Why is the strength of all our science and mathematics programs important? When you select a major in one of the school departments, your program will include a variety of required courses in other disciplines within the school.

- Challenging, one-on-one research opportunities with a faculty mentor.
- Strong record of student success including many regional and national awards.
- Supportive learning community – student clubs, field trips, tutoring, guest presenters.

Our American Chemical Society approved programs of study allow students to benefit from a common core of classes that provide basic theory and skills vital for all degree programs leading to the bachelor’s degree in chemistry. The recommended course sequence during the first year is identical for all three programs and differs only slightly through the junior year; thus any change in career emphasis need not delay graduation. All chemistry lectures, recitations, and laboratories are taught by eleven experienced faculty, all of whom hold Ph.D. degrees. Chemistry majors are assigned an advisor within the department who advises them on course work, research projects, graduate school selection, and careers. The department well-equipped laboratories give our students hands-on training in the application and use of our equipment.

Career Opportunities & Graduate School

School Strengths

- Up-to-date facilities. School buildings are new or recently renovated.
- Our faculty are committed to undergraduate education and 97% have doctoral degrees.
- Co-ops and internships that give practical experience.

Our Students

Our chemistry majors are students with good oral and written communication skills who also possess strong math skills. Our students are committed to the discipline and in their choosing of Millersville University have realized an outstanding educational value which gives them the training they need to pursue their career in the field of science.

Student Activities

The Millersville student affiliate ACS chapter is an active group of students interested in chemistry. The chapter is regularly recognized annually by the ACS for its activities and services which include sponsoring seminar speakers, arranging field trips to local industries and laboratories, sponsoring trips to attend scientific meetings, acting as peer advisors to incoming freshmen, and sponsoring student-faculty social activities.
Bachelor of Science Degree in Chemistry is designed for students who wish to pursue a career in chemistry. The intense training in chemistry and mathematics equips graduates with the knowledge and skills necessary to immediately enter the employment market in technical positions or for entrance to graduate and professional schools.

Bachelor of Science Degree in Chemistry with a Biochemistry Option provides an interdisciplinary course of study in the rapidly expanding area of the chemical life processes. This program offers the best preparation for acceptance to medical schools, pharmacy schools and numerous chemistry programs.

Bachelor of Science Degree in Chemistry with an Environmental Option provides an interdisciplinary program of study that includes all areas of science as well as issues of social, economic, and political importance.

Bachelor of Science Degree in Chemistry with a Nanotechnology Option will provide students with specific skills and knowledge in the area of nanotechnology which is the design and assembly of structures on the atomic scale.

All full-time faculty have earned Ph.D. degrees and reflect a diversity of expertise that covers the various subdisciplines of the chemical sciences. Faculty members teach all courses, including laboratories and lectures. Upon admission to the program, each student is assigned a faculty advisor to help in planning individual programs of study. The B.S. (Artium) faculty is in the department and the student is assigned a faculty advisor to help in planning individual programs of study.

Bachelor of Arts Degree in Chemistry combines a solid foundation in the chemical sciences with ample opportunity for breadth of study. In addition to preparing for careers or graduate study in chemistry, this program provides students with the background to develop careers in areas related to the chemical sciences such as oceanography, environmental sciences and geoscience.

Bachelor of Arts Degree in Engineering is available under the 3-2 Cooperative Engineering Program. Upon satisfactory completion of three years of study at Millersville and two years at a cooperating engineering school, the student is awarded the B.A. degree in Chemistry and the B.S. degree in Engineering.

Undergraduate Research

The Chemistry Department faculty are actively engaged in research projects covering all the subdisciplines of chemistry. It is the Department’s philosophy that participation in research is an integral and essential part of a student’s undergraduate education. Under the guidance of a faculty mentor, a student can participate in the process of scientific inquiry and discovery of new knowledge. Undergraduate research incorporates the skills and knowledge learned in previous courses and requires creative and original contributions to the solving of a scientific problem. Participation in a capstone research project develops independence and intellectual maturity.

The facilities of the Department of Chemistry are housed in Caputo Hall.

Student research projects can be pure basic research, development of new instrumentation or research in chemical education. Students are welcome to work on faculty on their specific projects or topics of the student’s choice within the expertise of the faculty. Undergraduate research can be part of the student’s normal course load during the academic year or full-time during the summer. Interested students and all academic standings, class standings and majors are encouraged to participate in undergraduate research.

Students are encouraged to present the results of their research at Millersville’s Undergraduate Research Symposium or at scientific meetings of the American Chemical Society or other scientific meetings.

The programs offered by the Chemistry Department provide the basic information and the depth of experience which enable graduates to pursue a number of educational and career options. Those who major in chemistry at Millersville can select from the following degree programs.

Bachelor of Science Degree in Chemistry with a Polymer Option trains students in an important area of the chemical industry where it is estimated that 50% of all chemists will work in some capacity during their careers.

Bachelor of Science Degree in Chemistry Secondary Education provides curriculum in teacher education leading to the B.S. in Education degree with certification in chemistry. A student must major in a subject area and minor in education.

Bachelor of Arts Degree in Chemistry provides the faculty in the chemistry program with ample opportunity for breadth of study. In addition to preparing for careers or graduate study in chemistry, this program provides students with the background to develop careers in areas related to the chemical sciences such as oceanography, environmental sciences and geoscience.

Our eight instructional laboratories are well equipped with a variety of research-grade instrumentation including high-resolution spectrometers (FT-IR), UV-Vis spectrophotometers, including an OceanOptics unit equipped with a variety of detectors such as an oxygen electrode, a 400 MHz nuclear magnetic resonance (NMR) spectrometer, several gas chromatographs equipped with different detectors, two high-performance liquid chromatography (HPLC) units, an atomic absorption spectrometer, a Raman spectrometer, and an atomic force microscope. All of our apparatus and instrumentation is provided at cost and is used by undergraduates. In addition, a number of specialized computers are available for student use.

The chemistry department maintains a personal computer that provides student use. Computers are available for undergraduate research. A personal computer that provides student use. Computers are available for undergraduate research.

All students are encouraged to participate in undergraduate research as a part of their normal course load during the academic year or full-time during the summer. Interested students and all academic standings, class standings and majors are encouraged to participate in undergraduate research.

Students may wish to participate in a co-op experience to gain work experience in a job related to their major. Students who wish to participate in a co-op experience should contact the employment coordinator or faculty coordinator. The chemistry department maintains approximately 10 co-op positions at any given time. Students may have the opportunity for full-time employment during the year or part-time while attending school.

Internships

Internships provide students with practical experience in a job related to their major. Students may wish to participate in a co-op experience to gain work experience in a job related to their major.

Co-ops & Internships

Cooperative Education is an academic program which allows students to gain practical work experience in a job related to their major.

Students may have the opportunity for full-time employment during the year or part-time while attending school. Students who wish to participate in a co-op experience should contact the employment coordinator or faculty coordinator. The chemistry department maintains approximately 10 co-op positions at any given time. Students may have the opportunity for full-time employment during the year or part-time while attending school. Students who wish to participate in a co-op experience should contact the employment coordinator or faculty coordinator. The chemistry department maintains approximately 10 co-op positions at any given time.