



Chemistry & Biochemistry

The Department of Chemistry and Biochemistry aims to intentionally develop the whole person through deep understanding of the chemical basis of matter and hands-on practical laboratory skills. The program will cultivate in students the capacities and dispositions for reflective and critical thought, independent lifelong learning, and ethical practices to create scientific knowledge, as well as foster a mature commitment to social justice, global engagement, and care for sustainable chemical practices.

THE PROGRAM

As empirical sciences, chemistry and biochemistry require extensive laboratory experimentation. Thus, most of Gonzaga's chemistry and biochemistry courses have both a lecture and laboratory component. Knowledgeable and dedicated faculty teach all courses. The program is built on a strong laboratory curriculum, student-centered faculty, high academic standards, and modern equipment for teaching and research.

Department faculty members strongly encourage students to conduct research. Many students join a research lab in their sophomore or junior year, and seniors pursuing a B.S. degree complete an extensive undergraduate thesis. Students have full use of the Department's most advanced equipment, including various spectrometers (nuclear magnetic resonance, mass, infrared, fluorescence, ultraviolet/visible, inductively-coupled plasma, circular dichroism, and atomic) and gas and liquid chromatographs.

DEGREE PROGRAMS

The Department of Chemistry and Biochemistry offers Bachelor of Science degrees in Chemistry and Biochemistry and a Bachelor of Arts degree in Chemistry. There are two different options available for an American Chemical Society (ACS) approved Bachelor of Science (B.S.) degree:

- B.S. Biochemistry
- B.S. Chemistry

There are also two non-ACS approved degrees:

- B.A. Chemistry
- B.S. Biochemistry

The non-ACS approved B.S. Biochemistry degree has a larger biology emphasis and is better suited for students seeking a broad background in both biochemistry and molecular biology.

The Bachelor of Arts (B.A.) is offered for students seeking a strong background in chemistry, but with less specialization than the Bachelor of Science program.

RESEARCH OPPORTUNITIES

The primary objective of the **Gonzaga Science Research Program (GSRP)** is to expand undergraduate research opportunities. More specifically, the program aims to encourage and assist our faculty members in winning external grants for their research while providing research experiences for our science majors. GSRP pays for faculty and student stipends, as well as research supplies.

Some topics that faculty are currently investigating with students include:

- The development of new diagnostic agents for neurodegenerative diseases
- Design of chemical sensors and batteries
- Supramolecular chemistry and molecular recognition
- RNA chemistry and biology
- Transcription factor proteins and Parkinson's disease
- Biosynthesis and enzyme mechanisms as targets for new anti-parasitic drugs and novel antibiotics
- Electronic structure analysis using computational chemistry

CAREER OUTCOMES

Gonzaga Chemistry and Biochemistry graduates pursue careers in a wide variety of fields requiring strong backgrounds in science, problem-solving, and analysis.

Approximately **60%** of all Gonzaga Chemistry and Biochemistry graduates go on to graduate study, including medical, dental, veterinary, pharmacy, physician assistant, and even law school. Our graduates are also involved in service positions with the Jesuit Volunteer Corps, Teach for America, and AmeriCorps.

Recent employers include:

- Avista Laboratories
- Bend Research
- Gilead Sciences
- Jubilant HollisterStier
- Merck
- Metrical
- Milliken & Company
- Pacific Northwest National Laboratories
- Publicity Providers Inc.
- Spokane School District #81



GRADUATE PROGRAMS

Gonzaga students have recently been admitted to the following graduate and medical schools:

- Creighton University
- Johns Hopkins School of Medicine
- Loyola University Chicago
- Oregon Health & Science University
- Oregon State University
- Tulane University
- University of California - Berkeley
- University of California - San Diego
- University of Chicago
- University of Colorado - Boulder
- University of Massachusetts - Boston
- University of Texas - Austin
- University of Utah
- University of Washington

FACULTY CONTACT

Jeff Watson, Ph.D.

DEPARTMENT CHAIR

WATSONJ@GONZAGA.EDU

FOR MORE INFORMATION:

gonzaga.edu/chemistry



GONZAGA
UNIVERSITY