



### The Passion

Students who aspire to achieve the noble goals of easing pain, combating disease, and improving the quality of life by pursuing health science careers must have a love of biology and a deep passion for their studies. Given the rigors and demands of the profession, health science students must make a lifelong commitment to learning and refining their skills.

In the Jesuit tradition, health science studies at Gonzaga sharpen the mind and inspire the heart. Through the pre-professional health science “tracks” and the Core Curriculum, students receive a strong background in science and the comprehensive liberal arts education necessary to continue their studies and earn advanced degrees.

At the same time, they also develop a philosophical and humanitarian perspective to address social and ethical issues. The realization of the passion comes when students earn a degree in Medicine, Dentistry, or Veterinary Medicine and put that degree to work.

### The Program

Different paths after graduation from college may lead a student to become a practicing member of the medical community either by earning an M.D., D.O., D.D.S., D.M.D., or D.V.M. degree in professional school, or by entering into research and/or teaching careers after they earn an M.S. or Ph.D. degree in graduate school. Students interested in medicine, dentistry, and veterinary medicine complete their undergraduate degrees in the College of Arts and Sciences and take a “track” of classes that prepares them to enter the professional programs they desire. The pathways leading to research and teaching careers are more varied, and are selected by the students and their major advisors or mentors during their undergraduate studies. Either way, students at Gonzaga University do not major directly in pre-medicine or any other pre-professional field; rather, they select undergraduate majors based upon personal and academic interests. Health science students must demonstrate an aptitude and a strong interest in the natural sciences; however, a major in science is not required, provided they take all of the science courses required for admission into the graduate or professional programs they choose. Thus, non-science majors are also well-prepared to perform successfully in the health sciences.

Regardless of their major, all health science students should complete certain courses as minimum preparation for professional study. These courses must be completed prior to spring semester of the junior year, which is when standardized admission examinations are usually taken. At Gonzaga University, these requirements are best met by taking:

- 1 semester of general chemistry & 1 semester of bioanalytical chemistry.
- 1 year of organic chemistry.
- 3-4 semesters of biology (Diversity of Life, Cell Biology, and Genetics & Evolution at a minimum; Biochemistry is strongly recommended).
- 1 year of general physics.
- 1 year of English (a semester each of composition and literature).
- 1 semester of calculus or statistics (math requirements vary widely among graduate and professional programs).

Most schools specify 1 year of general or inorganic chemistry and 1 year of organic chemistry. In our curriculum the general chemistry requirement would best be fulfilled using Introduction to Bioanalytical Chemistry (CHEM 240/240L) in place of a second semester of general chemistry or inorganic chemistry. One year of biochemistry or molecular biology is also strongly recommended by most schools, including the University of Washington. Check with the schools you are interested in attending to determine if they have a specific math requirement. We recommend that students exceed the minimum admission requirements. In fact, most professional schools have specific additional requirements. For example, many suggest supplementary science courses, including biochemistry, physiology, and molecular biology. Professional schools also appreciate the increased knowledge base that comes from taking a diverse selection of courses in topics such as plant biology and ecology.

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**For more information, please visit our website at:** <http://www.gonzaga.edu/Academics/Colleges-and-Schools/College-of-Arts-and-Sciences/Majors-Programs/Biology/premed-preident-info.asp>



It is strongly suggested that students obtain a broadly based spectrum of classes with a good mixture of the social sciences, humanities, language, literature, and fine arts. Students should consult with their major advisor and the Committee on Health Science Careers to determine the courses necessary to best prepare them for their desired career track.

### **The Committee on Health Science Careers**

Made up of professors from departments such as biology, chemistry, physics, English, and psychology, the Committee on Health Science Careers provides guidance on classes and research and internship opportunities to students. Under the supervision of their major advisor and the Committee, students are invited to attend mock interviews and workshops for writing personal statements. They also may submit their personal statements for the Committee's review. Additionally, the Committee drafts most letters of recommendation for pre-medical, pre-dental, and pre-veterinary students and provides practical, constructive advice to those seeking entrance to professional schools. The Committee stresses the importance of student initiative throughout the advisory and application process. It also highly recommends volunteering and becoming involved in social justice issues as important to both graduate and professional school acceptance and personal growth.

### **The Particulars**

Students planning to study the health sciences at the graduate or professional level must demonstrate the ability to achieve a consistent record of high academic performance while tackling a comprehensive and challenging curriculum. Medical school course loads are extremely heavy. The average load during the first year at many medical schools is 25 hours of instruction each week, compared to 16-18 hours in a typical undergraduate's course load.

Standardized admission tests are used to ensure that a high undergraduate GPA reflects thorough comprehension of course materials and not merely short-term memory skills. These tests include the DAT for dental schools and the MCAT for medical schools, osteopathy, and select veterinary schools. Some veterinary schools require the VCAT or GRE instead.

In addition to scoring well on standardized tests, professional school candidates must incorporate complementary extracurricular activities into their schedules. Hands-on experience in a health-related setting is an important factor in professional school admission. This type of experience exposes students to the complex duties expected of today's health-care professionals. Spokane is a major medical technology center

with six hospitals and a variety of specialty clinics offering students numerous volunteer and internship opportunities. Professional and graduate schools also take research into consideration. Students majoring in Gonzaga's science programs have excellent opportunities to participate in fascinating faculty research. Typically, 15 to 20 students hold paid research assistantships every summer, which often culminate in published results and presentations at regional or national meetings. Additional experiences are offered throughout the academic year for pay or for academic credit, including the opportunity to participate in the "research option" program funded in part from a grant recently received through the Howard Hughes Medical Institute. Students not majoring in the sciences can hone their research skills by arranging individual projects within their own academic disciplines.

Teaching assistantships also allow upper-division students an opportunity to work with professors by grading papers and helping explain material to lower-division students. (Teaching assistants do not teach courses or give lectures but rather assist professors with labs and student questions.)

Professional schools assess non-cognitive qualities through letters of recommendation and personal interviews. Although most graduate programs ask for individual letters of recommendation, the primary source of recommendation letters for professional schools is the Committee on Health Science Careers. The Committee bases its assessments on conversations between students and faculty and a review of each student's overall record. Although academic performance plays a major role, personal qualities such as maturity, utilization of time, resourcefulness, dependability, self-confidence, and compassion are also assessed. The Committee finds that it is able to write significantly stronger letters for students who are well known by the faculty. It is therefore essential that students make every effort during their college career to interact with faculty in their discipline, both in the classroom and through participating in extracurricular activities such as research or teaching assistantships.

During the year in which they apply to professional schools, students seeking a letter of recommendation from the Committee are required to submit specific information on their academic and extracurricular achievements, a self-evaluation, their personal statement, letters of evaluation from faculty, and outside letters of reference to the Committee. They also must attend a mock interview. Many professional schools attempt to confirm the content of recommendations by scheduling personal interviews with select candidates; thus, students greatly benefit from both the experience and feedback they receive from their mock interview with the Committee.

Finally, professional schools repeatedly reject students who present strong academic records but lack maturity or have unclear motives for a health-related career.

Therefore, students serious about health science careers need a sense of purpose and a high level of discipline from the outset. This work ethic is essential to obtain the necessary academic credentials and to earn the admiration of evaluators. Although some students attend professional school immediately following the completion of their undergraduate degrees, it is common for students to enter these programs several years after graduating from college. In fact, the average age of all first-year medical students is typically 25. Gonzaga graduates often choose to work or volunteer with programs such as the Jesuit Volunteer Corps, AmeriCorps, and the Peace Corps before pursuing an advanced degree.

### **The Potential**

Both state-supported professional schools and private schools nationwide recognize the excellence of Gonzaga's health science studies. The admission rate of Gonzaga University graduates to medical school is typically around 60 percent, a rate that is generally double the national average. Dental school admission rates are typically about 80 percent.

Recent graduates have been accepted to the following schools:

#### **Medical Schools**

Baylor University  
Case Western Reserve  
Columbia University  
Creighton University  
Emory University  
Georgetown University  
Kirksville College of Osteopathic Medicine  
Loyola University of Chicago  
Marquette University  
Mayo Medical School  
Ohio State University  
Oregon Health Sciences University  
St. Louis University  
Tulane University  
Uniformed Services Univ. of the Health Sciences  
University of California - Los Angeles  
University of Colorado  
University of Hawaii  
University of Minnesota  
University of North Dakota  
University of Pennsylvania  
University of Southern California  
University of Washington

#### **Dental Schools**

Creighton University  
Marquette University

Oregon Health Sciences University  
University of California - Los Angeles  
University of Colorado  
University of Southern California  
University of Washington

Students applying to graduate courses in veterinary studies have also done quite well in the admission process in recent years. All four applicants on record as having applied for veterinary studies programs following their graduation received offers of admission.

### **The People**

Professors in the Committee on Health Science Careers represent several departments and many years of professional experience. The Committee on Health Science Careers includes the following faculty members:

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