Brown University  
Gateways to Medicine, Healthcare and Research  
ScM in Medical Sciences  

Program Handbook  
Academic Year 2018-19  

Table of Contents  

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Program Overview</td>
<td>1</td>
</tr>
<tr>
<td>II. Program Goals and Learning Objectives</td>
<td>1</td>
</tr>
<tr>
<td>III. Program Structure</td>
<td>2</td>
</tr>
<tr>
<td>IV. Curriculum Overview</td>
<td>3</td>
</tr>
<tr>
<td>V. Instructional Methods</td>
<td>3</td>
</tr>
<tr>
<td>VI. Program Degree Requirements</td>
<td>5</td>
</tr>
<tr>
<td>VII. Policies &amp; Procedures for Admission, Retention and Completion</td>
<td>5</td>
</tr>
<tr>
<td>VIII. Attendance Policy</td>
<td>8</td>
</tr>
<tr>
<td>IX. Grading Policy</td>
<td>10</td>
</tr>
<tr>
<td>X. Codes of Student Conduct</td>
<td>12</td>
</tr>
<tr>
<td>XI. Expectations for Satisfactory Academic Standing and Remediation</td>
<td>14</td>
</tr>
<tr>
<td>XII. Resources for Academic and Wellness Support</td>
<td>17</td>
</tr>
<tr>
<td>XIII. Advising System/Professional Development</td>
<td>18</td>
</tr>
<tr>
<td>XIV. Requesting a Leave of Absence</td>
<td>19</td>
</tr>
<tr>
<td>XV. Grievance Procedures</td>
<td>20</td>
</tr>
</tbody>
</table>

Appendix 1: Technical Standards for the ScM in Medical Sciences Program  
Appendix 2: Technical Standards Assessment Process                      
Appendix 3: Competencies                                                 


I. Program Overview

The Master of Science (ScM) in Medical Sciences Program is housed within the Gateways to Medicine, Healthcare and Research Program at the Warren Alpert Medical School of Brown University. This one-year (10.5 month), full-time, non-thesis Master’s program is designed to enhance the credentials of students aspiring to careers in medicine, as well as in other healthcare and research professions.

This program is unique in its approach to preparing future physicians and other healthcare professionals. It is built on the premise that outstanding healthcare professionals possess a special combination of excellence in the basic sciences as well as a nuanced understanding of the complex factors associated with human health and well-being. It is also built on the premise that health educational programs have an obligation to assess the healthcare needs of the community they serve and foster students’ awareness and responsiveness to those needs. Given the rapidly changing healthcare environment, it is also becoming increasingly essential to work effectively in interdisciplinary teams to improve the health of populations.

With this in mind, the Brown Master of Medical Sciences aims to provide promising candidates with both an in-depth knowledge of the biological basis of health and a broad understanding of the multiple complex factors impacting human health. Accordingly, while the program predominantly involves multiple rigorous scientific courses, almost identical to those taken by first year medical students, it also draws upon the social sciences and humanities to inform a course series for Master of Medical Sciences students, which is unique to Brown. This course series imparts both theoretical and practical knowledge and includes classroom learning, experiential learning at a community health center site, and opportunities to work alongside members of interdisciplinary healthcare teams. A robust advising system helps students clarify the next steps in their career, and provides coaching on application to medical school, graduate school or other health professions training programs.

II. Program Goals and Learning Outcomes

**Goals:** The overarching goals of this program are:

1) To provide students with an in-depth understanding of the biologic basis of health and disease and assess their ability to master this material compared to first year medical students

2) To provide students with a broad understanding of the complex factors affecting health and healthcare delivery

3) To provide students with the opportunity to gain first-hand experience working in a community healthcare setting focused on the care of underserved and vulnerable patients.
**Student Learning Outcomes:** Upon successful completion of the program, students will be able to:

- Demonstrate proficient in-depth knowledge of the biological basis of health and disease.
- Identify and describe the multiple, complex factors impacting health.
- Work collaboratively as a member of a team.
- Conduct and present a community project.

**III. Program Structure**

The program is specifically structured to support the above goals. There are three main components to this curriculum:

1) **Basic Science Courses:** Students gain in-depth understanding of the biologic basis of health and disease by taking six (6) basic science courses which are almost identical to those taken by first-year medical students. This rigorous set of courses is completed in tandem with first-year medical students, and students will be assessed using the same exams as first-year medical students for 5 of the 6 courses. Masters students take all first semester medical school basic science courses. Three courses (Scientific Foundations of Medicine, Histology, and General Pathology) are almost identical to the equivalent medical school courses. One course (Human Anatomy) utilizes prosections rather than dissections as a primary instructional method and covers upper and lower extremities in addition to the neck and truck (which is the scope of the medical school course). In the second semester, students complete two-thirds of the organ system courses taken by medical students - Brain Sciences & Neurology with Head Anatomy, and Microbiology and Infectious Diseases. Both utilize the same instructional material and exams as the equivalent medical school courses.

2) **Patient Care in Complex Systems:** This series of 2.5 courses are specifically tailored to Master of Medical Sciences students and is unique to this program. Whereas the basic science courses teach depth of knowledge, these courses impart breadth of knowledge. Courses combine an interactive seminar structure with longitudinal experiential learning, service learning and field work in a community health center. Content covers a broad range of topics, using as its foundation the biopsychosocial model of healthcare. These topics include: the social determinants of health, healthcare systems, care of vulnerable patients, interdisciplinary healthcare teams, population health, patient advocacy, professional and ethical issues in medicine, and quality improvement techniques.

3) **Community Health Project (Capstone Project):** Students are required to complete a focused community project of benefit to their longitudinal community health center site and patients. Projects will need to be approved by both the Master’s Program Director and the site coordinator at their community health center. Emphasis will be placed on learning interdisciplinary, collaborative, and quality improvement skills and serving an organization that is supporting their education. This project requirement is embedded
in the Patient Care in Complex Systems Course Series and culminates in a poster presentation and oral presentation.

IV. Curriculum Overview
This Master of Medical Sciences curriculum is comprised of a total of 8.5 required courses. The program is a 1-year (10.5 month) full-time program, running from July to May. Since the basic science courses are linked to the first-year medical school courses, all courses must be completed in a pre-determined sequence. Fall Semester courses are prerequisites for Spring Semester courses.

Curriculum outline and course sequencing are as follows:

July Intensive Course – 2.5 weeks (considered part of the Fall Semester)
1. Introduction to Medical Sciences and Patient Care 0.5

Fall Semester (starts Aug 1st)
1. Human Histology 1
2. Human Anatomy 1
3. General Pathology 1
4. Scientific Foundations of Medicine 1
5. Patient Care in Complex Systems I [includes field work assignments] 1

Spring Semester
1. Brain Science & Neurology (includes Head Anatomy) 1
2. Microbiology and Infectious Disease 1
3. Patient Care in Complex Systems II 1
   [includes field work and community project (capstone project) implementation & presentation]

Total # of Required Courses 8.5

V. Instructional Methods
Multiple instructional methods are used during this program.

Basic Science Lectures: Lectures are the standard content delivery method for most of the basic science courses at the medical school. Given what we know regarding how different people learn, attendance is not required at most basic science lectures (see Google calendar). All lectures are video-recorded and available later that day and then 24/7 for students to review at their own pace. Additionally, lectures are accompanied by detailed handouts, slide sets and reference material to help students learn the material well.
Small group Basic Science Team-Based Learning:
These required sessions are essential to learning and solidifying understanding of basic science course material. Students are expected to come prepared to small group sessions, having reviewed lecture material over the previous several days. These collaborative learning sessions teach students both content knowledge and teamwork skills. Sessions are led by the Gateways Basic Science Curriculum Director with the help of upper level medical student teaching assistants (TAs). In addition opportunities for peer teaching enhance mastery of the material.

Virtual Microscopy Self-Study Labs:
This unique learning tool helps students solidify material covered in Human Histology and General Pathology. Students can progress through these labs at their own pace. Some of this material is used in small group team based learning (TBL) sessions to further solidify learning. Completion of self-study labs is required.

Anatomy Labs:
Anatomy labs are essential for learning human anatomy and attendance is required. Gateways anatomy labs utilize a combination of mini-lecture, small group TBL exercises, prosection human cadaver examination, and clinical correlation to enhance learning.

Interactive Seminars/Discussion:
This is the primary delivery method for the didactic portion of the Patient Care in Complex Systems course series. Attendance is required. Students are expected to come to class prepared having reviewed reading assignments which will enhance classroom discussion of complex topics including health systems, health disparities, and medical ethics.

Basic Clinical Skills Training:
Basic level clinical skills training is integrated into the Patient Care in Complex Systems course series. Attendance is required. Students are expected to have reviewed relevant material and be prepared to practice skills. Examples include: basic history taking, vital signs, and splinting/initial stabilization of upper and lower extremity sports injuries.

Field Work/Clinical Immersion in a Community Health Center Site:
Fieldwork sessions are scattered throughout the academic year. Attendance is required. Students will be informed of learning goals for each session. Field notes and patient logs are required to be submitted for each session, and small group discussion sessions will be used to explore students’ experiences and observations relative to what they have learned in class.

Capstone Project Planning, Implementation and Presentations:
Students are required to attend all planning and implementation sessions that are scheduled for them regarding their capstone project. During assigned field work sessions, they are expected to collaborate with project leaders and advisors at the community site in order to complete their project. Students will be provided self-study
time to complete their projects and prepare their abstracts, oral presentation and poster presentation.

VI. Program Degree Requirements

In order to receive the Brown Master of Science (ScM) in Medical Sciences degree, students must:
A) Receive a passing grade in all of the above 8.5 courses.
B) Successfully complete their community fieldwork assignments
C) Successfully complete the Capstone Project requirement.
D) Display professional and ethical behavior at all times
E) Be enrolled full-time, unless they are on an approved leave of absence (see section below)
F) Complete all requirements for the degree within 2 years of beginning the program.
Exceptions to this rule may be made only with the consent of the Director of Graduate Study and the Gateways Academic Standing Committee (see below).

There is no final comprehensive exam at the end of this program, rather each course is completed individually and utilizes multiple assessment methods to determine students’ mastery of the material.

Teaching is not required for the degree.

(Please see below re: remediation policy)

VII. Policies and Procedures for Admission, Retention and Completion

A. Admission Criteria

Since this Master’s program includes both classroom-based coursework and clinical training in a community health center serving vulnerable & underserved patients, the admissions process is both rigorous and conservative, emphasizing quality over quantity. The admissions committee utilizes a holistic approach to admissions decisions, which includes a critical appraisal of multiple factors that would indicate applicants’ likelihood of success in this program. This includes a critical assessment of: academic ability, interpersonal skills, character, commitment to patient-centered care and research, and leadership qualities. Applicants meeting initial screening based on transcript, test scores, CV, personal statement, short essay and letters of recommendation are invited to interview either in person or via Skype. Final admissions decisions are made based on input from members of the admissions committee. Once admitted, in order to accept a position in the program and matriculate, students are required to review and sign the “technical standards for admission, retention and completion” form, complete a criminal background check and submit proof of graduation (final transcript) and official MCAT scores.
B. Technical Standards for Admission, Retention and Completion (see appendix 1 & 2)

Applicants to the ScM in Medical Sciences at The Warren Alpert Medical School of Brown University are selected on the basis of their academic, personal, and extracurricular attributes. In addition, all students must possess the intellectual, physical and emotional capabilities necessary to undertake the full curriculum and to achieve the levels of competence required by the faculty.

The required abilities and characteristics for completion of the ScM degree consist of certain minimum physical and cognitive abilities and sufficient mental and emotional stability to ensure that candidates for admission and graduation are able to complete the entire course of study and participate fully in all aspects of their education. In addition, students must demonstrate the ability to work as a member of a healthcare team. This ScM program includes training in the care of patients, and differs markedly from graduate education in fields outside of the health sciences.

For this reason, students admitted to the ScM in Medical Sciences program were asked to review the “Technical Standards for the ScM in Medicine Program” (appendix 1) and sign the “Technical Standards Assessment Process” document (appendix 2) indicating their understanding of the steps needed to report a disability or other condition that might require accommodation or modification of any course procedure in order to successfully complete the requirements of this program. As part of this process students should be registered with Student and Employee Accessibility Services (SEAS) and provide the Director of Graduate Studies with an academic accommodation letter from them. For more information, contact SEAS at 401-863-9588 or SEAS@brown.edu.

C. Student Evaluation Procedures

*Student Course Performance Evaluations*

By undertaking coursework in Alpert Medical School’s robust competency-based integrated curriculum, students are well positioned to learn concepts efficiently and effectively (Appendix 3 - Alpert Medical School's Nine Abilities). Each course utilizes multiple methods to assess students’ mastery of the course material. The course grading system is consistent with that of other graduate courses at Brown University and employs an “A, B, C, no credit (NC)” system with no minus or plus grades possible (see grading policy below).

Basic science courses use a combination of: multiple choice exams; quizzes; laboratory or small group preparation & participation (including evidence of teamwork abilities); and completion of self-study modules. Competencies addressed in these courses include: “Effective Communication”, “Using Basic Science in the Practice of Medicine”, “Lifelong Learning” and “Professionalism”.
Acquiring these competencies will deepen students’ ability to engage in substantive analysis and problem solving. (see appendix 3 – Competencies)

In the “Patient Care in Complex Systems” course series, students are also assessed using a combination of methods including: seminar participation; reflective essays; assessment from community mentors (multidisciplinary); and assessment of their community capstone project progress & completion. During this course work, students will address the following Medical School competencies: “Effective Communication”, “Basic Clinical Skills”, “Professionalism”, “Population Health and Advocacy” and “Moral Reasoning and Clinical Ethics” (see appendix 3 – Competencies). Students are assessed via student performance evaluations, which are based on the Alpert Medical School Nine Abilities and completed by small group leaders.

Assessments as Linked to Student Learning Outcomes:
Upon successful completion of the program, students will be able to:

- Demonstrate proficient in-depth knowledge of the biological basis of health and disease (assessed using standard first year medical school exams plus quizzes, lab or small group participation, & self-study modules). The exams allow for benchmarking of students’ exam performance against medical students taking the same exam.
- Identify and describe the multiple, complex factors impacting health (assessed using multiple methods including: rubrics for reflective essays, seminar participation, and community mentor evaluations).
- Work collaboratively as a member of a team (assessed using several methods including rubrics for community site mentor evaluations and classroom observations).
- Demonstrate proficiency in conducting and presenting a community project (assessed using rubrics for poster presentation, oral presentation, and mentor evaluation).

(Please see individual course syllabi on Canvas for grading breakdown for each course).

Gateways Academic Standing Committee

Function:
The Gateways Academic Standing Committee oversees the evaluation of progress of students throughout the ScM in Medical Sciences Program. The committee reviews all evaluation data on each student, determines the student’s academic standing (see below for categories), assesses for remediation needs, assesses whether remediation (if needed) is successful, and ultimately recommends whether the student is or is not eligible to receive the Master of Science in Medical Sciences degree. This recommendation is then presented to the Associate Dean for Medical Education at Alpert Medical School and the Associate Dean for Masters Programs at the Graduate School who, in turn, present the candidate to the Dean of the Graduate School.
Committee Members:
The Gateways Academic Standing Committee is comprised of educators and evaluators involved in the Gateways program. Members include: the ScM in Medical Sciences Director of Graduate Study, the Director of Gateways Basic Science Curriculum, the Co-Director of the Patient Care in Complex Systems courses, the Director of the Gateways Anatomy Curriculum, the Assistant Director of Assessment and Evaluation at Alpert Medical School and the former Director of Medical Education at Alpert Medical School.

Committee Evaluation Process & Meeting Times:
Routine committee meetings take place 3 times per semester. These are timed to occur after every 2 “blocks” (ie. after every 2 Gateways Integrated Medical Science exams; approximately every 6 weeks). During each meeting, the committee will review all assessment data for each student and determine whether satisfactory progress has been made. In between these meeting times, the Director of Graduate Study and Course Directors will informally monitor students’ progress in order to identify early any students who might benefit from extra help to achieve their academic goals. If a serious situation arises that needs immediate action from the committee, the Director of Graduate Studies will call for an Ad Hoc meeting to address the issue.

Summative Program Completion Letter
When a student successfully completes the ScM in Medical Sciences Program, the Director of Graduate Studies and team will write a summative assessment of the student’s performance in the form of the “Brown ScM in Medical Sciences Program Completion Letter.” This letter supplements the student’s transcript by providing a more detailed evaluation of the student’s academic performance, achievements and personal characteristics.

This document is kept on file and can be used as the basis for a recommendation letter, if requested by the student, at any time after graduation. This letter is similar to a pre-health advisory committee letter, but is not intended to take the place of a pre-health committee letter from the student’s undergraduate institution. The details in this letter can provide medical school or graduate school admissions committees with detailed information to help them interpret the meaning of the student’s transcript grades (for example the student’s performance on exams as compared to Alpert Medical School students taking the same exam) and to help them better understand the student’s skills related to patient care (as observed & assessed during the program).

VIII. Attendance Policy
A. Requirements
   • Basic Science Lectures: Attendance at most basic science course lectures is strongly encouraged, but not required. Please note: a few are marked required.
• *Intro to Medical Science & Patient Care Sessions & Patient Care in Complex Systems I & II Sessions (including field work), Small Group sessions, Team-Based Learning, and Laboratory Sessions* are all required activities. Timely attendance and active participation are mandatory. All absences must be excused and more than one excused absence per course is strongly discouraged. Students need to request an excused absence on the Canvas website and receive permission from the Director of Graduate Study to miss one of these sessions. If granted an excused absence, students must then notify their small group leader(s)/course leader and perform the make-up work for that session. If a student misses two or more required sessions (even if excused) within a course, s/he may receive a grade of NC in the course and may be required to remediate the deficiency by special accommodation or by retaking the course. A pattern of unexcused absences across courses may result in a professionalism citation by the Associate Dean for Medical Education.

B. Excused Absences and Approved Exam Extensions

Do not make travel or conference plans until you have determined whether or not an absence will be excused. An excused absence or exam extension may be granted for the following reasons:

• **Illness:** An excused absence may be granted if you are ill. For your own sake and the sake of others, you should not attend classes, see patients, or take exams if you are sick. An excused absence due to illness requires a note from Health Services or your physician.

• **Presentation at a meeting/conference:** An excused absence may be granted for students presenting at a conference. Conference attendance without presentation responsibilities does not meet the requirements for an excused absence.

• **Leadership activity:** An excused absence may be granted if you are representing Brown in a leadership capacity at a conference or meeting. Conference attendance without leadership responsibilities does not meet the requirements for an excused absence.

• **Medical school interview:** We ask that medical school interviews not be scheduled during exams. If this is unavoidable, granting of an excused absence in this instance will be considered on a case-by-case basis.

• **Major life event:** An excused absence may be granted in light of a major life event such as a death in your immediate family, the wedding of an immediate family member, or other major event. The granting of an excused absence in these instances will be considered on a case-by-case basis.

• **Religious holidays or observances:** An excused absence may be granted on a case-by-case basis, but students will likely be required to make up the time excused.

*All excused absences of required educational sessions will require make-up work.*

C. How to Obtain an Excuses Absence

• All excused absences must be approved by the Director of Graduate Study.

• In order to obtain an excused absence, please submit a "request for an excused
absence" on the Canvas website. Both to maximize your own learning and to help with planning, please request approval as far in advance as possible, two weeks at a minimum.

- If granted an excused absence, students must then notify their small group leader(s) and will be required to complete required make-up work. This work will be assigned by the Director of Graduate Study (Dr. Anandarajah). In the case of illness, an absence will be approved retroactively with appropriate documentation. Please make sure to provide the required note from Health Services or your healthcare provider to Patricia Vescera in the Gateways Office.
- In order to reschedule a field work session, please start by working directly with your Community Health Center site coordinator. If you are not able to reschedule a field work session, then please contact Patricia Vescera to assist you.

D. How to Obtain an Approved Exam Extension
All extension requests for exams must be approved by the Director of Graduate Study (Dr. Anandarajah). Due to the logistical complexity of holding a make-up exam, unless it is an emergency or illness, students should make every effort to plan around them, when possible. In order to obtain an exam extension, please use the excused absence form on Canvas but also notify Dr. Anandarajah via email. Request approval as far in advance as possible - two weeks at a minimum.

E. Make-Up Work
Students missing a required educational session must complete a written make-up assignment, the content of which will be determined by Dr. Anandarajah in conjunction with their course leader/small group leader. Make-up assignments must be completed before a student can successfully pass a course.

IX. Grading Policy

A. General
The grading policy for the ScM in Medical Sciences is consistent with that of other Brown Graduate School programs.

B. Grade Options

A,B,C/NC: All Gateways courses are graded on an A, B, C/No Credit (NC) basis. All grades are recorded as such on the student’s unofficial and official student transcripts. Grading criteria and rubrics for individual courses are available in each course syllabus posted on Canvas. Grades for the basic science courses are assigned by the Director of Graduate Study and the Director of the Gateways Basic Science Curriculum in consultation with the course leaders. Grades for the Patient Care in Complex System course series (including the July course) are assigned by the course leaders.

Existing Deficiency (ED): This temporary grade indicates that the student has performed below the expected standard of performance in certain components of
the course, but that overall performance was deemed satisfactory. This grade option is used when a course leader believes that a reasonably limited amount of additional effort or study would remedy these deficiencies and result in satisfactory performance in all course components. When using the ED option, the course leader(s) should discuss the deficiencies with the student, develop a plan and timetable for correction, and communicate this plan to the Director of Graduate Study. The course leader(s) should decide, at the time of the meeting with the student, what means will be used to evaluate the student's performance at the end of the timetable. When the student successfully remediates the deficiencies, the grade will be changed to an A, B, or C grade. If the student fails to remEDIATE the deficiencies as explicitly outlined in the plan, then the grade will be changed from ED to No Credit (NC). An ED grade not remediATED within one year of the beginning of the course may be changed to an NC, in which case the student may be required to repeat the entire course. Grades of ED are reported to the Gateways Academic Standing Committee.

**Incomplete (I or INC):** Under exceptional circumstances outside of the student’s control (such as illness or a family emergency), a student who is unable to complete all of the required coursework may be given a grade of incomplete (I). Normally, course work not completed within one year will result in the grade being changed to No Credit (NC).

**Approved Withdrawal (W):** In rare cases, the notation of W may be entered by the AMS Registrar to indicate that a student started, but did not complete, a course. This is not an actual grade, but a notation to preserve the accuracy of the student record. A notation of W does not appear on the official transcript.

**C. Transcripts**

The grades of A/B/C/NC become part of a student’s official transcript once they are entered in Banner by the AMS Registrar’s office. This same office also maintains an unofficial transcript. The unofficial transcript contains information about temporary grades and grade changes. When a student receives an NC in a course, a remediation plan is put into place by the Director of Graduate Study, the Course Director, & the Gateways Academic Standing Committee. For basic science courses, remediation typically entails mandatory tutoring sessions followed by a remediation exam, or a repeat of the entire course. After a course has been successfully remediATED or repeated, the new grade appears on the official student transcript. Temporary grades of ED or INC are noted on the unofficial transcript and are changed to a letter grade on both the official and unofficial student transcripts after the appropriate course work has been completed.

**D. Grade Determination**

The Director of Graduate Study and the Course Leaders are responsible for determining how students will be evaluated and how grades will be assigned (see individual course syllabi on Canvas for grading breakdown). Students who
believe that an assigned grade is not an accurate reflection of their performance should discuss this with the Director of Graduate Study. While there is no formal avenue of appeal of a grade beyond the judgment of the Director of Graduate Study and the Course Leaders, the Associate Dean for Medical Education may be asked to provide input into particularly contentious discussions regarding grade assignments.

X. Codes of Student Conduct

In addition to the standards outlined in the “Technical Standards” document (appendix 1), students in the ScM in Medical Sciences Program are expected to adhere to the Code of Conduct standards expected of everyone in the Brown community and the healthcare community.

A. Academic and Student Conduct Codes:
Graduate students are expected to be aware of, and to conduct themselves in accordance with, the principles of the Brown community as set forth in the Academic Code: Graduate Student Edition and the University's Student Conduct Code. The Academic Code document can be found on the Graduate School website. Students are also responsible for rules and regulations set forth in the University-wide version of the Academic Code, found on the website of the Dean of the College, and which includes University policies on federal regulations. The fundamentals are the same in the Codes, though the processes in each are geared to different student populations. The Student Conduct Code applies to all students. Ignorance of these Codes is not accepted as a defense for violation of any of the rules and regulations specified in the Codes. Procedures for identifying and treating code violations are described in the above mentioned documents.

B. Sexual and Gender-Based Harassment
Graduate students are expected to refrain from behaviors that constitute sexual harassment as specified by Brown University’s Policy Statement on sexual or gender-based harassment, sexual violence, relationship and interpersonal violence and stalking. This policy can be found online on the Graduate School website and the Graduate School Handbook.

In part, the policy states: No faculty, graduate or medical student, medical resident or fellow, postdoctoral fellow or associate, teaching or research assistant or fellow, proctor, mentor, or undergraduate teaching assistant shall request or accept sexual favors from or engage in a romantic, sexual or intimate relationship with any undergraduate, graduate or medical student who is enrolled in a course or section taught by that individual or otherwise subject to that individual’s academic supervision. The policy also addresses relationships between individuals of different University status; see Section IX: Prohibited Sexual or Intimate Relationships.

Additional information on what constitutes sexual or gender-based harassment and what a student should do if they feel they are the victim of harassment by another student or an individual of different University status can be found online on the Office
of Institutional Diversity and the Title IX Office websites. The Sexual and Gender-Based Harassment Resource Guide for Graduate Students is also a good resource.

C. Code of Conduct Expected of Healthcare Professionals

Students in the ScM in Medical Sciences Program will be working alongside other health professionals caring for patients in community health center settings. Because of this, they are expected to conduct themselves in a manner consistent with the standards expected of all health care professionals. The duty to act in the best interest of the patient is a fundamental ethical principle governing the behavior of all medical professionals, including physicians and those aspiring to be physicians. These standard of behavior include, but are not limited to:

a) **Honesty** – in all activities, including classroom work, examinations, clinical work and interaction with patients, peers, physicians, staff and professors.

b) **Professionalism** – conducting oneself in a professional manner at all times. This includes, but is not limited to: punctual attendance at all required learning activities; seeking advanced permission for anticipated absences; responding to communication from Gateways professors and staff in a timely manner; maintaining respectful verbal and written communication at all times; respecting and adhering to the standards of behavior expected in clinical settings, including patient confidentiality.

c) **Avoiding boundary violations with patients** - In the clinical setting, students become part of the healthcare team and are held to the same standards. It is never appropriate to have a sexual relationship with a current patient. Information obtained during a clinical encounter should never be used for any purpose other than therapeutic. Therefore a romantic relationship based on this information is always inappropriate. (Please see University policies re: relationships with other students, staff & faculty).

d) **Health** - Specific illnesses that impair performance include, but are not limited to, active drug and/or alcohol addiction, severe depression and other psychiatric illnesses and, occasionally, physical illnesses. It is not permissible for students to interact with patients while impaired by these conditions. It is the policy of the medical school to encourage recognition of illness which leads to impairment in students and to support treatment so that those students may continue their education successfully and without stigma.

e) **Criminal activities** - These include, but are not limited to, selling or dealing drugs, driving while under the influence of alcohol or drugs, child abuse, violence against others, possession of child pornography and sexual activities resulting in legal designation as a registered sex offender. Such behavior is incompatible with medical professionalism.

f) **Social Networking**. The medical school strongly advises students to exercise caution when using social networking tools such as Facebook, Twitter, Tumblr, YouTube, and blogs. These tools, while useful for interaction around social causes or political movements, can also create professional and ethical dilemmas regarding relationships with patients, patient confidentiality and patient trust in healthcare providers. Additionally, they contribute to a blurring of the line between professional contexts, in which you represent Brown and the healthcare professions.
generally, and other more personal interactions. Gateways students must be cognizant of the “social contract” between physicians and the public that holds medical professionals to high standards of behavior. Specifically, students are prohibited from sharing personal expressions, in the form of text, photos, images or video, that:

- Violate patient confidentiality
- Violate the clinician-patient relationship
- Depict illegal activities

Students are strongly discouraged from sharing personal expressions in the form of text, photos, images or videos that could impair a student’s ability to form a therapeutic relationship with patients or to have a professional relationship with medical colleagues and supervisors. In short, the administration of Gateways and AMS expects students, like physicians, to maintain a high level of professionalism in their non-medical public life.

XI. Expectations for Satisfactory Academic Standing & Remediation

A. Academic Standing and Warning Policy

This policy is consistent with the policy for all other Brown graduate programs. Students’ academic standing can be classified in four ways: good, satisfactory, warning, or termination. Each program’s director of graduate study (DGS) is required to maintain an updated and comprehensive census of the status of each student in his/her graduate program. DGSs are also required to update students on a regular basis regarding their academic status; requirements for the scheduling of these notifications are below.

**Good Standing:** Students who are in “good standing” are making both good and timely academic progress. No more than one incomplete can be carried on a student record in good standing.

**Satisfactory standing** indicates that a student has encountered difficulties of some kind – inadequate performance or slow progress in coursework, research, writing, etc. A failed exam would result in a shift from good to satisfactory standing. Two or more incompletes will, at minimum, result in a shift from good to satisfactory standing. If the concerns impacting a student’s status are not resolved, the student will move on to **warning** status.

**Warning status** signals chronic or severe problems. Students on warning must be given a written notice of their deficiencies and the consequences of those deficiencies. Students must also receive clear, written instructions of the steps to be taken (if possible) to regain good or satisfactory standing, and date-specific deadlines for recovery. Such notice must come at the end of every semester that a student is on warning status. (see below for specific policies for shift to warning status).
**Termination Status:** If the deficiencies are not resolved by the specified deadline, the student on warning moves to “termination.” Termination status signals severe and irrevocable problems. Termination indicates an immediate removal of matriculation/enrollment status, as well as all forms of financial support.

NOTE: Depending on the severity of the problem, a student may be placed immediately on warning or termination status. In cases of extreme non-performance, a student can be terminated at the end of the current semester, but only with a special petition to the Dean of the Graduate School.

**B. Remediation Policy**

*Satisfactory Standing*

Students in this category may have focused deficiencies that need to be successfully remediated. For basic science courses, remediation of poor exam performance typically entails mandatory tutoring sessions followed by a remediation exam. Deficiencies are communicated to the student by the Course Director & Director of Graduate Study who then facilitate access to learning resources, monitor the student’s progress and document successful remediation of the deficiency. If the deficiencies are too numerous to be remediated within a reasonable time frame, a repeat of the entire course may be needed (see below).

**Process of changing a student’s status to ‘warning’:**

The Gateways Academic Standing Committee (GASC) provides the student with a written notice of warning status that:

i. outlines areas of poor performance,
ii. lists specific performance goals and deadlines,
iii. states the date of the evaluation, and
iv. indicates that the student will be terminated at the end of the specified time period if performance goals are not met.

The program provides this letter to the student, and a copy to the Graduate School, by the specified deadline.

**Process of evaluating student:**

The student and the program follow the schedule outlined in the warning letter. In most cases the outcome will be either of the following:

Positive outcome: student status is raised to ‘good’ or ‘satisfactory’.
Negative outcome: student is terminated (dismissed) from the Graduate School.

In case of a negative outcome, a written notice of withdrawal must be delivered to the student by the deadline, with a copy to the Graduate School. The program also submits a withdrawal form to the Graduate School by the deadline. The Graduate School sends an official letter of withdrawal from Brown to the student.

**Specific policies for remediation, re-evaluation, warning & termination (dismissal)**

- Students who have received a grade of Satisfactory in all courses/clerkships/rotations in the period under review will be considered in good standing.
• Students who have received a grade of No Credit (NC) or Existing Deficiency (ED) in one course but who have received satisfactory grades in the remaining courses will be brought to the attention of the Gateways Academic Standing Committee (GASC) which will determine if the student should remain in good standing or be designated satisfactory standing.

• Remediation may be accomplished through a special examination, repetition of the course, or sometimes through special arrangements with the Director of Graduate Study. The student will work with the course director to determine the appropriate timing of any remediation. Remediation must be completed within 1 year. Students will only be allowed to take a special remediation examination once. Exceptions will be considered by the Director of Graduate Study and the Associate Dean for Medical Education in unusual circumstances.

• If a student fails a special remediation examination, the student will be required to repeat the course the following year, and this second failure will be brought to the attention of the Gateways Academic Standing Committee (GASC). At that time, the student may be placed on academic warning. If a student fails a course having repeated the course for a second time, the student will be brought to the attention of GASC to be considered for termination (dismissal).

• Students who have received a grade of NC or ED in two courses will be brought to the attention of the GASC to be considered for placement on academic warning.

• Students who have received grades of NC or ED in three courses, or have received a grade of NC or ED in one or more courses while on academic warning, will be brought to the attention of the GASC to be considered for termination (dismissal).

• Students in good academic standing who receive three grades of NC or ED may be considered for termination (dismissal) by the GASC.

• Students who have received grades of NC or ED in all courses during a period comprising one semester will be brought to the attention of the GASC to be considered for termination (dismissal).

• Students being considered for dismissal will be given an opportunity to appear before the GASC in order to present information as to why they should not be dismissed and respond to questioning. The GASC may also invite other individuals to appear for the purpose of providing information to the Committee. The student may be accompanied by a Brown University faculty member or advisor, but may not be accompanied by an attorney. The student will be informed of the Committee's decision in a letter from the Director of Graduate Study and Associate Dean for Medical Education. The student will be informed in the letter that they have the right to appeal any decision to the Dean of the Graduate School.
If a student has appeared before the GASC based on consideration of dismissal, but has not been dismissed, and the student subsequently fails an additional course the student may be dismissed without being asked to again appear before the GASC.

**Appeal of Decision to Terminate (Dismiss)**

The student may initiate an appeal of a GASC decision to place a student on termination status by filing a letter, within 72 hours of notification of the Committee's decision, to the Dean of the Graduate School, requesting reconsideration of the decision. Note: GASC decisions to place students on academic warning may not be appealed. The letter should include a statement of the basis for the request and any documents in support of the student's request. The Dean may either (1) reconsider the matter, (2) direct the matter to the GASC for reconsideration and issuance of a recommendation to the Dean, or (3) sustain the decision of the GASC. If the matter is referred back to the GASC, the GASC will review the appeal and transmit its recommendations to the Dean. The Dean will, either through their own reconsideration, or through reconsideration and recommendation by the GASC, review the appeal in a manner they determine is appropriate under the circumstances, and may, at their discretion, interview the student. Upon appeal, the Dean may then sustain, modify, or reverse the original GASC decision. The decision of the Dean is final.

**XII. Resources for Academic & Wellness Support**

If a student is identified as having difficulty, there are several resources available both within the department and at the University to help students succeed.

**Departmental resources:**

a) **Formal advisors/academic coach** – All students are assigned a formal advisor at the beginning of the year who can act as an academic coach for students.

b) **Team-Based Learning Sessions** – These are required sessions, occurring generally twice a week throughout the year, which are designed to help students solidify their basic science knowledge through application of concepts learned in lecture, team-based exercises and peer teaching. These sessions are conducted by the Gateways Director of Basic Science Curriculum and TAs drawn from high performing upper level medical students.

c) **Group Tutoring** – A group tutoring program is available to all students (optional) on a weekly basis beginning in August and continuing through the year. Tutors are generally upper level medical students and work closely with the Gateways Director of Basic Science Curriculum.

d) **Individual Tutoring** – If a student is identified as having academic difficulty, part of the remediation plan that is devised by the Gateways Academic Standing Committee may include referral for one-on-one tutoring, utilizing talented upper level medical students.
e) **Learning Specialist** – Some students may display challenges that are unlikely to be remedied through tutoring alone. These students may be referred by the GASC for evaluation by a learning specialist.

**University Resources:**
In all cases of unsatisfactory performance, attention is given to the particular difficulties being faced by the student. The Graduate School Associate Dean for Student Life in the Office of Student Life is available to provide advice in these situations. Often, a leave of absence may be the best course of action.

Wellness and support services through the University include:

a) Students seeking more information about **Medical Leave** should contact **Student Support Services** (Graduate Center, 4th floor).

b) **Diversity Initiatives** provides assistance with recording a lived or chosen name change into University systems to support T* students (Graduate Center, 4th floor).

c) **Student and Employee Accessibility Services (SEAS)** coordinates and facilitates services for students with physical, psychological, and learning disabilities, and temporary injuries (20 Benevolent Street, 1st floor).

d) **Counseling and Psychological Services (CAPS)** provides free confidential counseling (J. Walter Wilson, Room 516, 401-863-3476). CAPS offer Saturday appointments for graduate students from 9 am to 4 pm during the academic year at Health Services, 13 Brown Street.

e) **Maria Suarez, Associate Dean of Student Support in the Graduate School,** is dedicated to serving Master’s and Doctoral students (Horace Mann 110, maria_suarez@brown.edu, 401-863-1802)

**XIII. Gateways Advising System/Professional Development**
The Gateways program offers a multilevel advising system to assist students in achieving their professional and personal goals.

A. **Formal Professional/Personal Advisors** – All students are assigned an advisor at the beginning of the academic year. These advisors take on approximately 3 advisees per year and meet with each advisee 1:1 at least once a month. The goal of these advisor/advisee meetings is to ensure that students are getting adequate support, mentoring and coaching as they progress through the ScM in Medical Science Program. In the Fall Semester, meetings will likely focus on academics, study skills, coaching and support. In the Spring Semester, the focus of meetings will likely shift to plans for next steps in the student’s academic career. These advisors are students’ advocates and their “go to” person for any concerns. Advisors will receive ongoing faculty development to support their role and function.
B. **Director of Graduate Studies** – The Gateways program director monitors students’ progress closely. Students will be scheduled for routine, periodic brief check-in meetings to review learning goals and progress.

C. **Capstone Project Mentors** – Course Directors for the Patient Care & Complex System courses will act as overall project mentors for students’ Capstone Projects. Advice regarding day-to-day project implementation is provided by the designated project leader at the community health center site.

D. **Additional Academic Advisors** – Core Gateways faculty leadership are available for academic advice as needed. Students are free to request appointments to meet with core faculty if needed. Core faculty members include: Director of Gateways Basic Science Curriculum; Co-Directors of Patient Care in Complex Systems Courses, and Director of Gateways Anatomy Course. Program leadership includes: Director of Graduate Studies and the Associate Dean for Medical Education.

E. **Informal advisors/mentors** – Students will get to know many faculty and staff both at the medical school and at their community health center sites. Students are encouraged to seek out advice and mentoring from any of a variety of informal mentors/advisors.

XIV. **Requesting a Leave of Absence**

The Graduate School recognizes that during the course of graduate study, a student may need to request a leave of absence. Applications for leaves of absence (with the exception of medical or psychological leaves) should be sent to the Graduate School at least four weeks before the start of the semester in which the leave is to be taken. Failure to inform the Graduate School means that the student will still be considered active and will be billed for tuition. **Directors of Graduate Study (DGS) must approve all leave of absence applications.**

Students must use the Leave of Absence Request form to request a leave (found on the Graduate School website) and should attach a separate note explaining the reason for their request. The leave request process then follows these steps:

- The Department Chair (Associate Dean for Medical Education) and the program DGS must sign the form to indicate awareness and approval of the leave request.
- The completed and signed form, along with the applicant’s note explaining the rationale for the leave are then forwarded to the Graduate School for approval by the Associate Dean of Academic Affairs.
- If a student has existing Federal Title IV Aid funding or prior Federal student loans, the Leave of Absence Request form must then be signed by Brown’s Office of Financial Aid. Since students on leave are not enrolled, students with loans lose their eligibility for student loan repayment deferral. Whether or not students on leave will enter or continue repayment is a function of federal regulations on student loan repayment. Students can receive information on this topic from the Office of
Financial Aid.

- If a student is an international student, the form must also be signed by the Office of International Student and Scholar Services.

Leaves of absence are normally granted for one to two semesters.

To extend a leave of absence for a second year, students must file a request for an extension with the Graduate School prior to the expiration of their leave; this request must be accompanied by a supporting letter from the program DGS. Students who do not file extension requests will receive a warning from the Graduate School and may be automatically withdrawn from their graduate programs at Brown.

[For more information, please see the Graduate School Handbook]

XV. Grievance Procedures
The Graduate School expects that each student will have the best possible relationship with colleagues and faculty during the course of their graduate work at Brown. It is possible, however, that difficulties will arise. Should a student have a grievance, it is important to know how it can best be handled. It is University policy that each and every graduate student is entitled to a fair and prompt hearing of grievances. It is also policy that all other avenues of resolution are to be exhausted before a formal grievance procedure can begin.

According to Section 10 of the official Faculty Rules and Regulations:

a. The student must attempt to resolve the issue directly with the person or persons involved.

b. In the event that the attempt is unsuccessful, the next step is to take the issue to the Director of Graduate Study (DGS). It is the responsibility of the DGS to have an informal discussion with all involved parties, in order to achieve a resolution via mediation. It is also the DGS’s obligation to prepare a memorandum outlining the problem, steps taken, and the proposed solution; copies of this memorandum are given to all concerned parties. If this step is unsuccessful, a written request for a review with the chair of the department should be filed.

c. The Department Chair (Associate Dean for Medical Education) will attempt to mediate a resolution of the issue and will determine whether or not the question at issue is departmental in nature. If the issue at hand is departmental in nature, a written appeal must be filed with the chair of the department. This appeal must ask for a review of the question and must specify the alleged injury, the reasons for the student’s belief that they are aggrieved, and the remedy sought. The chair may either refer the appeal to a committee of review or to the departmental faculty. As expeditiously as possible, the committee of review will hear the student, consider the evidence, confer with other persons concerned, and prepare a comprehensive report of findings and a response to the appeal. Committee decisions are made by a simple majority vote of the members. It is the chair’s duty to carry out the directions of the committee. Once a decision has been made, a memorandum of the resolution is prepared and a copy is given to the student.
d. If the issue is not determined to be a departmental issue, no further action can be taken at the departmental level. Instead, the issue must be taken to the Dean of the Graduate School, where the aggrieved can seek advice and direction in the matter. If there is disagreement with the determination of whether the issues are departmental in nature, an appeal concerning that decision may be made to the Dean of the Graduate School, whose decision is final.
Appendix 1

Master of Science (ScM) in Medical Sciences

TECHNICAL STANDARDS FOR ADMISSION, CONTINUATION, AND GRADUATION

Applicants to the ScM in Medical Sciences at The Warren Alpert Medical School of Brown University are selected on the basis of their academic, personal, and extracurricular attributes. In addition, all students must possess the intellectual, physical and emotional capabilities necessary to undertake the full curriculum and to achieve the levels of competence required by the faculty.

The required abilities and characteristics for completion of the ScM degree consist of certain minimum physical and cognitive abilities and sufficient mental and emotional stability to ensure that candidates for admission and graduation are able to complete the entire course of study and participate fully in all aspects of their education. In addition, students must demonstrate the ability to work as a member of a healthcare team. This ScM program includes training in the care of patients, and differs markedly from graduate education in fields outside of the health sciences.

Technological accommodation is available to assist in certain cases of disability and may be permitted in certain areas. However, under all circumstances, a candidate for the ScM in Medical Sciences degree should be able to perform in a reasonably independent manner. An accommodation is not reasonable if it poses a direct threat to the health or safety of self and/or others, if making it requires a substantial modification in an essential element of the curriculum, if it lowers academic standards, or poses an undue administrative or financial burden.

The following abilities and characteristics are defined as technical standards, which, in conjunction with academic standards established by the faculty, are requirements for admission, and graduation.

Technical Standards for ScM in Medical Sciences Admission:

Adapted from the recommendations of the AAMC Special Advisory Panel on Technical Standards for Medical School Admission, approved by the AAMC Executive Council on January 18, 1979

A candidate for the ScM in Medical Sciences degree must have abilities and skills in five varieties, including observation; communication; motor; conceptual, integrative, and quantitative; and behavioral and social.

I. Observation: The candidate must be able to observe demonstrations and experiments in the basic sciences, including but not limited to the observation of radiologic images, microbiologic cultures, and microscopic studies of microorganisms and tissues in normal and pathologic states. A candidate must be able to observe a patient accurately at a
distance and close at hand. Observation necessitates the functional use of the sense of vision and somatic sensation.

II. Communication: A candidate should be able to speak, to hear, and to observe patients in order to elicit information, describe changes in mood, activity, and posture, and perceive nonverbal communications. A candidate must be able to communicate effectively and sensitively with patients. Communication includes not only speech but reading and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the healthcare team.

III. Motor: Candidates should have sufficient motor function to elicit information from patients by palpation, auscultation, and other diagnostic and therapeutic maneuvers. ScM in Medical Sciences students are expected to be able to assist in patient care by measuring vital signs and are expected to successfully complete Basic Life Support training.

IV. Intellectual-Conceptual, Integrative and Quantitative Abilities: These abilities include measurement, calculation, reasoning, analysis, and synthesis. Problem solving, the critical skill demanded of many advanced healthcare professionals, especially physicians, requires all of these intellectual abilities. In addition, the candidate should be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures (eg., for the study of human anatomy).

V. Behavioral and Social Attributes: A candidate must possess the emotional health required for full utilization of his or her intellectual abilities, the exercise of good judgment, the prompt completion of all responsibilities, and the development of mature, sensitive, and effective relationships with patients, members of the healthcare team, and peers. Candidates must be able to tolerate taxing workloads and to function effectively under stress. They must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the care of patients. Compassion, integrity, concern for others, interpersonal skills, interest, and motivation are all personal qualities that are assessed during the admissions and education processes.
Appendix 2:

Master of Science (ScM) in Medical Sciences

TECHNICAL STANDARDS ASSESSMENT PROCESS

Students applying to the Brown University Master of Science in Medical Sciences Program at The Warren Alpert School are selected on the basis of academic achievement, faculty evaluations, and evidence of maturity, motivation, leadership, integrity, and compassion. They must be capable of meeting the competency requirements expected of all graduates described in the Student Policies Handbook. Technological compensation can be made for some disabilities in certain areas of these competency requirements.

Candidates accepted for admission who will need special accommodations cannot be admitted unless those supportive services are available, as determined by the Dean of Medicine and Biological Sciences. The process for assessing whether applicants will be able to meet the competency requirements for the Masters in Medical Sciences degree (ScM), with reasonable accommodation, is described below.

A student requesting accommodation is responsible for providing the school with documentation supporting the need for the accommodation. The documentation must be sufficient to establish that (1) the student is disabled as defined by the ADA and Section 504 regulations, and (2) the requested accommodation is appropriate for the student's condition. The documentation must provide enough information for school administrators to understand the nature of the disability and determine what accommodations, if any, are necessary. Moreover, the student is responsible for any costs or fees associated with obtaining the necessary documentation to support his/her claim.

Process for Assessing Whether Applicants Meet Technical Standards for ScM in Medical Sciences:

1. No inquiry will be made on the application forms concerning disability. Brown's policies regarding technical abilities and skills necessary to meet the competency requirements are included with the letter of admission, and students are asked at that time to contact the Associate Dean for Medical Education if they have any concerns about their ability to meet these standards.
2. Applicants who are identified as having a disability through volunteered information, supporting credentials, or interviews will have an assessment of their ability to meet the competency requirements only after a determination is made of their admissibility to the Master of Science in Medical Sciences program.
3. Those applicants with disabilities deemed admissible to the ScM in Medical Sciences program will be requested to have submitted on their behalf appropriate documentation in regard to the disability from a qualified health professional. The health professional will be asked to provide an opinion on the candidate's ability
to meet the competency requirements for the ScM degree. The applicant may also be requested to respond to that question.

4. The responses will be submitted to a committee appointed by the Dean of Medicine and Biological Sciences. This committee may ask for a review of the supporting documentation by appropriate members of the faculty in regard to the applicant's meeting the competency requirements. The committee will ascertain what accommodations, if any, the ScM program would need to make in order that the applicant might be able to meet the competency requirements, and assess the feasibility of any needed accommodations.

5. The committee will review the information received to determine if the applicant will be able to meet the competency requirements, with reasonable accommodations on the part of the medical program, if necessary.

6. The committee will recommend to the Dean of Medicine and Biological Sciences acceptance of applicants who can meet the competency requirements or will recommend rejection of those applicants who cannot meet the competency requirements.

Gateways Admissions Telephone: (401) 863-5777 Email: MMS@brown.edu

I have read the Masters of Science in Medical Sciences Technical Standards

____________________________________
Signature       Date (mm/dd/yyyy)

Please sign and return to MMS@brown.edu before your 3 week deadline.
Appendix 3 – Competencies: The Nine Abilities

The Nine Abilities constitute competency-based standards by which medical students at Alpert Medical School are assessed over the course of their medical education. These same abilities are used as the foundation for competency-based assessment in the Gateways program. The expected competency level of ScM in Medical Sciences students for each of these abilities is equivalent to the level expected of first year medical students doing equivalent coursework.

The table below outlines the competencies that are assessed during the courses that students undertake in the Brown ScM in Medical Sciences Program.

For more details regarding the Nine Abilities see https://www.brown.edu/academics/medical/education/evaluation-and-assessment

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<thead>
<tr>
<th>Ability I: Effective Communication</th>
<th>Basic Science Courses</th>
<th>Intro to Medical Science &amp; Patient Care</th>
<th>Capstone Project</th>
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<tr>
<td>Ability II: Basic Clinical Skills</td>
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<td>Ability III: Using Basic Science in the Practice of Medicine</td>
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<td>Ability IV: Diagnosis, Prevention, and Treatment</td>
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<td>Ability V: Lifelong Learning</td>
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<td>Ability VI: Professionalism</td>
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<td>Ability VII: Population Health and Advocacy</td>
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<td>Ability VIII: Moral Reasoning and Clinical Ethics</td>
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<td>Ability IX: Clinical Decision Making</td>
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