

ESF's Chemistry Research Spans the Globe

Biochemistry

Algal Toxins and Harmful Algal Blooms
Naturally Occurring Anticancer Drugs
Biodegradable Plastics

Environmental Chemistry

Antarctic Research
Coral Reefs and Global Climate Change
Automated Water Monitoring
Indoor Air Quality
Water Pollution
Photochemistry
Smog and the Ozone Hole

Polymer Chemistry

Drug Delivery Systems
Bio-based and Biodegradable Polymers
Fuel Cell Membranes
Complex Fluids
Stimuli-Responsive "Smart" Materials

Natural Products Chemistry

Chemical Communication in Insects
Natural Pest Control



Apply Now

Graduate students receive support through graduate research or teaching assistantships. Awards start at \$20,000 per year. All supported students receive a full-tuition scholarship and other benefits including subsidized medical insurance.

Entrance requirements include a bachelor's degree in chemistry, biochemistry or a related discipline. Applicants must submit scores from the general Graduate Record Exam (GRE) and advanced exams in chemistry or biochemistry.

Early application is encouraged. For applications and additional information, contact:

Department of Chemistry

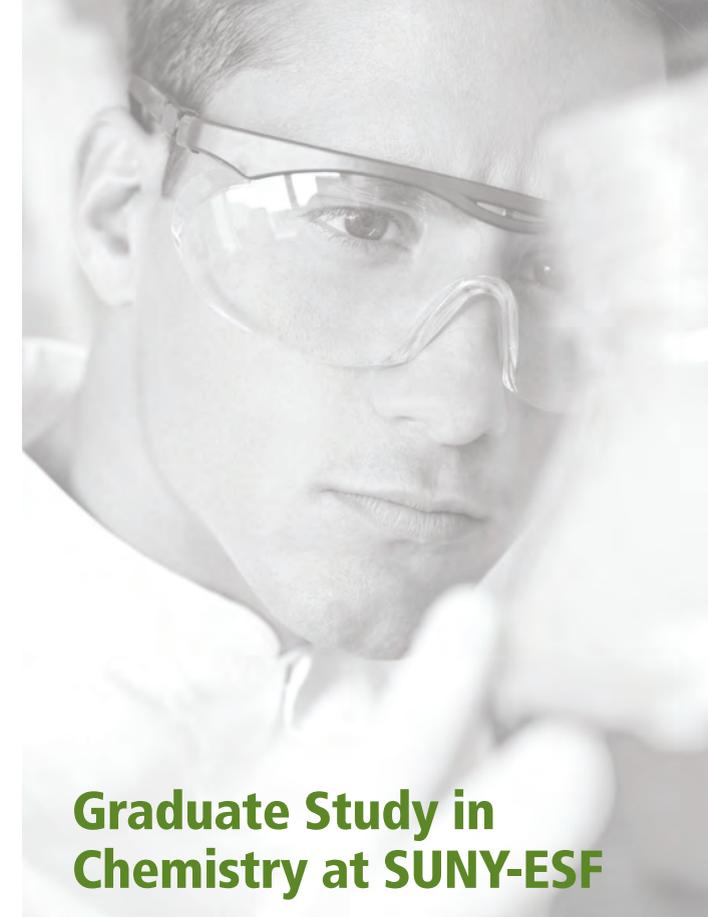
SUNY College of
Environmental Science and Forestry
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Syracuse, New York 13210

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E-mail the department at: chemistry@esf.edu



www.esf.edu/chemistry



Graduate Study in Chemistry at SUNY-ESF



A Non-traditional,
Interdisciplinary Program
Focused on the Solutions
to Tomorrow's Problems

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Environmental Science and Forestry
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Distinctive, Focused, and Respected

Graduate study in chemistry at SUNY's College of Environmental Science and Forestry has all the strengths of a traditional chemistry education, plus benefits you won't find at any other program in the U.S. The department offers degree graduate degree options including Master of Science (MS), Master of Professional Studies (MPS), a non-thesis Master's degree and the doctor of philosophy (PH.D).

Unique Core Programs

SUNY-ESF's core programs in chemistry are organized around four interdisciplinary areas:

- biochemistry,
- environmental chemistry
- polymer chemistry, and
- organic chemistry of natural products

While students receive a well-grounded education in the traditional study areas of analytical, inorganic, organic and physical chemistry, graduates have the added value of a specialty area aligned with the needs of a 21st century society.



Focused on Solutions

SUNY-ESF has both identified and found solutions to environmental problems for more than 95 years. It is the only college in the United States focused exclusively on the environmental and natural sciences, design and engineering. Chemistry students work on preparing novel bio-based products, energy-saving polymers, products for integrated pest management, mapping food webs, and the fundamental chemistry of aquatic and atmospheric systems. Chemistry alumni are leaders and problem-solvers who use their knowledge and skills to help society be productive as well as ensure sufficient natural resources for the future.

The Right Size

Students, faculty and staff at ESF form a small, close-knit community with students working side-by-side with faculty scientists on cutting-edge research. The total student population is just over 1,800; about one-third are graduate students in all of the college's majors.

ESF offers a small-school experience and a big-school environment. Our long-standing partnership with Syracuse University (located right next door) gives ESF students access to additional research and library facilities.

World-Class Faculty

Department of Chemistry professors are world-renowned and serve on many scientific committees and editorial review boards. Professors Boyer and Kieber have received the College's prestigious Exemplary Researcher Award. Chemistry faculty members have extensive contacts worldwide in industry and at prestigious universities, providing myriad opportunities for graduates to pursue their dream career or desire for additional education.

Outstanding Facilities.

The Edwin C. Jahn Laboratory is the exclusive home of the Department of Chemistry. The building's 72,000 square feet include 24 special-purpose research laboratories and three large teaching laboratories. Additional specialized facilities exist for biological and trace organic analysis, trace-metal studies, polymer characterization and atmospheric chemistry. The Jahn Lab is equipped with state-of-the-art research equipment including a 300 MHz and a 600 MHz NMR, GC and High Resolution Mass Spectrometers, MALDI TOF MS, ICP/OES AND ICP/MS, stable isotope MS and an electron microscopy lab (TEM,SEM) in an adjacent building.



SUNY-ESF Faculty of Chemistry

Neal Abrams
Inorganic chemistry

Solid state inorganic materials in photovoltaics and synthesis of supramolecular hydrogen storage molecules. Development of guided inquiry labs for general chemistry.

Gregory L. Boyer
Biochemistry

Harmful algal blooms, including red tides and freshwater cyanobacteria toxins; siderophores and the phytoremediation of heavy metals.

Israel Cabasso
Polymer chemistry

Polymer membranes and processes, transport in polymer matrices, batteries, fuel cells and electrochemical processes, conductive polymers.

Paul M. Caluwe
Polymer chemistry

Organic synthesis of highly functionalized molecules, cellulose chemistry, heterocyclic chemistry.

Avik P. Chatterjee
Physical and polymer chemistry

Theoretical physical chemistry; statistical mechanics of complex fluids; structural and thermodynamic phenomena in polymer colloid mixtures.

Theodore S. Dibble
Environmental chemistry

Atmospheric kinetics and photochemistry, spectroscopy and chemistry of radicals, laser chemistry.

Kelley J. Donaghy
Inorganic chemistry

Synthesis of materials, boron containing drugs and boron substituted peptides. Development of inquiry based teaching materials for inorganic chemistry and large lecture halls.

Jose L. Giner
Organic chemistry

Bio-organic chemistry; biosynthesis of natural products, sterols of marine origin; natural products of medical and agricultural significance.

Ivan Gitsov
Polymer chemistry

Synthesis and characterization of polymers with novel architectures, dendritic, hyperbranched, or star-like co-polymers.

John P. Hassett
Environmental chemistry

Aquatic organic chemistry, sampling and real-time detection of organic contaminants in aquatic and soil environments.

David L. Johnson
Environmental chemistry

Analytical methods, automated SEM/Image analysis, heavy-metal speciation, lead in soils and dusts.

David J. Kieber
Environmental chemistry

Environmental organic chemistry, aquatic photochemistry, chemical oceanography, Antarctic research.

Christopher T. Nomura
Biochemistry

Protein and metabolic engineering, biodegradable plastic production, biofuels, bacterial metabolism, polymer characterization, biochemistry and molecular biology.

Arthur J. Stipanovic
Polymer chemistry

Characterization and application of polysaccharides, controlled release of biologically active compounds; biodegradable polymers.

Mark A. Teece
Environmental chemistry

Environmental biogeochemistry of coral reefs and lakes, stable isotope analyses of food webs.

Francis X. Webster
Ecological chemistry

Isolation, identification, and synthesis of insect, mammalian, and plant semiochemicals; total synthesis of natural products.

William T. Winter
Polymer chemistry

Recyclable biopolymers, polysaccharide structural biology, biodegradable composites, bio/cheminformatics, polymer characterization.