



BIOCHEMISTRY

Program Objectives

The field of chemistry is concerned with the structure of matter, its transformations, and energy changes related to these transformations. The aims of this program are to help students integrate chemistry with other sciences, today's industrial world, and business. Through this program, graduates will be prepared for a career in teaching, or doing industrial, technical, or graduate work.

To achieve these aims the Department of Chemistry offers a four-year program with three tracks leading to baccalaureate degrees including the B.S. in biochemistry. Because the chemistry courses in each track are the same for the first two years, it is possible to switch tracks through the junior year.

Degrees & Concentrations Offered

Graduation Planner: usm.maine.edu/advising/degreeplanning

Degree Offered: Bachelor of Science

Major Offered: Biochemistry

Minor Offered: Biochemistry

Department of Chemistry

Portland Campus, 370 Science Building
(207) 780-4232

Web Address: usm.maine.edu/chy/bs-biochemistry

Career Possibilities*

Biochemical Engineers
Biochemists and Biophysicists
Bioinformatics Scientists
Biological Technicians
Biological Science Teachers, Postsecondary
Biomass Plant Technicians
Biological and Medical Scientists
Chemists and Material Scientists
Chemistry Teachers, Postsecondary
Clinical biochemist
Cytologist
Food Scientists and Technologists
Forensic Science Technicians
Geneticists
Immunologist
Medical and Clinical Laboratory Technologists
Physician Assistants
Science Technicians
Toxicologist
Veterinarians

* Additional education, training or experience may be required.

Acquired Transferable Skills

Active Learning & Listening
Complex Problem Solving
Critical and Creative Thinking
Competent in Computers & Mathematics
Dealing with Data
Flexibility
Independent Learning
Judgment and Decision Making
Planning and Organizing
Team Work
Time Management
Written & Spoken Comprehension

For more information on transferable skills go to:
usm.maine.edu/community-engagement-career-development/career-tools

What can I do with this major?*

AREA	EMPLOYERS	INFORMATION/STRATEGIES
Research Basic or Applied Healthcare Pharmacology Environmental Agricultural Food Science/Nutrition Forensic: Toxicology	University laboratories Federal government: Environmental Protection Agency; National Institutes of Health; Food & Drug Administration; Dept. of Agriculture; Dept. of Energy State government Hospitals or public health depts. Commercial/Private labs	<ul style="list-style-type: none"> Choose courses with laboratory components to build experimental and instrumentation skills. Gain experience in area of interest through internships, research with professors and/or complete a senior research project. Bachelor's degree in biochemistry, biology, or chemistry qualifies one for laboratory technician or research assistant positions. Earn master's degree in biochemistry for advanced positions, greater responsibility, and higher pay. Obtain Ph.D. to direct research projects and lead research teams.
Teaching Elementary Secondary Post-secondary Non-classroom settings	Two or four-year colleges. Colleges of pharmacy, dentistry, medicine, veterinary medicine, and agriculture Museums Zoos or nature centers and parks	<ul style="list-style-type: none"> Develop excellent communication skills. Volunteer with and/or tutor your target age group. Earn a master's degree for teaching at some two-year institutions. Prepare to attend graduate school by maintaining a high GPA and securing strong faculty recommendations. Complete Ph.D. for college or university teaching.
Healthcare Medicine, Dentistry Optometry, Pharmacy, Veterinary medicine Occupational therapy Physical therapy Public health	Hospitals, medical centers , clinics Colleges or universities Private and group practice Nursing homes Rehabilitation centers Correctional facilities Gov. agencies, & health depts..	<ul style="list-style-type: none"> Plan on attending medical school or other related graduate program. Maintain an outstanding GPA, particularly in the sciences. Join related student organizations. Demonstrate leadership abilities. Volunteer to work in a hospital or healthcare setting. Find a summer job or internship in a hospital. Secure strong faculty recommendations. Research the various fields to determine a particular career goal.

*To learn about these areas and much more visit: whatcanidowiththismajor.com/major • © 2011 What Can I Do With This Major

Enrichment Opportunities

Internships

[Undergraduate Research in Chemistry
usm.maine.edu/community-engagement-career-development/internships](http://usm.maine.edu/community-engagement-career-development/internships)

Study Abroad

For more information contact the USM Office of International Programs.
usm.maine.edu/international/study-abroad

Clubs & Organizations

[USM Chemistry Club.](#)

USM Corporate Partners

The USM Corporate Partners are over 350 business people, from nearly 100 companies. usm.maine.edu/corporatepartners

Helpful Career Links

USMCareerConnections:

USM's career network for job and internship searches. usm.maine.edu/community-engagement-career-development/usmcareerconnections

O*NET OnLine:

Learn more about a career opportunity by researching it with O*NET. onetonline.org

Occupational Outlook Handbook:

Learn more about a career opportunity by researching it with OOH. bls.gov/oooh

PROFESSIONAL ASSOCIATIONS To name a few...

[American Society for Biochemistry and Molecular Biology](#)

[American Chemical Society](#)

[Biotechnology Industry Organization](#)

[Council for the Advancement of Science Writing](#)

[The Association of Biomolecular Resource Facilities](#)



Office of Community Engagement and Career Development • usm.maine.edu/cccd

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