversity
The Office of Diversity ([http://www.feinberg.northwestern.edu/diversity/about/index.html](http://www.feinberg.northwestern.edu/diversity/about/index.html)) 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 MSTP considers community a strength of the program and encourages students to learn more about the Office of Diversity’s programs and initiatives.

2.4. The Graduate School Lawyer paid in Activity Fee
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. For more information about Legal Services please visit their website: [http://www.tgs.northwestern.edu/graduate-life/legal-services/](http://www.tgs.northwestern.edu/graduate-life/legal-services/).

2.5. Conflict Resolution
Please visit the following webpage published by The Graduate School as a resource on how to manage various types of conflict that may arise. This page lists the various resources available on campus as well as a chain of communication for students dealing with different types of conflicts.


2.6. Gym Access
All full-time students have access to special gym privileges on both the Evanston and Chicago campuses. On the Evanston campus memberships are managed by the Department of Athletics and Recreation ([http://www.fitrec.northwestern.edu/](http://www.fitrec.northwestern.edu/)) and includes complimentary access to the Henry Crown Sports Pavilion/Norris Aquatics Center, Patten Gymnasium, and Blomquist Recreation Center by presenting a valid WildCARD. Northwestern students and employees based on the Chicago campus are eligible for discounted membership to The River East Club and the Chicago Park District's Lake Shore Park Field House. Learn about amenities, eligibility and membership ([http://www.northwestern.edu/uservices/fitness/chicago_campus.html](http://www.northwestern.edu/uservices/fitness/chicago_campus.html)).

2.7. U-Pass
The U-Pass ([http://www.tgs.northwestern.edu/graduate-life/u-pass/](http://www.tgs.northwestern.edu/graduate-life/u-pass/)) is a discounted fare card that is good for travel on all Chicago Transit Authority (CTA) and Pace busses and elevated train/subway routes (does not include Metra trains). Students in both FSM and TGS receive U-Passes, which is covered by the Student Activity Fee that is paid annually by medical school students and quarterly by graduate phase students.

3. Other MSTP Activities

3.1. MSTP Coffee Talk with the Directors
Students have an opportunity to engage in group discussion with the MSTP Director, Associate Directors and Assistant Director at monthly MSTP Coffee Talk Discussions. A variety of issues are discussed, including course of training, financial support, residency applications, and curricular issues.

3.2. MSTP Women's Forum
Each year the women in the MSTP Women’s Forum invite women physician-scientists to discuss the particular challenges they will face balancing family life and career. The Women’s Forum introduces students to many role models and their strategies for their career success. Occasionally, professional couples discuss how to balance two careers in the Family Forum.
3.3. MSTP Visiting Scholar Series
MSTP students host 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 firsthand the varied paths to successful careers in academic medicine.

3.4. MSTP Clinical Exploration Program
There are many opportunities for students to participate in patient care during the research phase. The most common include: (i) joining an Education-Centered Medical Home (ECMH) either during the preclinical years and continuing on during the graduate phase or at some point during the graduate phase. The ECMH is a four-year, longitudinal, ambulatory experience based in existing primary care clinics where multi-level student teams (4 from each class) work collaboratively to care for “high-risk” patient panels. Learn more here: [http://www.feinberg.northwestern.edu/education/curriculum/learning-strategies/index.html](http://www.feinberg.northwestern.edu/education/curriculum/learning-strategies/index.html). (ii) working at one of the Chicagoland clinics to maintain their clinical skills, some of which are run by Northwestern students and attending physicians (Chinatown Clinic, Community Health Clinic, Chicago Youth Programs Clinic, Devon Clinic, and New Life Volunteering Society Clinic), (iii) attending morning report in a variety of specialties, (iv) half-day clinics, typically in the specialty area of interest with a physician-scientist (these relationships often begin in the pre-research clinics). Students should begin to define their clinical interests as early as possible so that they may schedule their core M3 clerkships in a logical order. Students are also encouraged to get to know the chairs and faculty of the departments of interest who provide advice on research residency choices and write letters of recommendation.

3.5. Outreach and Service Opportunities
There are many outreach and service opportunities available for MSTP students. Science in Society is a Northwestern University outreach initiative connecting science to the community. For a full list of their initiatives please visit their website. The Department of Family and Community Medicine’s Chicago Community Engagement Program (CCEP: [http://www.familymedicine.northwestern.edu/CCEP/](http://www.familymedicine.northwestern.edu/CCEP/)) also facilitates a wide range of activities and opportunities for involvement.

3.6. 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. The program pairs MSTP students from Northwestern University with Chicago area high school students at the Robert R. McCormick Boys and Girls Club in the Uptown neighborhood of Chicago. Meeting twice a month throughout the academic calendar, PRISM aims to increase the scientific and medical knowledge of underprivileged high school students while also providing them with the exposure to careers in science and medicine. In order to meet these objectives, PRISM quarterly modules integrate didactic learning with laboratory experimentation, medical and scientific field trips, and career information sessions each quarter. For more information on how to get involved with the PRISM program explore the website: [http://www.feinberg.northwestern.edu/sites/mstp/about-us/prism/index.html](http://www.feinberg.northwestern.edu/sites/mstp/about-us/prism/index.html).

3.7. 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 diversity travel awards to participate in these motivating meetings.