

SAINT ANSELM COLLEGE



Chemistry

DEVELOPING ETHICAL AND RESPONSIBLE SCIENTISTS

The Saint Anselm College Chemistry Department provides students with the knowledge and skills necessary to excel in chemistry within the context of a liberal arts education. Consistent with the Catholic Benedictine mission of the college, the department seeks to develop ethical and responsible scientists, who are active in their local, national, and global communities. The department engages students in a variety of learning experiences that integrate the teaching and research laboratories with the classroom.

Chemistry, as the central science, is by its nature interdisciplinary, drawing on both the mathematics and physics to understand basic principles and helping to inform the structure and reactivity in biological systems. As such, in addition to chemistry, students demonstrate competency in calculus, physics, and biochemistry.

THE DEPARTMENT

The Chemistry Department consists of seven faculty members and one full time lab supervisor with experience in academic, government, and industrial research. Faculty teach lecture & laboratory sections using a variety of pedagogical methods, and all maintain and undergraduate-inclusive research program. Additional support is provided by lab instructors.

Dr. Mary Kate Donais, Ph.D. 1995 University of Massachusetts, Amherst Analytical Chemistry

Dr. Nicole Eyet, Ph.D. 2009 University of Colorado, Boulder Physical Chemistry

Dr. Matthew Hurley, Ph.D. 2012 University of Maryland, College Park Organic Chemistry

Dr. Jennifer Pace, '13, Ph.D. 2018 University of Connecticut Medicinal Chemistry



Dr. Britney Privett, Ph.D. 2017 University of Connecticut Bioinorganic Chemistry

Mr. John Tipping, '08, M.S. 2010 Indiana University Organic Chemistry

Dr. Carolyn Weinreb, Ph.D. 1994 Department Chair Pennsylvania State University Organic Chemistry

Dr. Derk Wierda, Ph.D. 1990 Harvard University Inorganic Chemistry

STUDENT CENTERED LEARNING

The Chemistry Department just undertook a major revision of it's undergraduate curriculum in 2018, focusing on modernizing and integrating curricular offerings to provide students with both more flexibility in their scheduling and a greater focus on the interdisciplinary nature of science. Laboratories are integral to our curriculum, and are designed deliberately as part of this new curriculum. Hands-on learning is emphasized and students use modern instrumentation in all laboratory classes – including general chemistry, organic chemistry, and forensic chemistry. Our classes and lab sections are small (as small as 5), enabling more direct interaction between faculty members and students.

MAJORS & MINORS

In order to meet the diverse aspirations of Saint Anselm students, our department offers the following: $\frac{1}{2} \left(\frac{1}{2} \right) = \frac{1}{2} \left(\frac{1}{2} \right) \left($

- Chemistry Major
- Chemistry Major (American Chemical Society Certified)
- Chemistry Major (7-12 Teaching Certified)
- Forensic Science Major

- Chemistry Minor
- Forensic Science Minor

RESEARCH

In collaboration with a faculty member, chemistry majors undertake a research project in an area of their own interest. Research projects completed in recent years include:

- Elemental Analysis of Archaeological Artifacts from and Ancient Roman Villa
- Analysis of the Factors that Influence the Infrared Spectra of Pollen Grains
- Reactions by Microwave Irradiation
- Detection of Photosterols
- Analysis of Chars from Fabric and Accelerants
- Nitrogen Fixation using Vanadium Complexes
- Identifying Sulfur Compounds in Beer

There are several opportunities for compensated student research. The College currently receives funding from the NH-INBRE grant through which paid research fellowships are available. Additionally the Father Michael Summer Research Grant is awarded for a summer research position in collaboration with Chemistry faculty. Many of our students have also obtained summer industry positions or have participated in summer programs at major research universities.

The College also supports research through Undergraduate Research Fellowships and Honors Program Summer Research Fellowships open to students in all disciplines.

CAREER PATHS

A chemistry degree from Saint Anselm College can be the beginning to many career paths. Many of our students have successfully pursued a graduate or professional degree, work in industry and government agencies, and teach at colleges and high schools.

- University of Cincinnati
- Colorado School of Mines
- Clemson University
- College of William & Mary
- Tufts University
- Washington University
- Dartmouth College
- Arizona State University
- University of Rhode Island
- Indiana University
- Rensselear Polytechnical Institute
- University of Pittsburg
- University of Oregon
- University of Massachusetts
- Raytheon
- Johnson Matthey Pharma Services
- Sunovion Pharmaceuticals
- Northern Analytical Laboratories
- Teledyne Leeman LaboratoriesBedford High School
- Malden Catholic High School
- Western New England University

FUN COURSES

- Forensic Chemistry
- Physical Organic Chemistry
- Integrated Laboratory
- Chemistry of Art & Artifacts
- Polymer Chemistry
- ChemConnections
- Chemistry of Biological Systems

CHEMISTRY CLUB

Our students work to engage members of our community in science. They fundraise by selling periodic table cupcakes

during National Chemistry week, run review sessions, engage with the local community on campus and in schools, and support travel to conferences.

