THE PROGRAM

Different paths after graduation from college may lead a student to become a practicing member of the medical community. Some students aspire to become practicing medical professionals either by earning an M.D., D.O., D.D.S., D.M.D., or D.V.M. degree in a professional school. Other students are interested in medical research or teaching careers and instead pursue an M.S. or Ph.D. 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 their professional school upon graduation. The pathways leading to research and teaching careers are more varied and chosen by student, in consultation with their major advisors and 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 their 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 their chosen graduate or professional program.

Regardless of their major, all students interested in applying to medical, dental, or veterinary medicine schools should complete certain courses to guarantee they have fulfilled the minimum preparation for professional study in their desired field. These courses usually are completed prior to spring semester of the junior year, which is when standardized admission examinations are usually taken graduate or professional programs in health science fields.

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 (Information Flow in Biological Systems, Energy Flow in Biological Systems, and Genetics at a minimum; Biochemistry is strongly recommended and may soon be required by many medical schools)
- 1 year of general physics
- 1 year of English (a semester each of composition and literature)
- 1 semester each of introductory sociology and psychology
- 1 semester of calculus or statistics (math requirements vary widely among graduate and professional programs)

Most schools specify one year of general or inorganic chemistry and one year of organic chemistry. In Gonzaga’s 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. Biochemistry or molecular biology are 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.

THE PASSION

Students who aspire to ease pain, combat disease, and improve quality of life for patients by pursuing careers in medicine, dentistry, or veterinary medicine 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 pre-professional “tracks” and the College of Arts and Sciences 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 Gonzaga pre-professional health science tracks aim to help students realize their career passions by preparing them for medical, dental, or veterinary school.
It is strongly suggested that students take a broad course of study, with a combination of coursework in the social sciences, humanities, language, literature, and fine arts. In fact, the 2015 MCAT will include additional questions related to psychology, sociology, and statistics in new sections of the exam. 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.

ADMISSION INTO HEALTH SCIENCES GRADUATE PROGRAMS

Students planning to study a health sciences field 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 for a typical undergraduate student.

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 should 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, and offers students numerous volunteer and internship opportunities.

Professional and graduate schools also take research into consideration. Students majoring in Biology, Chemistry, and Biochemistry at Gonzaga have excellent opportunities to participate in fascinating faculty research. Typically, 35 to 40 students hold paid research assistantships, and an additional ten obtain academic credit for their work every summer. These research projects often culminate in published results and presentations at regional or national meetings. Research experiences are also offered throughout the academic year for pay or for academic credit, particularly for Biology majors who are adding the Research Concentration. Science research at Gonzaga is funded in part from a grant 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.

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, a group of Gonzaga faculty members who provide advising assistance to students interested in 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, time management, resourcefulness, dependability, self-confidence, and compassion are also assessed. The Committee finds that they are 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 when they are applying to professional schools, students seeking a Committee recommendation letter are required to submit to the Committee specific information about their academic and extracurricular achievements, a self-evaluation, their personal statement, letters of evaluation from faculty, and outside letters of reference. 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 theadmiration of evaluators.

Although some students attend professional schools 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 that include the Jesuit Volunteer Corps, AmeriCorps, the Peace Corps, and Teach for America 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%, a rate that is generally double the national average. Dental school admission rates are typically about 80%.

Recent graduates have been accepted to the following schools:

**Medical Schools**
- Baylor University
- Boston University
- Brown University
- Case Western Reserve University
- Creighton University
- Emory University
- Georgetown University
- Loyola University Chicago
- Mayo Medical School
- Medical College of Wisconsin
- Northwestern University
- Oregon Health & Science University
- St. Louis University
- Tulane University
- University of Colorado
- University of Hawaii
- University of Massachusetts Medical School
- University of Minnesota
- University of Nebraska
- University of Nevada, Reno
- University of North Carolina
- University of Southern California
- University of Utah
- University of Vermont
- University of Washington

**Dental Schools**
- Creighton University
- Harvard University
- Marquette University
- Oregon Health & Science University
- University of British Columbia
- University of California, Los Angeles
- University of Colorado
- University of Southern California
- University of Washington

Though fewer in number, students applying to veterinary school have also done quite well in the admission process in recent years. All recent applicants on record as having applied for veterinary studies programs following their graduation received offers of admission.

THE COMMITTEE ON HEALTH SCIENCE CAREERS
Made up of professors from several academic departments, including Biology, Chemistry, Physics, English, Sociology, and Psychology, the Committee on Health Science Careers provides guidance on classes, 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 for their graduate program applications. They also submit their personal statements for the Committee’s review. Additionally, the Committee drafts most letters of recommendation for pre-medicine, pre-dental, and pre-veterinary students and provides practical, constructive advice to those seeking entrance to professional schools in the health sciences. The Committee stresses the importance of student initiative throughout the advisory and application process; it also highly encourages students to volunteer and become involved in social justice causes that they value, both to strengthen their candidacy as graduate and professional school applicants and for the personal growth that often accompanies these activities.

The Committee includes the following faculty members:
- Brian Cooney | Ph.D., University of South Carolina | English Department | cooney@gonzaga.edu
- Matthew Cremeens | Ph.D., Cornell University | Department of Chemistry & Biochemistry | cremeens@gonzaga.edu
- Jeff Cronk | Ph.D., University of California, Berkeley | Department of Chemistry & Biochemistry | cronk@gonzaga.edu
- William Ettinger | Ph.D., Washington State University | Biology Department | ettinger@gonzaga.edu
- Joey Haydock | Ph.D., Purdue University | Biology Department | Chair, Committee on Health Science Careers | haydock@gonzaga.edu
- Kate Hoffmann | Ph.D., Oregon Health and Science University | Department of Chemistry & Biochemistry | hoffmann@gonzaga.edu
- Anna Marie Medina | Ph.D., University of Southern California | Psychology Department | medina@gonzaga.edu
- Peter Pauw | Ph.D., University of Missouri | Biology Department | pauw@gonzaga.edu
- Michael Pringle | Ph.D., Washington State University | English Department | pringle@gonzaga.edu
- Ingrid Ranum | Ph.D., Washington State University | English Department | ranum@gonzaga.edu
- Brook Swanson | Ph.D., Northern Arizona University | Biology Department | swansonb@gonzaga.edu
- Stephen Warren | Ph.D., State University of New York, Buffalo | Department of Chemistry & Biochemistry | warren@gonzaga.edu
- Jeff Watson | Ph.D., Purdue University | Department of Chemistry & Biochemistry | watsonj@gonzaga.edu

Recent graduates have been accepted to the following schools:
- Alaska School of Dentistry
- Arizona State University
- Baylor University
- Boston University
- Brown University
- Case Western Reserve University
- Creighton University
- Emory University
- Georgetown University
- Loyola University Chicago
- Mayo Medical School
- Medical College of Wisconsin
- Northwestern University
- Oregon Health & Science University
- St. Louis University
- Tulane University
- University of Colorado
- University of Hawaii
- University of Massachusetts Medical School
- University of Minnesota
- University of Nebraska
- University of Nevada, Reno
- University of North Carolina
- University of Southern California
- University of Utah
- University of Vermont
- University of Washington
- Virginia Commonwealth University
- Washington University
- University of British Columbia
- University of California, Los Angeles
- University of Colorado
- University of Southern California
- University of Washington

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