Simmons UNIVERSITY

Pre-Medical
Academic Planning Worksheet
Undergraduate Advising 2019-2020

Guide for Students Interested in:
- M.D: Doctor of Medicine, Allopathic Medicine
- D.O.: Doctor of Osteopathic Medicine
- M.D./PH.D.
- D.P.M.: Doctor of Podiatric Medicine
- O.D.: Doctor of Optometry

Pre-Health Liaison:
Facebook Group: Simmons University Pre-Health Liaison
prehealth-liaison@simmons.edu

Pre-Health Advisors:
Sara Purisky
Academic Advisor
Office of Undergraduate Advising
sara.purisky@simmons.edu
L-036, Center for Student Success

Dr. Jennifer Roecklein-Canfield
Professor of Chemistry
jennifer.canfield@simmons.edu
S438, Park Science Center

Typical Medical School Prerequisite Requirements

Subject	# of Semesters	Simmons Courses to Satisfy Prerequisites
Biology	2 semesters required; 3+ strongly recommended	***BIOL 113**: General Biology or BIOL 115: Advanced General Biology (both SCI) ***BIOL 225**: Cell Biology ***Two additional Biology courses at the 200+ level**, including one that covers the structure and functions of systems prior to the MCAT (i.e. BIOL 222: Animal Physiology, or BIOL 231 & 232: Anatomy & Physiology I & II)
General Chemistry Enrollment in CHEM111, 113 or 115 is dependent on placement exam score or Chemistry department recommendation. All fulfill the first semester of General Chemistry.	2 semesters	***CHEM 111**: Principles of General Chemistry or ***CHEM 113**: General Chemistry I or ***CHEM 115**: Intensive General Chemistry (all SCI) ***CHEM 216**: General Chemistry II & Quantitative Analysis
Organic Chemistry	2 semesters	*CHEM 224: Organic Chemistry I (SCI) *CHEM 225: Organic Chemistry II (SCI)
Mathematics	3 semesters	***MATH 120**: Calculus I (QL, prerequisite for PHYS 114) ***MATH 121**: Calculus II (QL, prerequisite for PHYS 115) ***MATH 118**: Introductory Statistics and/or higher level (QL)
College Physics	2 semesters	*PHYS 114: Fundamentals of Physics I (SCI) ***PHYS 115**: Fundamentals of Physics II (SCI)
Biochemistry	1 semester	***CHEM 345**: Biochemistry (recommended) or **CHEM 223**: Principles of Biochemistry (SCI)
English Composition	2 semesters	**ENGL:** choose a writing intensive course (often fills ALA KCA); BOS 101 fulfills 1 semester
Psychology	1 semester	***PSYC 101**: Introduction to Psychological Science (or higher)
Sociology	1 semester	*SOCI 101: Introduction to Sociology (SH) or *SOCI 241: Health, Illness & Society (SH)

*Should be taken before MCAT

Note: Additional upper-level science classes are always beneficial, especially if students choose a major outside the science

Simmons supports two timeline options for Pre-Med students: the "Traditional" Timeline, and the Growth(+) Year Timeline. Both equally prepare students to be competitive medical school applicants.
NOTE: These timelines do not include major requirements or all PLAN requirements. They are only samples of the Pre-Med course sequence with notes about the Simmons PLAN.

"Traditional" Timeline Example

This timeline is an *example* of how you *may* wish to take courses if you plan to go directly from Simmons to Medical School, with only the summer after graduation as a break. This is generally an appropriate route for a student who had no doubts that they want to attend medical school (and therefore don't need to spend time exploring options), and is strong academically in their first two years of college. It is common for students to start out on the "Traditional" Timeline in their first year, and then transition to the Growth Year Timeline later in their career for a variety of reasons (i.e. academic rigor, MCAT preparation timeline, wanting to work before starting medical school, etc.). Students will consult with the Pre-Health Advisors to determine which timeline will aid them in being the strongest possible candidate at the time of application to medical school. This designed is designed to prepare you to take the MCAT in the spring semester of your **junior** year.

Year & PLAN Requirements	Fall	Spring	Summer
Year 1	**BOS 101**: Boston Course **SIM 101**: Simmons (2 cr.) **CHEM 111/113/115**: Inorganic Chemistry I **BIOL 113/115**: Biology I	**LDR 101**: Leadership Course **CHEM 216**: General Chemistry II & Quantitative Analysis **MATH 120**: Calculus I	*Exposure to Medicine* *Community Service*
Year 2 Learning Community • 2 courses, 3 cr. each • 1 integrated seminar, 2 cr. Simmons: Experience, fall or spring, 1 cr.	**CHEM 224**: Organic Chemistry I *Learning Community:* **PHYS 114**: Physics I AND **MATH 121**: Calculus II	**CHEM 225**: Organic Chemistry II **PHYS 115**: Physics II **BIOL 225**: Cell Biology	*Continue Service* *Research*
Year 3 3D: Design Across Diverse Disciplines (years 3 & 4) Simmons: Excel, 1 cr.	**CHEM 345**: Biochemistry *MCAT Preparation* *Review the Committee Letter Process*	*MCAT Preparation* *MCAT Exam strongly recommended by mid-April* *Committee Letter Process*	*Apply by June/July* *Secondary Applications*
Year 4 Capstone (in major)	*Med School Interviews*	*Med School Interviews*	*Take a break before Med School*
Additional Required Coursework: These courses are offered in both Fall and Spring semesters, and therefore offer students greater flexibility when adding them to their academic plan. *Should be taken before MCAT	***MATH 118**: Introductory Statistics (or higher, QL) ***PSYC 101**: Introduction to Psychological Science (or higher) ***SOCI 101 or 241**: Intro to Sociology or Health, Illness and Society (SH) **ENGL**: choose a writing intensive course (often ALA) ***Two additional Biology courses at the 200+ level**, including one that covers the structure and functions of systems prior to the MCAT (i.e. BIOL 222: Animal Physiology, or BIOL 231 & 232: Anatomy & Physiology I & II). Students with science majors may fill these requirements with major courses. **Language Requirement**, 2 sequential courses in the same language Remaining **Global Cultural (GC) Key Content Area** (The QL, ALA, SH and SCI requirements will likely be fulfilled with the above Pre-Health courses)		

Growth Year(+) Timeline Example

This timeline is an *example* of how you *may* wish to take courses If you plan to take at least one growth year between Simmons and medical school. **Approximately 80% of Simmons Pre-Health students and 50% of students nationally take at least one growth year.**

This schedule is designed to prepare you to take the MCAT in the spring semester of your **senior** year. The exam should be taken in the calendar year prior to which you plan to enter medical school (for example, if you are applying in 2020 for entrance to medical school in Fall 2021, you should take the exam in Spring 2020). If you wish to take additional years before applying to medical school, the MCAT, committee letter process, and application timeline can be moved to later years (although the times of year will always remain the same). Pre-Health Advising is available to Alumni to support then during their growth years.

Year & PLAN Requirements	Fall	Spring	Summer
Year 1	**BOS 101**: Boston Course **SIM 101**: Simmons (2 cr.) **CHEM 111/113/115**: Inorganic Chemistry I **BIOL 113/115**: Biology I	**LDR 101**: Leadership Course **CHEM 216**: General Chemistry II & Quantitative Analysis **MATH 120**: Calculus I	*Exposure to Medicine* *Community Service*
Year 2 Learning Community • 2 courses, 3 cr. each • 1 integrated seminar, 2 cr. Simmons: Experience, fall or spring, 1 cr.	**CHEM 224**: Organic Chemistry I **MATH 121**: Calculus II *Discuss Learning Community Options with your Advisor*	**CHEM 225**: Organic Chemistry II **BIOL 225**: Cell Biology	*Continue Service* *Research*
Year 3 3D: Design Across Diverse Disciplines (years 3 & 4) Simmons: Excel, 1 cr.	**PHYS 114**: Physics I	**PHYS 115**: Physics II	*Research or Clinical Experience*
Year 4 Capstone (in major)	**CHEM 345**: Biochemistry *MCAT Preparation* *Review the Committee Letter Process*	*MCAT Preparation* *Take MCAT Exam by mid-April* *Committee Letter Process*	*Apply by June/July* *Secondary Applications*
Growth Year	*Med School Interviews*	*Med School Interviews*	*Take a break before Med School*
Additional Required Coursework: These courses are offered in both Fall and Spring semesters, and therefore offer students greater flexibility when adding them to their academic plan. *Should be taken before MCAT	***MATH 118**: Introductory Statistics (or higher, QL) ***PSYC 101**: Introduction to Psychological Science (or higher) ***SOCI 101 or 241**: Intro to Sociology or Health, Illness and Society (SH) **ENGL**: choose a writing intensive course (often ALA) ***Strongly recommended***: at least two additional Biology courses at the 200+ level (i.e. BIOL 218, BIOL 222, BIOL 336), students with science majors may fill these requirements with major courses. **Language Requirement**, 2 sequential courses in the same language Remaining **Global Cultural (GC) Key Content Area** (The QL, ALA, SH and SCI requirements will likely be fulfilled with the above Pre-Health courses)		

Applying to Medical School

Admission to medical school is very competitive. Nationally, the percentage of applicants who are accepted varies from year to year but is generally less than 50% of the applicant pool. Accepted applicants nationally have an overall undergraduate grade point average of 3.5-3.6. Accepted applicants also have high scores on the MCAT averaging from 504 (DO) to 510 (MD).

Qualities of Strong Professional School Applicants:

- Apply early (early summer) of the year before the expected year of matriculation.
- Submit application to schools that best match your strengths.
- A high GPA in science and non-science courses – a competitive GPA is above a 3.5-3.6
- High Scores on the MCAT.
- Active in volunteer/work experience/extracurricular events
- Has significant clinical experience – shadowing & volunteer work are essential!
- Well known by professors
- Great letters of recommendation and evaluations
- It is recommended that applicants complete prerequisite courses at their home institution. If this is not possible, they should be completed at an accredited 4-year institution.

Students applying to medical schools must submit application materials through AMCAS (MD) or AACOMAS (DO).

- AMCAS application resources: https://www.aamc.org/students/advisors/amcasresources/
- AACOMAS application resources: https://www.aacom.org/become-a-doctor/applying

GPA Calculation

- Most professional schools will calculate your Overall GPA as well as your Science & Math GPA for admission. Math/science GPA is calculated using scores from any course taken in the departments of Biology, Chemistry, Physics, and Math (BCPM GPA).
- AP credits are NOT computed into your GPA
- ALL post-secondary coursework will be used to compute your GPA for admission, even if they are not included in your Simmons GPA. Dual-enrollment and transfer courses DO count toward your GPA.
- "W" grades do not count in your GPA. However, avoid "W" grades. Professional schools expect students to consistently carry a full-time course load (16-18 credits).

MCAT

Most U.S. medical schools will expect applicants to take the Medical College Admission Test (MCAT). The MCAT is a multiple-choice standardized exam that takes 7 hours and 30 minutes to complete (including breaks). The MCAT covers the following topics:

- Biological and Biochemical Foundations of Living Systems
- Chemical and Physical Foundations of Biological Systems
- Psychological, Social, and Biological Foundations of Behavior
- Critical Analysis and Reasoning Skills (CARS)

The AAMC recommends that students prepare for 300-350 hours for the MCAT exam. Many students find it beneficial to take a prep course for the MCAT. Up to date information regarding the current MCAT is available at https://www.aamc.org/students/applying/mcat/.

Researching Medical Schools

Admission requirements vary by program and institution. To find school-specific requirements visit medical school websites directly in addition to the following resources:

- **MD Schools**: *Medical School Admissions Requirements* (MSAR) guide. The MSAR (https://services.aamc.org/msar/), published by the Association of American Medical Colleges (AAMC), provides information on course requirements by school, acceptability of AP, community college, and online coursework for MD Schools. Some information on the MSAR is free to all students, and a 1-year subscription to access all information is $28.
- **DO Schools**: U.S. Colleges of Osteopathic Medicine https://www.aacom.org/become-a-doctor/us-coms