

THE COLLEGE OF
WOOSTER

*Preparing for a Pre-Health Career
Student Orientation Handout 2010*

We are glad to hear of your interest in a health care career. Your preparation during the undergraduate years – academically, professionally, and personally – will be key steps on your path towards this goal. Although this document frequently mentions medical school, it is generally applicable to all fields of health care. The best thing that you can do at this point is to gather information and work with your academic advisor and/or a member of the Pre-Health Advising Committee to formulate an individual plan. *To stay on track, most first-year students should register for biology (BIOL 200) and chemistry (CHEM 110 or 120) for the fall semester.*

I. Course Requirements for Medical, Dental, and Veterinary Schools

You do not necessarily need to be a science major for admission to medical, dental, or veterinary schools. Most programs, however, do require a minimum core of science courses that includes:

Biology: Two semesters with lab

- BIOL 200 Foundations of Biology (no lab)..... Annually, Fall & Spring
- BIOL 201 Gateway to Molecular and Cellular Biology..... Annually, Fall & Spring
- BIOL elective Genes and Genomes, Human Physiology, Microbiology, Cell Physiology as well as Neurobiology or Immunology are all good choices..... Variable – check *Catalogue*
- BCMB 331, 332 Biochemistry (no lab, but highly recommended)..... I: Fall only; II: Spring only

Chemistry: Two semesters of general chemistry with lab, two semesters of organic chemistry with lab*

- CHEM 110 Introductory Chemistry (no lab)†..... Annually, Fall only
- CHEM 120 Principles of Chemistry..... Annually, Fall & Spring
- CHEM 211, 212 Organic Chemistry..... I: Fall only; II: Spring only

Physics: Two semesters with lab‡

- PHYS 101, 102 General Physics (non-calculus based)..... I: Fall only; II: Spring only
- or PHYS 203, 204 Foundations of Physics (calculus based)..... I: Fall only; II: Spring only

Mathematics: One semester

- MATH 107 Calculus with Algebra A..... Annually, Fall & Spring
- MATH 111 Calculus with Analytic Geometry I..... Annually, Fall only

Writing: At least one semester

- IDPT 101 First Year Seminar..... You're already enrolled!
- Plus possibly others, either within Department of English or other Writing-Intensive courses

* Only three of the first four semesters of the chemistry sequence have a laboratory. Please consult an advisor if you are planning on taking only the minimum amount of upper-level science. Most science majors will be OK here.

† Placement out of CHEM 110 depends on AP credit or the score on the departmental entrance exam during Orientation.

‡ The physics section of the MCAT is not calculus-based, but the use of calculus could enhance your understanding.

II. Suggested Course Schedule at The College of Wooster

Science courses are hierarchal in nature, so some early planning will provide the background necessary for standardized exams (MCAT, DAT, or GRE) and the application process during your junior year. The following is a suggested course schedule for your first several semesters:

Fall 2009

- BIOL 200 Foundations of Biology
- CHEM 110 or 120 Introductory Chemistry or Principles of Chemistry
- IDPT 101 First-Year Seminar
- Elective Maybe Mathematics (107 or 111), but probably a non-science course

Spring 2010

- BIOL 201 Gateway to Molecular and Cellular Biology
- CHEM 120 Principles of Chemistry (if you did not take it in the fall)
- Mathematics (107 or 111) or a non-science course
- Electives
 - CHEM 215: Analytical Chemistry (if planning a chemistry major)?
 - A course in the social sciences?
 - General graduation requirements?

Fall 2010

- CHEM 211 Organic Chemistry I
- PHYS 101 / 204 General Physics or Foundations of Physics
- Electives
 - Mathematics (107 or 111), 300-level Biology, or non-science course
 - General graduation requirements

Spring 2011

- CHEM 212 Organic Chemistry II
- PHYS 101 / 204 General Physics or Foundations of Physics
- Electives
 - Mathematics (107 or 111), 300-level Biology, or non-science course
 - General graduation requirements

Fall 2011

- BCMB 331 Biochemistry I (recommended before taking MCAT) and other courses as needed for your major and graduation

→Unfortunately there is no universal set of requirements! Some programs require or “highly recommend” additional courses in the physical sciences, social sciences, and/or humanities. You can most easily find this information on the Web or in a reference book such as the *Medical School Admission Requirements (MSAR)*.

→The Pre-Health Web site (see URL at the end of this document) or a member of the Pre-Health Advising Committee can direct you towards these resources.

III. Standardized Tests: MCAT, DAT, and GRE

Medical schools require the MCAT (Medical College Admission Test), dental schools require the DAT (Dental Admission Test), and most veterinary schools require the GRE (Graduate Record Exam).

The **MCAT** (<http://www.aamc.org/mcat/>) consists of four sections:

- Physical Sciences concentrating on physics and introductory chemistry
- Biological Sciences covering biology and organic chemistry
- Verbal Reasoning assessing comprehension and critical thinking as applied to written passages from the humanities, social sciences, and natural sciences
- Writing Sample evaluating general writing skills in two short essays

The first three sections are scored from 1-15 for a combined maximum score of 45. The Writing Sample is scored on a letter system that is separate from the numerical combined score. The MCAT is computer-based and is offered more than 20 times per year, with the greatest frequency in the spring and summer months. Students considering medical school are strongly encouraged to take the MCAT *between May of their sophomore year and May of their junior year*. Applicants are in the most competitive position if they have their MCAT scores reported by the time they begin the application process in June after their junior year.

The **DAT** (<http://www.ada.org/prof/ed/testing/dat/>) consists of six sections:

- These four sections are similar to those in the MCAT
 - General Chemistry
 - Organic Chemistry
 - Biology
 - Reading Comprehension
- Quantitative Reasoning assessing basic math, algebra, and geometry knowledge
- Perceptual Ability evaluating eye coordination and object manipulation skills

The DAT is scheduled in coordination with the American Dental Association and is offered only on computer. You are strongly encouraged to take the DAT *in the summer after your sophomore year or during your junior year*. Waiting too long may delay the application process and significantly affect your chances for admission.

It is **ESSENTIAL** that you **PREPARE EXTENSIVELY** for these comprehensive and costly exams. Begin studying early and consistently, taking practice tests to familiarize yourself with the content and format. The Pre-Health Advising Committee can direct you to exam preparation materials, some of which are at the reserve desk at Timken Science Library.

IV. Selection of Applicants to Medical, Dental, and Veterinary School

Applicants to medical, dental, and veterinary schools are evaluated on:

Undergraduate GPA. In 2008, applicants with an overall GPA in the 3.50-3.75 range were more likely to be accepted than not accepted to medical school. Strong grades in the sciences are crucial, although there is no GPA that will guarantee acceptance.

Standardized test scores. As with the GPA, there is no specific score on the MCAT, DAT, or GRE that will guarantee acceptance into medical, dental, or veterinary school. A score of 10 or higher on each section of the MCAT or a 70th percentile ranking on each section of the DAT is typical of most successful applicants. Remember that these numbers are only averages, so there are successful applicants both above and below the numbers given.

State of residence. State-supported medical, dental, and veterinary schools are usually required by law to give preference to applicants who are in-state residents. In 2008-2009, for example, 68% of first-year students entering an MD program in an Ohio school were residents of Ohio.

(At Case Western Reserve University, the only private medical school in the state, Ohio residents made up 18% of the class entering in the fall of 2008) The best chance for admission into a medical, dental, or veterinary school is within the state of residence. It is also less expensive to attend a school within your state of residence.

Personal statement. This is usually a one-page essay that describes something significant or unusual that has happened or that you feel strongly about in your personal life. The personal statement is a chance to express yourself and allow yourself to stand out from the other applicants. The personal statement should describe one aspect of your life that is unique. Avoid cliché or overly broad topics such as saving the world or helping to heal people.

Extracurricular Activities. Admissions panels look favorably upon a well-rounded applicant who is actively involved in organizations, clubs, or athletics. Be advised, however, that it is usually better to be actively involved in a few activities than passively involved in many activities.

Work, volunteer work, and research experience. Applicants' work and research experiences, particularly those related to the proposed field of study, are considered. It is **highly recommended** that students spend at least one summer doing some type of science research. It is also **highly recommended** that students do volunteer work or community service during the summers. Observations of various practices are helpful for a student's decision on different career paths. Some dental and veterinary schools require a certain number of verified hours of observation in a private practice, although most medical schools do not.

Letters of recommendation, secondary applications, and interviews. These topics can vary somewhat and will be addressed in each individual school's application materials. The Pre- Health Web site (<http://www.wooster.edu/pre-health>) or a member of the Pre-Health Advising Committee can provide sample materials so that you can familiarize yourself with the type of information that the schools consider for admission. The better your professors know you, the stronger a recommendation they can provide!

V. What Happens Next? (Explore, prepare, and grow...)

Short Term: Dealing with Immediate Needs

- Formulate your plan for fall courses
- Discuss plans with academic advisor
- Register for classes
- Check out Scot Spirit Day (Friday, August 28, 4:00 PM outside of Lowry Center) to find clubs and volunteer opportunities

Medium Term: Building Knowledge, Skills, and Relationships

- Make it a priority to interact with your classmates and teachers...What kind of student do you want to be? What kind of reputation are you building? How are you growing?
- Get a strong start in all of your courses, especially in the sciences
- Explore athletic, extracurricular, and volunteer opportunities

Long Term: You Get Out What You Put In

- Make it a priority to interact with your classmates and teachers...How do others view you? How have you grown during college? If you were writing a letter of recommendation for yourself, what would it say?
- Actively seek out research experiences in a scientific laboratory (early spring semester)
- Continue to explore social, athletic, and extracurricular opportunities
- Consider pre-health-related volunteering and/or shadowing experiences (see Pre-Health Web site, a member of the Advising Committee, or find your own opportunities).

Very Long Term: The Secrets to Lifelong Fulfillment

- Make it a priority to interact with your classmates and teachers!!!
- Continue to explore social, athletic, and extracurricular opportunities
- Make a positive difference in the lives of others

**If you pursue your passions,
rather than worrying about what will look good
or satisfy somebody else's expectations,
then success will follow.**

VI. Resources

Online Resources

- *College of Wooster Pre-Health Advising Web site* <http://www.wooster.edu/en/Academics/Areas-of-Study/Pre-Professional-Programs/Pre-Health.aspx> (or go to “A to Z Index” at the bottom of wooster.edu and choose “Pre-Health” from that list)
- *Wooster Volunteer Network* <http://www.wooster.edu/Student-Life/Student-Activities-and-Organization/Student-Organizations/Volunteer-Service/Wooster-Volunteer-Network-WVN.aspx>
- *Wooster Activities Crew* <http://www.wooster.edu/Student-Life/Student-Activities-and-Organization/Student-Organizations/Arts-and-Culture/WAC.aspx>

Pre-Health Advising Committee

- *Cate Fenster*, Committee Chair
Department of Biology, Mateer 303 C
cfenster@wooster.edu
330-263-2436
- *Nancy Anderson* (Longbrake Wellness Center)
- *Lisa Kastor* (Career Services)
- *Claudia Thompson* (Psychology)
- *Thomas Tierney* (Sociology/Anthropology)
- *James West* (Biochemistry and Molecular Biology)
- *Wendy Miller*, Pre-Health Coordinator
Rubbermaid Student Development Center
Office of Career Services
wmiller@wooster.edu
330-263-2496

Career Services

- *Lisa Kastor*

Director Campus Resources

- *College of Wooster Course Catalogue*
- *Academic advisor and course instructors*

Printed Resources

- *Reserve section in Timken Science Library Career Services Library*
- *Medical School Admission Requirements (MSAR)*
- *ADEA Guide to Dental Schools*
- MCAT guides, health career guides and more