# PRE-MEDICINE

| Undergraduate Credit Required   | Bachelor's degree   |  |
|---------------------------------|---|--|
| Entrance Exam                   | MCAT  |  |
| Professional Schooling Required | 4 yrs medical school; 3-8 yrs residency   |  |
|                                 | Doctor of Medicine (MD) or Doctor of Osteopathy (DO) degrees                    |  |
| Local Professional Schools      | Penn State, PCOM, LECOM, Drexel, Temple, University of Pennsylvania,            |  |
|                                 | Thomas Jefferson University, Cooper Medical School of Rowan University, etc     |  |
| Professional Organization       | aamc.org (Association of American Medical Colleges)                             |  |
| Websites                        | aacomas.org (Osteopathic Medicine)  |  |
| Major                           | Students can major in any subject at WCU for Pre-Medicine. The most common      |  |
|                                 | majors that align with medical school pre-requisites are Biology: Cell and      |  |
|                                 | Molecular Biology, Biology: Integrative Concentration, and Chemistry: Chem-Bio. |  |

# REQUIRED AND SUGGESTED ELECTIVES FOR WCU UNDERGRADUATE STUDENTS

The following course recommendations are general requirements for MD/DO programs. For the specific requirements of your school of choice and whether AP/IB credit is accepted, please refer to that school's admissions website or contact those schools for a list of entrance requirements. Consult the Medical School Admissions Requirements publication (AAMC) for additional information on all medical schools.

#### MEDICAL SCHOOL REQUIREMENTS

| <b>Biological Sciences</b>   | Biological Sciences with labs (min. 2 courses) |          |  |  |  |
|--|--|----------|--|--|--|
| BIO 110 General Biol   | BIO 110 General Biology, BIO 215 Botany, BIO   |          |  |  |  |
| 217 Zoology, BIO 220 Cell Physiology   |  |          |  |  |  |
| Course   | Term   | Grade    |  |  |  |
|  |  |          |  |  |  |
|  | _  |          |  |  |  |
| Genetics (required b   |  |          |  |  |  |
| Course   | Term   | Grade    |  |  |  |
| BIO 230  |  |          |  |  |  |
| General Chemistry v  |  |          |  |  |  |
| Course   | Term   | Grade    |  |  |  |
| CHE 103 & CRL 103  |  |          |  |  |  |
| CHE 104 & CRL 104  |  |          |  |  |  |
| Organic Chemistry with lab   |  |          |  |  |  |
| Course   | Term   | Grade    |  |  |  |
| CHE 231 & CRL 231  |  |          |  |  |  |
| CHE 232  |  |          |  |  |  |
| Biochemistry (1 course)  |  |          |  |  |  |
| Course   | Term   | Grade    |  |  |  |
| CHE 476  |  |          |  |  |  |
| -  |  |          |  |  |  |
| Physics with lab (2 o  |  |          |  |  |  |
| Physics with lab (2 of General Physics PHY                                     | 130 AND 140                                    | ) or     |  |  |  |
| Physics with lab (2 of<br>General Physics PHY<br>Physics 170 AND 180           | 130 AND 140<br>)                               |          |  |  |  |
| Physics with lab (2 of<br>General Physics PHY<br>Physics 170 AND 180<br>Course | 130 AND 140                                    | or Grade |  |  |  |
| Physics with lab (2 of<br>General Physics PHY<br>Physics 170 AND 180           | 130 AND 140<br>)                               |          |  |  |  |

| English Composition (3 to 6 hrs)            |      |       |  |  |
|---|------|-------|--|--|
| Course                                      | Term | Grade |  |  |
| WRT 120                                     |      |       |  |  |
| WRT 2XX                                     |      |       |  |  |
| Calculus and Statistics (please contact     |      |       |  |  |
| school for specific admissions requirement) |      |       |  |  |
| Course                                      | Term | Grade |  |  |
| MAT 121                                     |      |       |  |  |
| MAT 145                                     |      |       |  |  |
| PSY 100 or SOC 200 (recommended)            |      |       |  |  |
| Course                                      | Term | Grade |  |  |
|   |      |       |  |  |

### SUGGESTED ELECTIVES

**BIO 214: Microbiology** 

BIO 259. Human Anatomy and Physiology I

**BIO 310. Biostatistics** 

**BIO 357. Comparative Vertebrate Anatomy** 

**BIO 422. Cancer Biology** 

**BIO 428. Animal Histology** 

**BIO 440. Human Genetics** 

**BIO 448. Animal Development** 

**BIO 465. Immunology** 

**BIO 468. Comparative Vertebrate Physiology** 

**BIO 469. Human Physiology\*** 

**BIO 484. Epidemiology** 

CHE 477. Biochemistry 2

CHL 232. Organic Chemistry Lab II

<sup>\*</sup> Does not count as a Biology major elective.

| Sample Course Plan of Pro | e-Medical Requirements  |
|---------------------------|-------------------------|
| Semester 1                | Semester 2              |
| CHE 103                   | CHE 104                 |
| CRL 103                   | CRL 104                 |
| BIO 110                   | BIO 215/217             |
| WRT 120                   | WRT 2XX                 |
| MAT 121                   | MAT 145                 |
|                           |                         |
| Semester 3                | Semester 4              |
| CHE 231                   | CHE 232                 |
| CRL 231                   | PHY 140                 |
| PHY 130                   | BIO 220                 |
| BIO 230                   | PSY 100/SOC200          |
| General/Major Electives   | General/Major Electives |
| General/iviajor Liectives | General/Major Liectives |
| Compotor F                | Samastar 6              |
| Semester 5                | Semester 6              |
| CHE 476                   | CHE 477                 |
| General/Major Electives   | General/Major Electives |
|                           | •                       |
| Semester 7                | Semester 8              |
| General/Major Electives   | General/Major Electives |
|                           |                         |

| Courses Covering MCAT 2015 content  |         |  |
|---|---------|--|
| BIO 110   | CHE 476 |  |
| BIO 215   | CHE 477 |  |
| BIO 217   |         |  |
| BIO 220   | PSY 100 |  |
| BIO 230   | SOC 200 |  |
| BIO 259   |         |  |
| BIO 440   |         |  |
| BIO 468   |         |  |
| BIO 469   |         |  |
| CHE 103 and 104   |         |  |
| CHE 231 and 232   |         |  |
| PHY 130 and 140 or 170 and 180  |         |  |
| Statistical reasoning skills tested on the MCAT may be obtained through science courses or through taking a statistical methods course (see front for options). |         |  |
| Meet with the Pre-Medical Director to develop your MCAT preparation plan.   |         |  |

#### **BEYOND ACADEMICS**

Pre-Medical students are encouraged to participate in experiences such as leadership roles, volunteer work, research, and shadowing, which will help prepare them for medical school and the medical profession. Such experiences demonstrate a commitment to and knowledge of the profession. All students are STRONGLY encouraged to **shadow medical professionals, volunteer with health providers,** get involved with research and pursue internships. Additionally, involvement with clubs such as Pre-Med Club and Minorities in Medicine, will help students to learn more about the medical profession. Activities beyond the classroom play a significant role in a student's application to a professional school program.

#### APPLICATION AND ADMISSION

There are two centralized application services, the American Medical College Application Service (AMCAS) and the American Association of Colleges of Osteopathic Medicine Application Service (AACOMAS). Application for admission to most medical schools are made through AMCAS (allopathic) or AACOMAS (osteopathic). This standardized application service is available online at <a href="mainto:ammc.org/students/applying/amcas">ammc.org/students/applying/amcas</a> (allopathic) or <a href="mainto:aacom.org/">aacomas.aacom.org/</a> (osteopathic). AMCAS and AACOMAS will duplicate your application and forward it to the medical schools in which you have interest. Schools will then contact you to verify receipt of your application and inform you of any secondary applications and/or additional materials they require.

# **ENTRANCE EXAM**

The Medical College Admissions Test (MCAT) is required. The MCAT is a computer-based exam that is offered on set dates throughout the year. Information about the exam, registration, and the Official Guide to the MCAT can be found online at <a href="https://www.aamc.org/students/applying/mcat/mcat2015/">https://www.aamc.org/students/applying/mcat/mcat2015/</a>. Students should obtain this publication as soon as possible and use it as a guide while preparing for the MCAT exam.

# **ADDITIONAL APPLICATION INFORMATION**

Applications to medical school require a **personal statement** and **letters of recommendation/evaluation**. The number of required letters varies by school. For the WCU Pre-Medical program, you will need to collect a minimum of 5 letters of recommendation (at least one from an MD or DO) and have them submitted to the pre-med office prior to requesting an interview from the pre-medical committee. You should get to know your professors so that they can write a thorough letter about your potential to be a successful medical student.



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