

CHEMISTRY



"The research opportunities, access to quality instrumentation in the lab, high academic standards and amazing professors at Millersville have allowed me to be successful." – David Walton, Chemistry with mathematics minor – '12

Our American Chemical Society approved programs provide students solid and comprehensive instruction in preparation for graduate training or professional work in chemistry.

DEGREES/CONCENTRATIONS

BACHELOR OF SCIENCE (B.S.) IN CHEMISTRY

Provides broad, in-depth training in chemistry to prepare students for careers as professional chemists or further study in graduate-level programs.

- Biochemistry - provides interdisciplinary program focused on the chemistry of life processes. Offers excellent student preparation for acceptance to medical schools, pharmacy schools, or forensic chemistry programs. ACS-approved option available.
- Environmental – provides interdisciplinary program of study that includes Green Chemistry and Sustainability, all areas of science, and explores issues of social, economic, and political importance. ACS-approved option available.
- Nanotechnology – provides specific skills and knowledge in study and control of matter at atomic or near-atomic scale. Includes training in nanofabrication and use of clean room facilities. Offers excellent preparation for work in materials science or industry.
- Polymer – provides study focused on chemistry relevant to production of plastics, synthetic fibers, paints, coatings, adhesives, and many other chemical products. Prepares students for work in interdisciplinary macromolecular applications. ACS-approved option available.
- 3+4 Pre-Pharmacy – provides opportunity for students to enroll directly into a Doctor of Pharmacy program and earn their B.S. Chemistry degree based on successful completion of first-year pharmacy school coursework.

BACHELOR OF ARTS (B.A.) IN CHEMISTRY

Provides excellent foundation in chemistry with ample opportunity for breadth of study, allowing students to develop careers in chemistry-related areas, pursue dual majors, or design an interdisciplinary degree.

BACHELOR OF SCIENCE IN SECONDARY EDUCATION (B.S.E.) CERTIFICATION IN CHEMISTRY

Provides opportunity to combine broad training in the physical and biological sciences with extensive coursework in professional education to prepare students for careers in chemical education.

MINORS AVAILABLE

Chemistry, Biochemistry, Environmental Chemistry

MINORS OF INTEREST TO CHEMISTRY MAJORS

Math, Physics, Biology, Environmental Science

Explore Scientific Research

Chemistry majors complete at least one semester of research in collaboration with faculty on campus. Students are regularly accepted into summer Research Experience for Undergraduate (REU) programs sponsored by the National Science Foundation.





CLUBS & ACTIVITIES

American Chemical Society (ACS) – The MU student chapter is an active group of students interested in chemistry. The chapter is regularly recognized at the National ACS Meeting for its activities and services. The group promotes chemistry on campus, sponsors seminar speakers, arranges field trips to local industries and laboratories, sends representatives to scientific meetings, arranges for members to serve as peer advisors to incoming freshmen, and plans student-faculty social activities.

INTERNSHIPS

Students have opportunities to participate in internships, earning academic credit and, in most cases, income while gaining valuable professional experience. Internships are offered in partnership with local industries. They provide experience in areas such as analytical methods and instrumentation and new product development and testing in polymers, nanotechnology products, coatings, and formulations.

ACCREDITATION

The Department of Chemistry at Millersville University is approved by the Committee on Professional Training of the American Chemical Society (ACS) and is authorized to grant ACS-certified degrees in chemistry.

ABOUT OUR GRADUATES

Recent graduates have gone on to graduate programs at U Penn, Drexel, Cal Tech, UC Irvine, UNC Chapel Hill, UCLA, Cornell, Princeton, Penn State-Hershey, Rutgers, U of Michigan, U of Arizona, Ohio State, Pitt, U Buffalo, and Texas A&M.

Graduates choosing to go into industry have been employed by companies such as Dow Chemical, Teva Pharmaceuticals, Dupont, Glaxo-Smith Kline, Merck, Eurofins, Glatfelter, Analytical Services, Global Foundaries, Bimax and AppleChem.

FACULTY

All eleven full-time faculty have earned a Ph.D. in chemistry and collectively reflect a diversity of expertise across chemical disciplines. Faculty members maintain active research programs in their areas of interest, working directly with chemistry majors on a range of research projects.

FACILITIES

The chemistry department occupies the top two floors of the south wing of Caputo Hall. It houses chemistry faculty offices, individual faculty/student research labs, and eight instructional labs. Additional specialized spaces include:

- Instrument Rooms - contains a wide range of analytical equipment used by students for instructional labs and research, including a 400-MHz NMR, IR, UV-Vis, and fluorescence spectrometers, AF-STM, AA, HPLC, GC-MS, and Raman.
- Student Study Room - equipped with computers, white boards, reference books, and texts.
- Laboratories - fully equipped with general equipment, glassware (there is no lab fee nor is there any breakage fee), pH meters, pipetmen, spectrophotometers, centrifuges, and computers for data analysis, as well as specific instruments relevant to sub-disciplines.
- Research Labs - space for each individual faculty to conduct research in collaboration with chemistry students.

All of our majors are taught the skills of research, analysis, and presentation that contribute to success in any career.