



GRADUATE PROGRAMS IN ARTS & SCIENCES



MASTER'S DEGREE PROGRAMS IN CHEMISTRY

The Chemistry Department at The University of Scranton offers three master's degree programs – chemistry, biochemistry and clinical chemistry. In addition, course work is offered in support of a master's degree in secondary education with a specialization in chemistry. To earn your degree in chemistry or biochemistry, you need 30 credits. To earn your degree in clinical chemistry, you need 36 credits. The University's Chemistry Department is well regarded nationally, consistently ranking as one of the top producers of master's degrees in the United States.

We offer a strong faculty, state-of-the-art laboratories and other facilities suited to graduate-level studies, as well as an array of rigorous courses. The result is a graduate degree that will prepare you for a successful career, whether it be in industry, secondary education, or research.

CHEMISTRY

Our students typically enter the University's graduate programs with majors in chemistry, biology or another natural science, or, in the case of our clinical chemistry program, with an undergraduate degree in medical technology. Many enter the program immediately after completing their undergraduate degree; others enter while employed by industry, various medical laboratories or educational institutions.

Chemistry and Biochemistry

A choice of a master of science or master of arts degree gives you a variety of alternatives in picking a career path. Our M.S. is ideal for upgrading your knowledge and professional capabilities for advancement in industry positions or secondary education. Our M.A. degree provides a solid foundation toward subsequent work for your doctoral degree, ultimately preparing you for a role in research.

Clinical Chemistry

This program is designed to provide ad-

vanced scientific and management training for positions in hospitals, industry or private analytical laboratories. Our M.A. degree emphasizes the skills needed for clinical research, while the University's M.S. degree is intended for students who wish to combine their scientific training with an administrative overview in health, medical, and laboratory environments.

FACILITIES

The University of Scranton's Chemistry Department is exceptionally well equipped with modern instrumentation, including a scanning electron microscope; IR, UV, and fluorescence spectrometers; gas and liquid chromatographs; a variety of lasers; a gas chromatograph-mass spectrometer; a Varian Gemini 300MHz NMR; and atomic absorption, liquid scintillation and polarographic instrumentation. In addition, you will have access to an electron microscope and x-ray diffraction equipment.

The University provides an excellent array of computing facilities and software. There

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A NATIONALLY RECOGNIZED MASTER'S UNIVERSITY

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THE UNIVERSITY OF
SCRANTON
A JESUIT UNIVERSITY

CHEMISTRY, BIOCHEMISTRY AND CLINICAL CHEMISTRY

are numerous PC laboratories reserved exclusively for student use and in support of research activities on our campus. Access to the mainframe is available as well.

GRADUATE ASSISTANTSHIPS

Approximately 20 graduate assistantships are awarded annually to graduate students in the Chemistry Department. Awarded on the basis of a student's academic record, experience and future promise, each assistantship provides a stipend and eligibility for a tuition scholarship.

APPLICATION REQUIREMENTS

- On-line application: www.scranton.edu/gradapply
- Official academic transcripts from all colleges/universities attended indicating a cumulative undergraduate GPA of 2.75.
- Three professional letters of recommendation from individuals that can evaluate your ability to perform graduate level work
- Statement of intentions
- Applications accepted on a rolling basis for all terms.

REQUIREMENTS FOR GRADUATION

- Complete your chosen program's credit requirements
- Pass a comprehensive examination on core courses required
- Achieve a 3.0 GPA (4.0 scale)
- Complete a thesis based on independent research (M.A. candidates)

CURRICULUM

The specific courses needed for your graduate degree in chemistry vary depending upon which program you select. Available courses include:

- Advanced Analytical Chemistry
- Advanced Inorganic Chemistry
- Advanced Quantum Chemistry
- Advanced Thermodynamics and Equilibrium
- Analytical Methods
- Applied Spectroscopy
- Biocatalysis and Metabolism
- Biochemical Structure and Function
- Biochemistry of Disease
- Chemical Toxicology
- Clinical Quality Control
- Instrumental Electronics
- Introduction to Quantum Chemistry
- Introduction to Thermodynamics
- Mechanistic Organic Chemistry
- Polymer Chemistry
- Special Topics in Chemistry
- Structural Organic Chemistry

OUTSTANDING FACULTY

- Christopher A. Baumann, Ph.D.**, University of Florida, Physical Chemistry, molecular spectroscopy, photochemistry, physical absorption
- Michael C. Cann, Ph.D.**, SUNY Stony Brook, Organic Chemistry, Green Chemistry
- John C. Deak, Ph.D.**, University of Rochester, Physical Chemistry, biophysical chemistry, surface chemistry, laser spectroscopy
- Trudy Dickneider, Ph.D.**, University of Miami, Organic Geochemistry, Oil/source rock correlations, paleoenvironments
- Tim Foley, Ph.D.**, University of Rhode Island, Biochemistry, enzyme regulation, protein-protein interaction
- David E. Marx, Ph.D.**, Binghamton University, Inorganic Organometallic photochemistry
- David A. Rusak, Ph.D.**, University of Florida, Analytical Chemistry, elemental analysis, lasers, optics
- Joe A. Vinson, Ph.D.**, Iowa State University, Analytical Chemistry, Clinical and toxicological analysis, pharmaceutical analysis
- Joan Wasilewski, Ph.D.**, University of Pennsylvania, Biochemistry, Molecular biology, DNA-protein interactions, gene regulation



Office of Graduate Admissions

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