



Biochemistry

Biochemistry is the study of the chemical structures and processes of living organisms. It is an interdisciplinary field with foundations in both chemistry and biology.

Studies in the major range from basic topics such as macromolecular structure and function, catalytic strategies of enzymes, DNA replication and repair, and transcription and translation, to the molecular understanding of complex processes including development, disease and aging.

A Distinctive Program

The biochemistry program at Stetson is distinctive in that students will do a year-long senior research project of their design. Students conducting their senior research have the opportunity to interact with faculty not only in the chemistry department but in the Departments of Biology, Integrative Health Science, Physics and even Math and Computer Science.

Students also have access to modern research instrumentation that is available for their use.

Fast Facts

Number of faculty: 6

Can you major in this program? Yes

Can you minor in this program? No

Emphasis within the major: chemistry, biology, physics, mathematics

Program website:

stetson.edu/chemistry/biochemistry.php

This department prepares students for professional studies leading to careers in medicine, health care and biotechnology, and for graduate studies in the sciences.

Academics and Research

Independent research

Students conduct two semesters of research, although some choose to conduct more than this amount. Areas of research may focus on a specific area of chemistry such as analytical chemistry, biochemistry, computational chemistry, organic chemistry, physical chemistry or any number of interdisciplinary areas.

Facilities and opportunities

In all, students have access to well over \$1 million worth of advanced research instrumentation. Students have access to all of the instrumentation in the Department of Chemistry as well as instrumentation located in other departments.

Preparation for graduate study

As an American Chemical Society certified program, the Stetson biochemistry major is considered to offer excellent preparation for future studies and professional training. Students receiving a B.S. in biochemistry can apply to a multitude of graduate program in the life, physical or biomedical sciences.

Awards and Recognition

Distinguished faculty

Faculty in the chemistry department have been recognized for their dedicated teaching at both the professional level via the American Chemical Society and the university level by way of the Phi Beta Kappa Honor Society. Faculty include:

- [Song Gao](#), Ph.D., University of Washington; analytical and environmental chemistry
- [William Tandy Grubbs](#), Ph.D., Duke University; physical chemistry, study of polymers and their properties by laser interferometry and 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 L. Price](#), Ph.D., University of Illinois; biochemistry, spectroscopic and computational analysis of biomolecular systems, biofuel cells
- [John T. York](#), Ph.D., University of Minnesota; inorganic chemistry, computational modeling and 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

Stetson chemistry majors are encouraged to do summer research, either at Stetson (often funded by the Stetson Undergraduate Research Experience), or, when available, through participation in funded research under the direction of a faculty member.

Undergraduate awards and honors

The 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.

Beyond the Classroom

Internships

Students are encouraged to apply for an NSF-funded Research Experience for Undergraduates summer fellowship. A number of Stetson chemistry and biochemistry majors have participated in this highly competitive program. The REU program allows students to work in a research laboratory at another research institution during the summer. REU participants receive a stipend and gain valuable experience.

After Stetson

Diverse careers

Stetson's biochemistry program provides students with great flexibility. Biochemistry students have the option to specialize in a related field, such as molecular biology, microbiology, genetics or cell biology, simply by choosing the appropriate courses from the list of biology electives. Completion of these electives in combination with biochemistry requirements provides students with solid preparation for advanced studies in the life sciences and for further professional studies leading to careers in medicine, health care and biotechnology.

Some of our alumni teach in high schools, colleges and universities; others work in environmental labs and for manufacturers of healthcare products. Recent alumni have studied at Stetson University College of Law, University of Florida Dental, Veterinary, and Medical Schools, Emory University and Boston University.

More Information



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