



## Bachelor of Arts and Bachelor of Science **CHEMISTRY**

The Department of Chemistry is home to a diverse and dynamic group of scholars who find creative ways to build professional connections, strengthen their skill sets and forge bonds with their classmates.

Students earning chemistry or biochemistry degrees at Pacific can expect to receive training in all practical laboratory skills, analytical techniques, computational methods, and in most of the current instrumental methods such as magnetic resonance and mass spectrometry. These skills give our students confidence and a competitive edge as they enter the workplace or pursue graduate degrees.

The Department of Chemistry offers classes in the core-curriculum of majors in chemistry, biochemistry, pre-pharmacy, pre-dentistry, pre-medicine, biology, physics, physical therapy and engineering.

We encourage students to discover the program that fits them best. Unlike larger institutions that rely on graduate students to gather scientific data, Pacific offers unparalleled research opportunities for undergraduate students and close faculty-student interactions.

### **PROGRAM FEATURES**

**Alpha Chi Sigma**  
professional  
fraternity

**Tri-Benzene student**  
organization

**Mass Spectrometry**  
Facility

**Magnetic Resonance**  
Facility

UNIVERSITY OF THE  
**PACIFIC**

**Department of Chemistry:**

Department Co-chair and Professor Jerry Tsai | [jtsai@pacific.edu](mailto:jtsai@pacific.edu) | 209.946.2298

Department Co-chair and Professor Jianhua Ren | [jren@pacific.edu](mailto:jren@pacific.edu) | 209.946.2393

Please visit [Pacific.edu/Chemistry](http://Pacific.edu/Chemistry) for more information



I hope to work in either government or private research on drug development for neurological diseases and disorders. At Pacific, the class sizes are small enough that my professors all know me, and I have had the opportunity to meet with them one-on-one whenever I needed any advice.

**Marcos Beltran-Sanchez**  
BS Chemistry

### **The Major**

The department offers courses covering the areas of general, organic, analytical, physical, inorganic, instrumental, theoretical chemistry and biochemistry. Students can pursue a BS or BA in chemistry, a BS in biochemistry and a chemistry minor.

The department also offers MS and PhD degrees in conjunction with the Thomas J. Long School of Pharmacy and Health Sciences.

### **The Experience**

The department offers a variety of exciting and future-oriented research topics for students, stretching from organic synthesis, biochemistry and theoretical chemistry to physical chemistry and spectroscopy. Our students also have the opportunity to engage in paid summer research with faculty members.

### **Objectives**

The emphasis in all chemistry classes is to provide a thorough understanding of basic chemical concepts and to develop the competence in applying these concepts in a logical fashion to solve real-world problems. Students can choose among a variety of degree programs designed to meet a range of career goals. Students are also well prepared for rewarding careers in industry, government service and private business.

The more rigorous Bachelor of Science degree prepares students for a variety of options, including advanced degree studies in chemistry and biochemistry, professional schools of medicine and dentistry, and careers in the chemical industry. Virtually all bachelor of science and many bachelor of arts candidates choose undergraduate research as one of their chemistry electives. In this course, students have the opportunity to use the modern instrumentation available in the department and to work closely with faculty and graduate students on an original research project.

### **OUTCOMES**

The Department of Chemistry has a long history of success in placing undergraduate students into excellent medical, dental, pharmacy and graduate school programs. Our graduates have gone on to careers in industry, academia, government service, the health sciences and private business. A chemistry degree provides a solid background for careers that can grow and adapt as the marketplace changes.

### **DEGREES OFFERED**

Bachelor of Arts  
Bachelor of Science

### **MAJORS OFFERED**

Chemistry (BA, BS)  
Chemistry with Departmental Honors (BS)  
Biochemistry (BS)  
Biochemistry with Departmental Honors (BS)  
Pharmaceutical/Chemical Science (MS, PhD) see Graduate Catalog

### **MINORS OFFERED**

Chemistry

For more information, please visit:

 [Pacific.edu/Chemistry](https://www.pacific.edu/Chemistry)