

PREMEDICAL, PREVET AND HEALTH CAREERS PROGRAM 2011-2012

Information for Advisers of First- and Second-Year Students

Here are some suggestions for students who express an interest in medicine, veterinary medicine or the allied health careers (dentistry, physical therapy, nursing, occupational therapy, etc.).

1. Premedical and Health Careers Advisers

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A student interested in any of the human health professions, including those listed in #3 below, should contact Dr. Davies early in the Fall Term. A student interested in veterinary medicine should contact Dr. Morrissey early in the Fall Term. Advisers are encouraged to contact us as well, as we will be happy to help with any questions you may have.

2. Recommendations for the First Semester

If a student plans on entering medical school directly after graduating from Sweet Briar, she needs to take the MCAT (Medical College Admissions Test) in the Spring semester of (or early summer following) her junior year. The required science courses contain material that is covered on the MCAT, so she must complete these courses in her first three years. A student planning to go to veterinary school will generally have all four years to complete her required courses, as most veterinary schools use the GRE. Be aware, though, that some vet schools want all of the required courses to be finished by the end of the Fall semester, senior year, so a student interested in veterinary medicine should consult with Dr. Morrissey on a 4-year plan.

If a student is serious about a health career, she should take CHEM 131 and 141, followed by CHEM 231 and 233 in the second semester. A strong student should be encouraged to begin biology (BIOL 111) as well. Biology may be postponed to the second semester or to the fall of the sophomore year, but not beyond that.

If a student interested in the health professions is not ready to take chemistry, she should begin with biology and math. Pre-med students who begin science after the first year will need to do one or more of the following: take heavier course loads in science in the sophomore and junior years, take some science courses in summer school, or delay applying to medical school by one year.

You might want to remind students that the GPA is important for admission to medical and veterinary schools. The average GPA for accepted applicants to medical school is around 3.6 and was 3.55 for accepted veterinary applicants last year, so premed and prevet students should be aiming for As and Bs in their courses, especially in their science courses. The minimum GPA needed to be considered competitive is a 3.3. Students with lower GPAs may be accepted if they have some other extraordinary qualification in the other areas of interest to these programs. These other areas of interest are 1) score on the MCAT or GRE exam, 2) quality of recommendation letters, and 3) quality/quantity of volunteer hours accumulated.

3. Allied Health Careers

Students who are interested in some area of the health professions, but not necessarily pre-med or pre-vet, might wish to consult Dr. Davies about the following careers:

Dentistry	Osteopathic Medicine	Nursing	Pharmacy
Physician Assistant	Occupational Therapy	Optometry	Podiatry
Physical Therapy	Speech Therapy	Public Health	Chiropractic
Genetic Counseling	Health Administration	Medical Research	

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Summary of Medical School Requirements

Science

Almost all medical schools require two years of chemistry (general and organic), one year of physics, and one year of general biology. All of these courses must include labs and should NOT be taken P/NC. While a student may take some courses in summer school, she should take at least the majority of her science courses at SBC.

These requirements can be filled by the following Sweet Briar courses:

General Chemistry: CHEM 131, 141, 252, 253.

Organic Chemistry: CHEM 231, 233, 232, 234.

Physics: PHYS 171, 131, 122 or 172, 132.

Biology: BIOL 111, 112, 113.

Physics 122, Principles of Physics II, is an algebra-based course that meets the medical school requirement and covers the second half of the topics needed for the MCAT. If a student wishes to take a more challenging physics program, she may take Physics 172, General Physics II, (which is calculus-based) instead of 122. In either case, the student will begin with Physics 171. The laboratory courses for either lecture sequence are Physics 131 and 132.

Most premeds begin chemistry in the first year and complete it in the sophomore year. Students planning to go directly to medical school after Sweet Briar will need to begin physics in the Spring of the sophomore year and finish it in the Fall of the junior year. Physics 122, however, is offered on an alternate-year sequence. Students wishing to take algebra-based physics may take it elsewhere during the summer.

Many schools recommend some advanced courses in science. The specific recommendations vary, but may include genetics, cell biology, biochemistry, and animal biology courses. Some of these courses may also help prepare students for the biology section of the MCAT. We recommend Biology 205 and 206, Genetics and Laboratory in Genetics, and Biology 230, Comparative Vertebrate Morphology. Other advanced Sweet Briar courses addressing these topics include Biology 326 (Comparative Animal Physiology), Biology 342 (Cell and Molecular Biology), and Chemistry 321 and 322 (Biochemistry I and II).

Mathematics

Most professional schools require a year of college math, but the exact requirement varies. Some ask for calculus, others for any college math course. Statistics is frequently recommended. The best preparation (in terms of giving the student both a competitive advantage and the widest number of choices) would be for a student to complete one year of calculus (MATH 123 and 124) and, if at all possible, a course in statistics.

English

Almost all medical schools require at least one year of English. In addition to English 104, premeds should plan on taking at least one more course in English, preferably two.

Other Courses

Many medical schools want to see upper-level humanities courses, especially those that stress written and oral communication.

Choice of Major

A science major is not required for medical school. Students need to demonstrate the ability to do well in the sciences, but medical schools also look for applicants with intellectual breadth. A student who majors in the sciences should be sure to take upper-level humanities courses, while a non-science major must make sure her record demonstrates the ability to handle multiple science courses in a semester. As for veterinary school, the requirements vary widely. Because most vet schools require significantly more biology than the med schools do, most pre-vet students major in Biology. Note, however, that no specific major is required for vet school either.