CHEMISTRY, MS

Chair

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Faculty

Atanu Acharya, Carlos A. Castañeda, Joseph Chaiken, Arindam Chakraborty, John D. Chisholm, Robert P. Doyle, Jonathan French, Weijun Gui, James L. Hougland, Xiaoran Hu, Timothy M. Korter, Yan-Yeung Luk, Mathew M. Maye, Davoud Mozhdehi, James T. Spencer, Michael B. Sponsler, Rachel Steinhardt, Shahar Sukenik, Nancy I. Totah, Weiwei Zheng

Program Description

The Department of Chemistry is large enough to provide a broad range of graduate-level courses and research opportunities and yet small enough to foster close working relationships between students and professors. It includes 20 faculty, some 95 graduate students, postdoctoral associates, and technical and administrative staff. Programs of study include those for both M.S. and Ph.D. degrees, with research offerings in the areas of biochemistry, organic, inorganic, and physical chemistry, as well as those at the interface of these disciplines.

During the first year of graduate study, courses enable students to gain a sound theoretical foundation for their own research investigations. Students are encouraged to become actively involved in research projects as soon as possible.

Graduate Awards

Graduate Scholarships:

Support graduate study for students with superior qualifications; provide, in most cases, full tuition for the academic year.

Graduate Assistantships:

Offered to most Graduate Scholarship recipients; no more than an average of 20 hours of work per week for nine months with a stipend in addition to tuition scholarship for 24 credits per year during the first two years of study. Additional summer support is generally available.

Syracuse University Graduate Fellowships:

Tax-free stipends for nine months of full time study; tuition scholarship for 15 credits per semester for a total of 30 credits during the academic year.

Facilities

The Center for Science and Technology near the main quadrangle of the Syracuse University campus provides space and facilities for chemistry faculty and graduate student research: millions of dollars of specialized equipment, including spectrometers, lasers, and other chemical instrumentation; computers and high-speed networks; and an automated X-ray diffractometer for structure determinations.

The Life Sciences Complex, located adjacent to the department of chemistry, provides research and teaching space for the departments of chemistry and biology, and helps foster interactions between the two departments. This building opened in fall 2008.

Student Learning Outcomes

1. Develop knowledge in a specialized area of chemistry, expand knowledge in one's own area of specialization
2. Develop broad overview of chemical knowledge outside of one's own area of specialization
3. Train on modern instrumentation and techniques, interpret and disseminate results. Develop accurate and safe laboratory techniques, recognize hazards and wastes, disseminate results
4. Work effectively in small groups, disseminate research findings, critically analyze and compare findings to those of others
5. Communicate effectively, work in small groups, perform database literature reviews. Design experiments using ethical behavior, understand impact of Chemistry on society

M.S. in Chemistry

There are two options for M.S. students. A non-thesis option requires at least 30 credits in graduate chemistry and related courses, passing two of four qualifying breadth examinations, GPA of 3.0 prior to graduation and successful completion of a comprehensive examination or other culminating experience based on the coursework taken by the student. An M.S. degree based in part on a thesis requires a satisfactory master's thesis; at least 18 credits in graduate chemistry courses; a total of 30 graduate credits, including thesis credits; passing two of four qualifying breadth examinations; GPA of 3.0 prior to graduation and passing an oral examination based on the thesis.