

Chemistry & Biochemistry

- Bachelor of Science
- Offered as a minor



A Tier 1 national research university that provides a private college educational experience and public university value.

The fields of chemistry and biochemistry are ever-changing and constantly growing. Chemistry is sometimes referred to as the “central science” because it involves elements of physics, mathematics, biology and earth science. The knowledge gained while studying and succeeding here will propel students into many different career opportunities in the five divisions of chemistry: analytical, biological, inorganic, organic and physical. Careers in education, forensics, government, technology, industry, medicine, or research are among the many exciting choices for graduates.

Skills Developed: Chemistry & Biochemistry Majors

Chemistry students are prepared for employment across many areas of the industry including but not limited to: polymers, biotechnology, forensics, pharmaceuticals, research, or the medical professional programs. For those looking into marine chemistry, geochemistry, toxicology, environmental monitoring and analysis, environmental law, or other environmental sciences this major is great for customizing their studies. Electives in departments like biology, physics, economics, and political science will help round out a successful career in the chemistry field.

Skills Developed: Chemistry or Biochemistry Minor

Choose between chemistry and biochemistry to expand your career and graduate school options with the fundamentals of either.

Curriculum overview

The Chemistry & Biochemistry curriculum provides a solid foundation in the theoretical knowledge and practical laboratory skills necessary for a variety of professional careers. Chemistry majors can choose between a Chemistry or Biochemistry option and can tailor their curriculum towards Environmental Chemistry or a Pre-Medical focus. The department also offers a BS/MS (4+1) option which allows the student to achieve both a Bachelor's and a Master's degree in five years, rather than the usual six years required. This option provides exposure to graduate courses and research, making the transition from BS-MS to PhD-level study easier.

Top Jobs

- Chemists, Biochemists and Material Scientists (median salary: \$76,280)
- Chemical Engineers (median salary: \$102,160)
- Pharmacists (median salary: \$124,170)
- Geoscientists and Geological Engineers (median salary: \$89,850-\$94,240)
- Healthcare Occupations (median salary: \$123,130-\$208,000 - degree level and industry/specialty dependent)
- Pharmaceutical R&D (median salary: \$72,406)

Graduate School Placements

- Brown University
- Massachusetts Institute of Technology
- Texas A&M
- University of Vermont
- University of Rhode Island

Medical School Placements

- Mass College of Pharmacy and Health Sciences
- Nova Southeastern School of Medicine
- Tufts University School of Medicine
- UMass Medical School
- University of New England College of Medicine

Career Placements

- Bristol-Meyers Squibb
- Immunogen
- Drug Enforcement Agency
- Fairhaven High School
- Federal Bureau of Investigation
- Massachusetts Crime Lab
- New Bedford High School
- Novartis
- Pfizer
- Siemens
- Waters Corporation
- Mass Biologics
- Nye Lubricants
- Perkin-Elmer

More Info

- American Chemical Society Certification
- Research-intensive capstone: work with faculty on projects with opportunities to present on campus or at a professional conference
- Technology: use state-of-the-art equipment including nuclear magnetic resonance spectrometer, atomic absorption spectrophotometer, x-ray diffractometer, voltametric analyzer, biosensors, mass spectrometers, DNA sequencer, HPLC and electrophoresis systems.
- Join organizations such as the Chemistry Club, the Pre-Health Society, and Honors Program
- Pre-med and pre-pharmacy studies track
- Cranberry Health Research Center: a collaboration among academia, medical institutions, and industry to provide scientific evidence for the cranberry's role in health and nutrition.

Contact info: umassd.edu/programs/chemistry