

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 165	Planet Earth	3	GEO 210	Dynamic Planet	3
GEO 169	Geology Lab I	1	STAT 250	Statistics for Scientists	3
CHEM 115	General Chemistry I	3	CHEM 116	General Chemistry II	3
CHEM 125	General Chemistry Lab I	1	CHEM 126	General Chemistry Lab II	1
ENGL 100	English Composition	3	CCC	American History	3
CCC	Foreign Language	3	CCC	Social Science	3
		TOTAL			TOTAL
		14			16

Geology and Environmental Sciences

205 Jewett Hall

The State University
of New York at Fredonia
Fredonia, NY 14063

(716) 673-3303

(716) 673-3347 Fax

email earth@fredonia.edu

web fredonia.edu/earth

The B.S. Geology degree is intended primarily for students planning to pursue geology as a profession. It requires the necessary courses in geology, mathematics, and allied sciences to prepare a student for undertaking employment or graduate study in geology. It is also appropriate for students who desire a liberal arts education with an emphasis on geology.

SECOND YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
MATH 122	University Calculus I OR	3	MATH 123	University Calculus II OR	3
MATH 120	Survey of Calculus I		MATH 121	Survey of Calculus II	
GEO 411	Mineralogy	4	GEO 421	Petrology	3
CCC	World History	3	CCC	Western Civilization	3
CCC	Humanities	3	CCC	Art	3
				General Elective	3
		TOTAL			TOTAL
		13			16

THIRD YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
PHYS 230	University Physics I OR	4	PHYS 231	University Physics II OR	4
PHYS 121	College Physics I		PHYS 122	College Physics II	
PHYS 232	University Physics Lab I OR	1	PHYS 233	University Physics Lab II OR	1
PHYS 123	College Physics Lab I		PHYS 124	College Physics Lab II	
GEO 330	Geomorphology	4	GEO 450	Hydrogeology	4
GEO 370	Structural Geology	4		General Elective	3
	General Elective	3		General Elective	3
		TOTAL			TOTAL
		16			15

FOURTH YEAR					
Fall Semester			Spring Semester		
Course		Credits	Course		Credits
GEO 345	Paleontology	4	GEO 400	Stratigraphy	4
CCC	Other World Civilizations	3	GEO 459	Seminar in Geosciences	1
	General Elective	3		General Elective	3
	General Elective	3		General Elective	3
	General Elective	3		Field Geology (Summer)	3
		TOTAL			TOTAL
		16			14
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.