

CHEMISTRY (CHEM)

Graduate Degree Program
College: Computer, Mathematical, and Natural Sciences

Abstract

The Department of Chemistry and Biochemistry offers graduate study leading to the Ph.D. degree in Chemistry. Our Ph.D. program in Chemistry has a strong core in the traditional fields of chemistry, including analytical chemistry, chemical physics (in cooperation with the Institute of Physical Sciences & Technology), environmental chemistry, inorganic chemistry, nuclear chemistry, organic chemistry and physical chemistry. In addition to these traditional areas we also have interdisciplinary programs in contemporary areas such as nanoscience, chemical biology, energy sciences, materials chemistry, theoretical chemistry, and supramolecular chemistry.

Financial Assistance

Ph.D. candidates are normally supported on graduate teaching assistantships during their first year in graduate school as long as they are in good standing. Teaching assistants usually instruct undergraduate laboratory and recitation classes and receive in return a tuition waiver of ten credits each semester, a salary and health care benefits. In subsequent years, Ph.D. candidates are typically supported on graduate research assistantships or fellowships. Financial assistance is not typically available to M.S. candidates.

Contact

Graduate Program Office (chem-gradoffice@umd.edu)
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University of Maryland
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Telephone: 301-405-1028 | 301-405-7022
Email: chem-gradoffice@umd.edu

Website: <http://www.chem.umd.edu>

Courses: BCHM (<https://academiccatalog.umd.edu/graduate/courses/bchm/>) CHEM (<https://academiccatalog.umd.edu/graduate/courses/chem/>)

Relationships: Biochemistry (BCHM) (<https://academiccatalog.umd.edu/graduate/programs/biochemistry-bchm/>), Chemical Physics (CHPH) (<https://academiccatalog.umd.edu/graduate/programs/chemical-physics-chph/>)

ADMISSIONS

GENERAL REQUIREMENTS

- Statement of Purpose
- Transcript(s)
- TOEFL/IELTS/PTE (international graduate students (<https://gradschool.umd.edu/admissions/english-language-proficiency-requirements/>))

PROGRAM-SPECIFIC REQUIREMENTS

- Letters of Recommendation (3)
- Graduate Record Examination (GRE) (optional)

- GRE Subject (optional/highly recommended)
- CV/Resume
- Description of Research/Work Experience
- Supplementary Application (contact department)

Admission to graduate study at the University of Maryland requires a minimum of a Bachelor of Science (B.S.), Bachelor of Arts (B.A.) or equivalent degree. Previous coursework must normally include a minimum of 30 semester or 40 quarter hours of chemistry, with at least 1 year of physical chemistry, 1 year of organic chemistry and 1 semester of inorganic chemistry, as well as laboratory courses in organic chemistry and physical chemistry. A laboratory course in analytical chemistry is also preferred.

The chemistry subject GRE score is not required but it can be helpful for a complete evaluation. Applicants from non-English speaking countries must also present the results of the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE).

APPLICATION DEADLINES

Type of Applicant	Fall Deadline
Domestic Applicants	
US Citizens and Permanent Residents	November 18, 2025
International Applicants	
F (student) or J (exchange visitor) visas; A,E,G,H,I and L visas and immigrants	November 18, 2025

RESOURCES AND LINKS:

Other Deadlines: [chem.umd.edu](http://www.chem.umd.edu) (<http://www.chem.umd.edu>)

Program Website: chem.umd.edu/graduateprogram (<http://www.chem.umd.edu/graduateprogram/>)

Application Process: gradschool.umd.edu/admissions/application-process/step-step-guide-applying (<https://gradschool.umd.edu/admissions/application-process/step-step-guide-applying/>)

REQUIREMENTS

- Chemistry, Doctor of Philosophy (Ph.D.) (<https://academiccatalog.umd.edu/graduate/programs/chemistry-chem/chemistry-phd/>)
- Chemistry, Master of Science (M.S.) (<https://academiccatalog.umd.edu/graduate/programs/chemistry-chem/chemistry-ms/>)

FACILITIES AND SPECIAL RESOURCES

The Department has state-of-the-art research facilities to support research in the fields listed above. Facilities include "clean" rooms for environmental sample analysis, X-ray crystallographic instrumentation, numerous mass spectrometers, numerous NMR spectrometers including 400, 500, 600 and 800 MHz Fourier-transform NMR spectrometers; an XPS spectrometer, Atomic Force Microscopes, ultracentrifuges, analytical optical spectrometers, and a state-of-the-art computer graphics facility.

Departmental research is supported by a departmental server and many individual faculty workstations. The Department has access to electronics shop and campus machine shops. The Chemistry Library has an extensive collection in chemistry, biochemistry, and other fields.

Electronic access to journals and literature search databases is available.
A Macintosh workstation facility (25 units) is available in the Department
for student/faculty use.