

The State University of New York at Fredonia is committed to doing our part to provide each student a clear path to graduation. This four-year degree plan is a sample map for fulfilling requirements in the major, the College Core Curriculum (CCC), and other supporting courses. The pathway that you take to your degree may differ somewhat from this illustration, depending on where you start and the detours and side trips you may take along the way. If you are committed to completing your degree in four years, we encourage you to consider signing up for the Fredonia in 4 program. For complete information about this degree program, please consult the university catalog at fredonia.smartcatalogiq.com

FIRST YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
GEO 102	Freshman Seminar	1	GEO 210	Geology II	3
GEO 165	Geology I	3	CHEM 116	General Chemistry II	3
GEO 169	General Geology Lab	1	CHEM 126	Chemistry Lab II	1
CHEM 115	General Chemistry I	3		STAT 250 or CSIT Course in programming	3
CHEM 125	Chemistry Lab I	1	CCC	Social Science	3
CCC	Basic Communication	3	CCC	Foreign Language	3
CCC	American History	3			
		TOTAL	15		
				TOTAL	16

Geology and Environmental Sciences

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The B.A. Earth Science degree includes the fundamental courses in geology, meteorology, oceanography, and astronomy which constitute the "content" of earth sciences. The department recommends that B.A. Earth Science majors should minor (or double major) in an appropriate area, for example GIS, Business Administration, Environmental Sciences, etc.

SECOND YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
	Mathematics Elective	3	GEO 215	Minerals and Rocks	4
	Geology Elective	3	MATH 120	Survey of Mathematics OR	4
CCC	Other World Civilizations	3	MATH 122	University Calculus I	
CCC	Humanities	3		GEO Elective	3
CCC	Social Science	3	CCC	Art	3
			CCC	Western Civilization	3
		TOTAL	15		
				TOTAL	17

THIRD YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
	General Elective	3	GEO 370	Structural Geology	4
	GIS Course	3		PHYS 122 or PHYS 231	3
	PHYS 121 or PHYS 230	4		PHYS 124 or PHYS 233	1
	PHYS 123 or PHYS 232	1		General Elective	3
	General Elective	3		General Elective	3
		TOTAL	14		
				TOTAL	14

FOURTH YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
	Upper-Level Geology Lab Course	4	GEO 459	Seminar in Geosciences	1
CCC	Foreign Language	3		General Elective	3
	General Elective	3		General Elective	3
	General Elective	3		General Elective	3
	General Elective	3		General Elective	3
		TOTAL	16		
				TOTAL	13
2016-2017				GRAND TOTAL	120

fredonia.edu

Why Study the Natural Sciences at Fredonia?

The Natural Sciences at Fredonia encompass state of the art programs in pure and applied sciences that prepare you well for graduate school and professional careers. Each program gives you the opportunity to engage in meaningful research in collaboration with the faculty.

Choose from a variety of disciplines

- Mathematical Sciences offer programs in pure and applied mathematics, as well as certification programs in mathematics education.
- Computer and Information Sciences have multiple programs including those in software development, systems management and cooperative computer engineering.
- Biology houses programs in Biology, Medical Technology, Molecular Genetics, Exercise Science and Biology Adolescence Education.
- The Department of Chemistry and Biochemistry offers programs approved by the premier accreditor, The American Chemical Society, as well as certification program in Adolescence Chemistry Education.



- Programs in the Physics Department include several concentrations in Physics (including Physics Education), as well as being the home for most Cooperative Engineering majors.
- Programs in Geology and Environmental Sciences cover all aspects of earth and planetary sciences as well as the interdisciplinary programs in environmental science and GIS.

Thrive in state-of-the-art Science Center

- Our new \$60 million Science Center features \$5 million in cutting-edge instruments and equipment. It boasts an innovative design that maximizes student learning, facilitates student-faculty collaboration, and creates spontaneous interactions across disciplines.
- Research labs and classrooms incorporate glass walls, natural light and open spaces, allowing visitors to easily observe students and faculty learning together.

Receive an exceptional value

- Fredonia alumni in graduate and medical schools consistently say they were better prepared than their peers at larger schools because of rigorous Fredonia courses, smaller class sizes, undergraduate research opportunities and genuine relationships with faculty mentors.
- Internships are conducted in hospital labs, physician offices, health departments, environmental agencies, and energy, biomedical and pharmaceutical companies, as well as hospitals, pharmacies, veterinary clinics and zoos.
- Health Professions Advising Program assists students pursuing careers in medicine, dentistry, optometry and veterinary medicine.
- Students perform field research in Lake Erie, its tributaries and Fredonia's 200-acre nature sanctuary.

- Numerous need- and merit-based scholarships and fellowships are available for academically talented students, including some of the biggest awards available on campus.

Exceptional faculty

- Faculty conduct research and are recognized consistently for their efforts on local, regional, national and international levels.
- Their interests range from studying the animal behavior of bats and praying mantises, among other species, quantifying the potential natural gas held with the Marcellus Shale region, and improving the water quality of the Great Lakes.



- One professor's research spurred a national law signed by President Obama. It bans the use of plastic microbeads in beauty and exfoliating products — because a Fredonian showed they contaminate water systems.

Alumni successes

- Many recent graduates are enrolled in medical, dental, veterinary and optometry schools.
- Alumni have gone on to become clinical scientists, high school teachers, biomedical research scientists, physicians, pharmacists, environmental scientists, venture capitalists, veterinarians, lab directors, lawyers and forensic scientists, among other professions.
- Fredonians are among the faculty at University of California at Berkeley, Penn State University, Indiana University of Pennsylvania, The Scripps Research Institute and other institutions.