

# **Chemistry & Biochemistry**

BS, Minor BS/MS MS 4+1 MAT

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.

Undergraduate options include the **Chemistry BS** with optional concentration in **Biochemistry** and focus areas of **Pre-Med Pre-Health** or **Environmental Chemistry**. Undergraduate students can elect a **Chemistry minor** or **Biochemistry minor** with their major program of study. Students can also pursue the **BS/MS Fast Track** program or **4+1 MAT**. Careers in education, forensics, government, technology, industry, medicine, or research are among the many exciting choices for graduates.

## **Program overview**

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.

# **Chemistry + Biochemistry Opportunities**

- 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 spectrophometer, 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.

# **Sample Graduate School Placements**

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

## **Sample Medical School Placements**

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

### **Sample Alumni Careers**

- Bristol-Meyers Squibb
- Immunogen
- Drug Enforcement Agency
- Massachusetts Crime Lab
- Siemens
- Nye Lubricants
- Perkin-Elmer

#### **Sample Career Tracks**

- Chemists and Biochemists (median salary:\$76,280)
- Chemical Engineers (median salary: \$102,160)
- Pharmacists (median salary: \$124,170)
- Geoscientists and Engineers (median salary: \$94,240)
- Pharmaceutical R&D (median salary: \$72,406)



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