

CHEMISTRY



"What I love the most about Millersville is the opportunity to grow as a student, a mentor, a researcher and a person due to the rigor of the coursework, access to quality instrumentation in the lab, ability to perform undergraduate research and the support of our outstanding faculty."

– Kyra Brakefield
B.S. Millersville 2020

Our American Chemical Society certified degree programs provide students with 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. The following options are also available.

- **Biochemistry** – Interdisciplinary program focused on the chemistry of life processes. Offers excellent student preparation for acceptance to medical schools, pharmacy schools or forensic chemistry programs.
- **Engineering Instrumentation Automation** – Blends chemistry, instrumentation and robotics to develop in-demand skills for engineering solutions in chemical analysis laboratories.
- **Environmental** – Interdisciplinary program of study that includes green chemistry and sustainability, all areas of science, and explores issues of social, economic and political importance.
- **Nanotechnology** – Provides preparation for control of matter at near-atomic scale using nanofabrication and cleanrooms. Offers excellent preparation for graduate work in materials science or industry.
- **Polymer** – Provides preparation for production of plastics, synthetic fibers, paints, coatings, adhesives and many chemical products. Prepares students for interdisciplinary macromolecular applications.
- **3+4 Pre-Pharmacy** – Provides opportunity to enroll directly into a Doctor of Pharmacy program and earn a B.S. degree in chemistry with successful completion of first-year pharmacy school coursework.

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

Minors offered in Chemistry, Environmental Chemistry and Biochemistry. Many majors also minor in Math, Physics, Biology or Environmental Science.

ABOUT OUR GRADUATES

The department graduates 21 majors a year on average. The next highest PASSHE University graduates on average 12 majors a year.

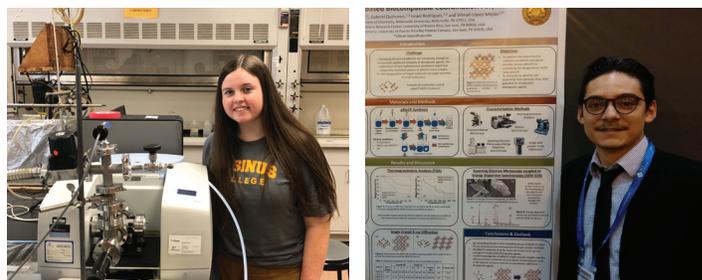
The department is nationally ranked 18th out of more than 1,000 bachelor's and master's-granting institutions for the number of Ph.D. graduates in chemistry (National Science Foundation NCSES).

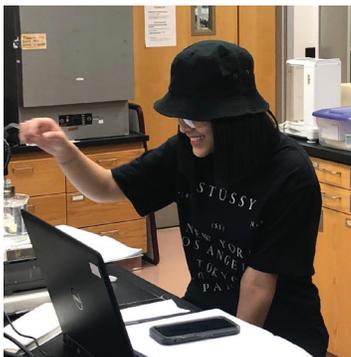
Recent graduates have gone on to graduate and professional programs at the University of Pennsylvania, Drexel, Caltech, University of North Carolina, UCLA, Cornell, Princeton, Northwestern University, University of Michigan, University of Pittsburgh and many others.

Graduates choosing to go into industry have been employed by companies including Dow Chemical, Teva Pharmaceuticals, DuPont, GlaxoSmithKline, Merck, Eurofins, Glatfelter, Applechem and many others.

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 Experiences for Undergraduates (REU) programs offered by the National Science Foundation. The Murley Summer Undergraduate Research Fellowship funds chemistry majors in performing mentored research with Millersville faculty.





CLUBS AND ACTIVITIES

American Chemical Society (ACS) – The student 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. The student chapter is regularly recognized at the National ACS Meeting for its activities and services.

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.

DEGREE CERTIFICATION

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.

FACULTY

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.

All graduates from the program work one-on-one with faculty on independent research projects.

FACILITIES

Students engage with faculty in fully equipped laboratories that provide students with hands-on access and training on state-of-the-art instrumentation used for teaching and research. Independent faculty research spaces and collaborative student study spaces facilitate important interactions with faculty and peers outside of the classroom. <https://www.millersville.edu/chemistry/facilities.php>

SCHOLARSHIPS

The Millersville Chemistry Department grants more than \$30,000 per year in endowed scholarships and awards to chemistry majors. <https://www.millersville.edu/chemistry/scholarships.php>

Students are taught the skills of research, analysis, and presentation, which contribute to success in any career.

RECENT ALUMNI SPOTLIGHTS



Kayla Bixler Straub '17

Chemistry Teacher and Field Hockey Coach at Eastern Lancaster School District.



Pineal Bekere '16

M.D. Student at Loyola University – Chicago Stritch School of Medicine



Joseph Dennes III '04

Ph.D. in Chemistry from Princeton University. Head of Global Marketing in DuPont Safety, a multi-billion dollar business.



Jillian Weissenrieder '15

Ph.D. in Bio Medical Science from Penn State-Hershey. Started a postdoctoral fellowship at the University of Pennsylvania in 2019.



Jonathan Shue '13

D.D.S. from University of Pennsylvania School of Dental Medicine. Dentist in the United States Air Force.



Will Shelton '16

Associate Engineer at Heraeus in Conshohocken, PA. Heraeus uses metals and glass to build technology that has applications in wide variety of fields.