

Lock Haven University
Department of Geology and Physics
Bachelor of Science
Geology: Engineering Geology

Effective: Fall 2019

Intellectual Foundation	9 sh
Written Communication	3 sh
ENGL100: Composition	3
WC Competency 1	
WC Competency 2	
Oral Communication	3 sh
Mathematical and Computational Thinking	3 sh
MATH141: Calculus 1	3
Critical Thinking	
CT Competency 1	
CT Competency 2	

Knowledge and Inquiry	21 sh
Natural Science Inquiry	6 sh
GEOS130: Principles of Geology 1	3
GEOS131: Principles of Geology 2	3
Historical, Behavioral, and Social Science Inquiry	6 sh
Philosophical, Literary, and Aesthetic Inquiry	9 sh

Personal and Social Responsibility	12 sh
Global Awareness and Citizenship	9 sh
GAC-H	
Wellness	3 sh
Experiential Learning	
EL Competency 1	
EL Competency 2	

Electives	17 sh

First Year Student Seminar	1 sh
SCI119: First Year Student Seminar	1 sh

Major Area and Cognate Courses	60 sh
CHEM120: Principles of Chemistry 1	4
CHEM121: Principles of Chemistry 2 #	4
PHYS170: Intermediate Physics 1	4
PHYS171: Intermediate Physics 2 #	4
PHYS105: Engineering Graphics	3
MATH142: Calculus 2	3
GEOS213: Introduction to GIS	3
GEOS230: Geomorphology #	3
GEOS305: Mineralogy and Petrology #	4
GEOS313: Advanced GIS #	3
GEOS315: Sedimentology #	3
GEOS360: Hydrogeology #	4
GEOS420: Geology of Energy and Mineral Resources #	4
GEOS430: Structural Geology #	4
GEOS450: Geophysics and Tectonics #	4
GEOS490: Capstone Research Project #	2
Geology Field/Lab Experience	4
A combination of any of the courses below	
GEOS260: Geology Field Methods # (1-4 sh)	
GEOS369: Internship # (1-4 sh)	
GEOS499: Independent Study # (1-4 sh)	

= Advanced Course Work

Lock Haven University
Geology and Physics Department
Geology—Engineering Geology Track
Suggested Course Sequence

Fall Freshman (example)	Credits
ENGL100: Composition	3
SCII19: First Year Student Seminar	1
GEOS130: Principles of Geology 1	3
MATH141: Calculus 1	3
General Education Courses	6
Total Credits:	16

Spring Freshman (example)	Credits
GEOS131: Principles of Geology 2	3
MATH142: Calculus 2	3
General Education Course	3
General Education Course	3
General Education Course	3
Total Credits:	15

Fall Sophomore (example)	Credits
GEOS230: Geomorphology*	3
OR	
GEOS315: Sedimentology**	3
AND	
CHEM120: Principles of Chemistry 1	4
PHYS105: Engineering Graphics	3
GEOS213: Introduction to GIS	3
General Education Course	3
Total Credits:	16

Spring Sophomore (example)	Credits
GEOS313: Advanced GIS**	3
OR	
GEOS415: Stratigraphy*	3
AND	
CHEM121: Principles of Chemistry 2	4
PHYS170: Intermediate Physics 1	4
Geology Field/Lab Experience	1
General Education Course	3
Total Credits:	15

Fall Junior (example)	Credits
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
OR	
GEOS315: Sedimentology**	3
GEOS450: Geophysics and Tectonics**	4
AND	
PHYS171: Intermediate Physics 2	4
Electives	6
Total Credits:	17 or 18

Spring Junior (example)	Credits
GEOS313: Advanced GIS**	3
GEOS305: Mineralogy and Petrology**	4
OR	
GEOS420: Geology of Energy and Mineral Resources*	4
General Education Course	3
AND	
General Education Courses	6
Geology Field/Lab Experience	1
Total Credits:	14

Fall Senior (example)	Credits
GEOS230: Geomorphology*	3
GEOS360: Hydrogeology*	4
GEOS430: Structural Geology*	4
OR	
GEOS450: Geophysics and Tectonics**	4
Geology Field/Lab Experience	1
AND	
GEOS490: Capstone Research Project	2
Electives	5
Total Credits:	12 or 18

Spring Senior (example)	Credits
GEOS305: Mineralogy and Petrology**	4
OR	
GEOS420: Geology of Energy and Mineral Resources*	4
General Education Course	3
AND	
Electives	6
Geology Field/Lab Experience	1
Total Credits:	12 or 14

Upper Division Majors Courses are only offered every two years.

* = Offered Only in Odd Ending Years

** = Offered Only in Even Ending Years