

## **XII. PRE-HEALTH PROFESSIONS**

### **Contents**

|  |   |
|--|---|
| Pre-Health Advising Overview.....                  | 2 |
| Pre-Health Professions at Messiah.....             | 2 |
| 3+ Pre-Health Professions Programs at Messiah..... | 2 |
| Advising Services .....                            | 2 |
| Planning Your Academic Program .....               | 2 |
| Choosing a Major.....                              | 2 |
| Preparing for Graduate Study .....                 | 3 |
| Messiah University Course Equivalencies.....       | 3 |
| Course Selection, a Generic Framework .....        | 4 |

## Pre-Health Advising Overview

*The Pre-Health Advising is best thought of as an overlay of courses.*

Pre-health advising at Messiah University is just that: specialized advising to help you overlay courses that can be part of virtually any major on campus, with the exception of nursing. Because medical programs of all types – medicine, dentistry, veterinary, PA, podiatry, chiropractic, and the list goes on – are looking for broadly educated applicants, at Messiah the choice of major is up to the student as long as the one that is chosen is recognized as being academically rigorous. That said, the majority of pre-health students choose a science-related major, but that is not a requirement. A list of the pre-health professions advising choices follow.

### Pre-Health Professions at Messiah (4 years at Messiah)

- Allopathic Medicine
- Chiropractic Medicine
- Dentistry
- Forensic Science
- Occupational Therapy
- Optometry
- Osteopathic Medicine
- Pharmacy
- Physician Assistant (PA)
- Podiatric Medicine
- Public Health
- Veterinary Medicine

### 3+ Pre-Health Professions Programs at Messiah (3 years at Messiah with an articulated curriculum at a partner institution)

- Biochemistry (B.A.) / Doctor of Pharmacy (Pharm.D.) – University of the Sciences in Philadelphia
- Biopsychology (B.S.) / MSOT in Occupational Therapy – Messiah University
- Applied Health Science (B.S.) / MSOT in Occupational Therapy – Messiah University
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### Advising Services

Messiah students who plan to pursue a career in the healthcare professions are assigned **two** advisors: one in their academic major, and our Pre-Health Advisor, Martha Stigelman. It is vital that the student contact the Pre-Health Advisor as soon as possible after meeting with you, the academic advisor. Because preparing for medical program admissions is more like training for a marathon than a sprint, it is vital that students begin the non-academic portion of their medical program requirements at the beginning of their college career.

### Planning Your Academic Program

#### Choosing a Major

There is no single, best "pre-health" major. Medical schools are looking for students who have completed specific course work and have performed at a high academic level. We recommend that a student's interest dictate his/her choice of major as long as the prerequisites for health program admission are met. Because of their natural interest in the sciences, many Messiah applicants complete a degree in Biology,

Molecular Biology, Chemistry, Biochemistry (B.A. or B.S.) or Biopsychology.

Some students, however, pursue majors outside of the sciences (including majoring in music or the social sciences, for example). In these cases, students are encouraged to take the “strongly recommended” courses described in the next section. Indeed, *medical school admissions personnel unequivocally state that the specific undergraduate major is not a consideration in the admissions process*. They are interested in the rigor of the courses the applicants have completed and the grades they have earned.

Because the preparation for graduate-level health programs vary by institution and discipline, it is important that prospective pre-health students contact the Pre-Health Advisor as early as possible in their university career to jointly choreograph a schedule to best fit students’ goals.

**Remember:**

1. Students are personally responsible to research and plan their program of student to meet all graduation requirements as well as required undergraduate coursework for their intended graduate program.
2. Under ordinary circumstances, the last thirty (30) credits preceding the conferring of the degree must be earned at Messiah University with a minimum of twelve (12) credits in the major.
3. To continue at Messiah, the student will need to maintain a cumulative grade point of 1.80 (0-23 credits), 1.9 (24-56 credits), and 2.0 (57 credits or above).

**Preparing for Graduate Study**

Messiah University has a proud tradition of preparing students for careers in the health field. While the academic and experiential requirements *may* vary by institution, most of them have similar requirements. Prospective applicants must research the schools to which they may apply to best plan their curriculum. The following charts present a brief outline of what is generally expected of successful applicants to medical programs, and how Messiah University prepares its students to meet and often exceed these requirements. You will note that at Messiah we have a Pre-Health *Advising*. Our program is best thought of as an overlay of courses that can be scheduled as part of most majors, with the exception of nursing.

**Messiah University Course Equivalencies**

The tables on the following pages refer to course requirements in one year increments. Here is how that translates to specific Messiah University courses.

- 1 year general biology (Biology 170, 171 and 172)
- 1 year general chemistry (Chemistry 105 and 106)
- 1 year organic chemistry (Chemistry 309 and 310)
- 1 semester biochemistry (CHEM 410) (minimum requirement). Two semesters are preferred (CHEM 410 and 412).
- Math Requirement varies by institution. This likely includes one semester of statistics (STAT 269, STAT 291 or PSYC 271) and/or one or two semesters of mathematics (MATH 108 or higher).
- 1 year physics (Physics 201 and 202 or Physics 211 and 212)
- 1 year English (satisfied by FYS, CCC and the writing intensive course requirement)
- 1 semester Psychology (PSYC 101)
- 1 semester Sociology (SOAN 101)

## Course Selection, a Generic Framework

While the task of advising students how to plan their academic program in the myriad pre-health professions may seem daunting, the course requirements are actually quite straightforward, at least in the early years. Prospective applicants are required to research the schools to which they may apply to best plan their four-year curriculum, but assigning them to the appropriate courses that will get them off to the best possible start is quite formulaic.

To help students plan, the following minimal sequence of courses is recommended. It should be impressed upon the student that this is not the complete list of courses required for medical programs to which they hope to apply. It is a preliminary list of classes that will be supplemented by additional program-specific and school-specific requirements.

### FIRST YEAR SEQUENCE\*

| <u>Fall Semester</u>                    | <u>Spring Semester</u>                      |
|---|---|
| CHEM 105 General Chemistry I            | CHEM 106 General Chemistry II               |
| BIOL170 Cell and Animal Physiology      | BIOL172 Diversity of Life and Plant Science |
| BIOL171 Biological Sciences Cornerstone |   |

### SOPHOMORE YEAR SEQUENCE\*

| <u>Fall Semester</u>         | <u>Spring Semester</u>        |
|------------------------------|-------------------------------|
| CHEM 309 Organic Chemistry I | CHEM 310 Organic Chemistry II |

### JUNIOR YEAR SEQUENCE\*

| <u>Fall Semester</u>       | <u>Spring Semester</u>      |
|----------------------------|-----------------------------|
| PHYS 211 General Physics I | PHYS 212 General Physics II |
| CHEM 410 Biochemistry I    |                             |

\* One semester of introduction to psychology (PSYC 101) and one semester of introduction to sociology (SOAN 101) must be completed prior to taking the MCAT. Students who have AP scores from either of these subjects should confer with the Pre-Health Advisor.

