

Curriculum for Geosciences with Geophysics Concentration, B. S. Degree 2012-2013

MAJOR:

GEOL 1303 – Physical Geology	GPH 2333 – Introduction to Geophysics
GEOL 1101 – Physical Geology laboratory	GPH 4321 – Seismic Methods
GEOL 2303 – Earth Materials	GPH 4323 – Electrical Methods
GEOL 3402 – Structure (WI)	
GEOL 4312 – Senior Research Project (WI)	
GEOL 4101 – Senior Seminar	
(WI) – writing intensive classes)	
+15 elective hours from mandatory electives and <u>major elective</u> list below	
= 39 hours	

Mandatory electives - these classes are required to be in either the major or the minor:

MATH 2360	Linear Algebra
MATH 3350	Higher Math for Engineers and Scientists I
CE 2301	Statics
CE 3303	Mechanics of Solids OR CE 3305 – Mechanics of Fluids
GEOL 3310	Quantitative Methods

ADJUNCT COURSES:

MATH 1451	Calculus I	
MATH 1452	Calculus II	
MATH 2450	Calculus III	
CHEM 1307	Chemistry I	
CHEM 1107	Chemistry I lab	
PHYS 1408	Physics I	
PHYS 2401	Physics II	= 24 hours

MINOR:

= 18 hours

Recommended minor plans:

MATH: MATH 1451, 1452, 2450, 2360, 3350, and one elective from MATH 3351, 4310, 4312, 4330
GEOL: GEOL 1304, 1102, GCH 3303, GEOL 4320, 4361 (or 4362), 4325, 4331 (or 4332)
ATMO: ATMO 1300, 1100, 2301, 2316, 3301, pick two from MATH 3350, CE 3305, GEOL 3322
 GEOL 4331, 4332, GEOG 3300, WE 3315 or ATMO 4300 (permission required)

Major Elective List: Most students will pick their major electives from the following list

GEOL 1304, 1102 – Historical Geology or ATMO1300, 1100 – Atmospheric Science

G GCH 3303 Intro to Geochemistry, GEOL 4325 Sed/Strat, GEOL 4320 Optical Mineralogy, GEOL 4331 Digital Imagery, GEOL 4332 Spatial Data Analysis, GEOL 4361 Adv. Structure, GEOL 4362 Tectonics, GEOL 4201 Field Sed. Geol., GEOL 4301 Adv. Field Methods, or GEOL 4300 (graduate classes for undergraduate credit).

GP GPH 4300, geophysics graduate classes taken for undergraduate credit

A ATMO 3301 General Meteorology, ATMO 4300 (graduate class taken for undergraduate credit)

E CE 3303 Mech. of Solids, CE 3305 - Mech. of fluids, CE 3302 – dynamics.

P PHYS 3401 Optics, PHYS 3305 Electricity, PHYS 3306 Magnetism, PHYS 4304 Mechanics

M MATH 3351 Higher Math for Eng. and Sci. II; MATH 4310 Numerical Analysis I; MATH 4312 Numerical Analysis II; MATH 4330 Mathematical Computing

All undergraduate degrees require completion of 40 hours at the Junior-Senior level, some of which may be taken in the core electives.

Four-year Curriculum Table

YEAR 1.....

<i>Fall</i>		<i>Spring</i>	
GEOL 1303, Physical Geology	3	PHYS 1408, Prin. of Physics I	4
GEOL 1101, Physical Geology Lab	1	MATH 1452, Calculus II	4
MATH 1451, Calculus I	4	HIST 2300, US History to 1877	3
CHEM 1307, Principles Chem I	3	ENGL 1302, Advanced Coll. Rhetoric	3
CHEM 1107, Principles Chem I lab	1	PFW 11XX, Personal Fitness course	1
ENGL 1301, Essentials of Coll Rhetoric	3		
15 hrs		15 hrs	

YEAR 2.....

<i>Fall</i>		<i>Spring</i>	
GEOL 2303, Earth Materials	3	GEOL 3310 Quantitative Methods	3
GPH 2333, Introduction to Geophysics	3	MATH 2360, Linear Algebra	3
PHYS 2401, Principles of Physics II	4	English Literature (Hum)	3
MATH 2450, Calculus III	4	Oral Communications Elective	3
PFW 11XX, Personal Fitness course	1	Individual and Group Elective *	3
15 hrs		15 hrs	

YEAR 3.....

<i>Fall</i>		<i>Spring</i>	
GEOL 3402, Structural Geology	4	GPH 4323 Electrical Methods	3
GPH 4321, Seismic Methods	3	CE 3303 or 3305 Mechanics	3
CE 2301, Statics	3	MATH 3350, Higher Math Eng &Sci I	3
POLS 1301, American Govt. Org.	3	POLS 2302, American Public Policy	3
Foreign Language course	3	Foreign Language course	3
16 hrs		15 hrs	

YEAR 4.....

<i>Fall</i>		<i>Spring</i>	
Major/minor elective	3	Major/minor elective	3
Major/minor elective	3	Major/minor elective (if needed)	(3)
Major/minor elective	3	GEOL or ATMO 4312 Senior Research	3
English Literature	3	HIST 2301, US History since 1877	3
GEOL 4101 Senior Seminar	3	Visual and Performing Arts Elective*	3
15 hrs		10 (13) hrs	

.....
 *Students should select one course that also meets the multicultural requirement