

Chemistry

Chemistry touches your life every day, from the air you breathe to the food you eat. The science of chemistry examines the atomic and molecular structure of matter and relates these structural features to the chemical and physical properties of substances. Its practical applications are many, from medicine and biochemistry to plastics.

The study of chemistry offers excellent undergraduate preparation for advanced study in areas ranging from the physical and biological sciences to the health professions, and from business to law. An undergraduate degree in chemistry also affords direct entrance into government and industrial work.

A Distinctive Program

The Stetson chemistry department is approved by the American Chemical Society to offer students the prestigious A.C.S. certified degree in either chemistry or biochemistry. Only one in four chemistry programs in the country are accredited to offer the certified degree.

While offering a comprehensive instructional program supported by modern laboratory equipment, the chemistry program at Stetson places special emphasis on undergraduate research, small class size and close attention to the needs and interests of the individual student.

Academics and Research

Independent research

Each chemistry major completes a senior research project guided by a faculty mentor. Our students are regularly co-authors of research publications and frequently travel with their professors to regional and national meetings to present their results. Recent research topics have included; the use of laser light scattering to study coordination chemistry, polymerization to form novel hydrogels, analytical detection of pesticides in ground water as well as bisphenol-A in disposable plastic food/drink containers, synthesis of ionophores, quantum calculations on novel inorganic complexes, and the characterization of protein-mediated exchange of small molecules across the plasma membrane of active muscle, liver and red blood cells.

Facilities and opportunities

In 2009, the Stetson chemistry program occupied a new 22,000 square-foot science facility, which expanded classroom and laboratory capacity by over 50 percent. Renovations of laboratories and student research spaces in our former facility were completed in 2012, offering a total of 28,000 square feet of lecture, laboratory, computing and informal study spaces dedicated to chemistry-biochemistry instruction and faculty-student research.

The Stetson chemistry department offers a wide range of scientific instruments dedicated to undergraduate

Fast Facts

Number of faculty: 6

Can you major in this program? Yes

Can you minor in this program? Yes

Emphasis within the major: inorganic chemistry, organic chemistry, physical chemistry, analytical chemistry, biochemistry

Popular second majors: mathematics, pre-health, pre-law

Program website:

stetson.edu/chemistry

This department prepares students for advanced study or to go directly into lab work in industry or government in fields ranging from semiconductors to forensics.

research and instruction. Instrumentation includes:

- A new 400 MHz NMR spectrometer capable of analyzing molecular structures containing hydrogen, carbon, fluorine and phosphorus atoms
- Typhoon 9410 Phosphor Imager scanner for detection and quantification of fluorescent and radioactive molecules
- Fourier transform infrared spectrophotometer
- Gas chromatograph with a mass spectrometer detector, and two other gas chromatographs with FID detectors
- Ultraviolet/visible spectrophotometer
- Steady-state and time-resolved laser fluorescence spectrophotometers
- Atomic absorption spectrometers
- Differential scanning calorimeter, capillary electrophoresis, glove box-Schlenk line, and two high-performance liquid chromatography systems.

Preparation for graduate study

The chemistry-biochemistry program has an outstanding record of placing students beyond Stetson. Over the last 10 years, 36 percent of our graduates continued on to graduate programs, 27 percent entered medical, dental or other health science professional schools, and 30 percent entered directly into the workforce.

Awards and Recognition

Distinguished faculty

Three of the five departmental faculty (Grubbs, Indralingam and Price) have been honored by the Orlando Section American Chemical Society as the Outstanding Teacher at a Florida Undergraduate Institution. Furthermore, Price received the Phi Beta Kappa, 2011 John Hague Award for outstanding teaching in the liberal arts and sciences. Faculty include:

- [Song Gao](#), Ph.D., University of Washington; analytical and environmental chemistry
- [W. Tandy Grubbs](#), Ph.D., Duke University; physical chemistry, study of polymers and their properties by laser interferometry, various forms of spectroscopy
- [Ramee Indralingam](#), Ph.D., University of Florida; analytical chemistry, isolation and identification of chemicals in spices, development of innovative lab experiments for inclusion in the curriculum
- [Harry Price](#), Ph.D., University of Illinois; biochemistry, spectroscopic and computational analysis of biomolecular systems, biofuel cells
- [John York](#), Ph.D., University of Minnesota; inorganic chemistry, computational modeling, synthetic studies of small molecule activation by biologically inspired transition metal complexes
- [Paul Sibbald](#), Ph.D., University of Washington; organic chemistry, reaction development, mechanistic study

Grant-funded research

The chemistry-biochemistry program has been the recipient of approximately \$1.3 million in federally and privately funded grants over the last five years in support of teaching and student research. Stetson chemistry majors are encouraged to do summer research, often funded by the Stetson Undergraduate Research Experience program. Several recent Stetson chemistry students have won SURE grants.

Undergraduate awards and honors

The chemistry department presents awards each year to the outstanding students in general chemistry, organic chemistry, inorganic chemistry and analytical chemistry, and also recognizes one outstanding graduating senior from the chemistry and biochemistry majors.

More Information



Office of Admissions
421 North Woodland Boulevard, Unit 8378
DeLand, Florida 32723



386-822-7100 or 800-688-0101



admissions@stetson.edu



stetson.edu/admissions

Beyond the Classroom

Internships

Chemistry-biochemistry majors interested in medical school have an opportunity to take the pre-medical student clinical experience.

After Stetson

Diverse careers

A major in chemistry prepares you for advanced study in chemistry or in other areas as diverse as the biological sciences, health-related fields such as medicine, or law. The major also prepares you to go directly into laboratory work in industry or government in fields ranging from semiconductors to forensics.

Some of our alumni teach in high schools, colleges and universities. Others work in environmental labs and for manufacturers of healthcare products. Our alumni attend Stetson University College of Law, Notre Dame University, Duke University, Georgetown University, Colorado State, Massachusetts Institute of Technology, University of Florida Dental, Medical, and Veterinary Schools, Johns Hopkins Medical School and the University of Michigan.



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