



Chemistry

CHEMISTRY

It is the study of matter and chemical processes that are central to our very existence. Chemistry is a broad field of study that has many directions for specialization, so it should come as no surprise that chemistry majors end up in a wide variety of careers. Although most of our students go on to medicine, dentistry, or the chemical industry, recent graduates have also gone on to careers in law, forensics, and even art restoration.

THE DEPARTMENT OF CHEMISTRY

The department is one of the oldest departments in the University and has a long and proud record of preparing students for rewarding careers. Both Bachelor of Arts (BA) and Bachelor of Science (BS) degrees in Chemistry are available, depending on a student's career goals. Since America's chemical industry is centered in the Philadelphia region, there is a wide range of career opportunities locally available. Students who plan careers as chemistry teachers may take a five year interdisciplinary program, offered jointly with the College of Education, that leads to a Bachelor's degree in Chemistry, teaching certification, and a Master's degree in Education

The department has a strong commitment to a "hands-on" approach to the teaching of chemistry. Our laboratory programs have been enhanced in recent years by numerous external grants for equipment, providing state of the art instrumentation for several of our upper-level laboratory classes. In addition, our undergraduates are encouraged to participate in independent study and research, so that they may experience "real" laboratory operations. The operation and care of equipment are considered integral to the education of students. Research quality instruments that are used in undergraduate coursework include Nuclear Magnetic Resonance and Electron Spin Resonance; Infrared, Raman, Ultraviolet, Fluorescence, and Mass Spectrometers; Single Crystal X-Ray Diffractometer and Calorimeters.

Undergraduates are encouraged to participate in research under the direction of the Chemistry Department Faculty. Current research in the department spans a wide range of areas including organic synthesis of biologically relevant molecules, study of catalytically active surfaces, synthesis of novel materials, computational chemistry, the study of light driven chemical processes, and the analysis of the structures and functions of biomolecules, including proteins, DNA and RNA.

THE CHEMISTRY LIBRARY

The department library is an excellent resource for the department with upto date online searching of the most advanced chemical databases. The Chemistry Library and the University Paley Library have a collection of over 1400 journal titles, 53,000 bound journals and 33,000 reference books.

CHEMISTRY COURSES INCLUDE

- Organic Chemistry
- Chemical Research Techniques
- Physical Chemistry
- Inorganic Chemistry
- Inorganic Synthesis
- Solid State Analysis
- Instrumental Design
- Techniques of Chemical Measurement
- Organic Structure and Mechanisms
- Qualitative Organic Analysis
- Polymer Synthesis
- Polymer Structure and Properties



Department of Chemistry

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