B.S. GEOLOGY (Earth Science Subplan) CHECKLIST of required courses for major

The Earth Science Subplan is typically for someone who wants to teach at the middle or high school level (followed by a MEd.), or as a secondary major accompanying a B.S. in Education. See School of Education for details.

Basic Earth Science Block: 4-5 courses, 15-17 credits

Course	Credits	When to take:
GEOLOGY 101 – The Earth, *or take*	4	1st year, either semester
GEOLOGY 131 - Experiencing Geology Lab *and*	(1)	1st year, either semester
GEOLOGY 105 - Dynamic Earth	(4)	1st year, either semester
GEOLOGY 103 – Intro to Oceanography	4	1st year, either semester
ASTRON 100 – Exploring the Universe	4	1st year, either semester
GEOGRAPHY 354 – Climatology *or take*	3	1st or 2nd year, fall semester
ASTRON 105 – Weather and Our Atmosphere	(4)	1st or 2nd year, spring semester

Supporting Science Courses: 7 courses, 26-27 credits

Course	Credits	When to take:
BIOL 110 – Intro. Biology for Science Majors *or take*	4	1st or 2nd year, spring semester
BIOL 151 – Intro. Biology 1	(4)	
MATH 131 – Calculus I *or take*	4	1st or 2nd year, either semester
MATH 127 – Calculus for Life/Social Sci. I	(3)	
CHEM 111 – General Chemistry I with lab	4	1st or 2nd year, either semester
CHEM 112 – General Chemistry II with lab	4	1st or 2nd year, either semester
PHYSICS 131 – Introductory Physics I with lab *or take*	4	1st or 2nd year, either semester
PHYSICS 151 – General Physics I with lab	(4)	1st or 2nd year, either semester
PHYSICS 132 – Introductory Physics II with lab *or take*	4	1st or 2nd year, either semester
PHYSICS 152 – General Physics II with lab	(4)	1st or 2nd year, either semester
NATSCI 387 – CNS Junior Year Writing	3	3rd or 4th year, either semester
fulfills Gen.Ed. "Junior-Year Writing" requirement		

Geology Core Courses: 5 courses, 18 credits

Course	Credits	When to take:
GEOLOGY 201 – History of the Earth	4	1st or 2nd year, spring semester
GEOLOGY 231 – Geological Field Methods	3	2nd year, spring semester
GEOLOGY 311 – Mineralogy	4	3rd year, fall semester, after CHEM 111
GEOLOGY 321 – Petrology	4	3rd year, spring semester, after GEOSCI311
GEOLOGY 494LI – Living on Earth	3	3rd or 4th year, fall semester
fulfills Gen. Ed "Integrative Experience" requirement		

Geology Electives: 3 courses*, 9 credits minimum

Select from 300- to 600-level Geology (odd course numbers) or physical geography (***some*** even course numbers).

***CONSULT WITH YOUR UNDERGRADUATE ADVISOR BEFORE SELECTING ELECTIVES.**

Junior or senior research projects, senior thesis, or independent study with individual faculty members are strongly encouraged. GEOLOGY 396 and GEOLOGY 496 credits contribute towards Geology B.S. electives.

Examples of Geology electives: Not all electives are offered each semester. Consult with faculty for schedule and prerequisites.		
415 – Intro to Geochemistry	571 – General Geophysics	591V – Volcanology
515 – X-ray Fluorescence Analysis	575 – Paleomagnetism	595D – Physical Oceanography
517 – Sedimentary Geochemistry	587 – Hydrogeology	597I – Isotope Geochemistry
519 – Aqueous/Enviro. Geochemistry	591D – Spatial Data Analysis	615 – Organic and Biogeochemistry
531 – Tectonics	591E – Ecohydrology	627 – Clay Petrology
555 – Dynamic Digital Maps	591G – Granites and Rhyolites	687 – Advanced Hydrogeology
557 – Coastal Processes	591J – Microprobe Analysis	691C – Optical Mineralogy
563 – Glacial Geology	591N – Climate Modeling	
567 – Planetary Geology	591P – Paleoceanography	
Examples of Physical Geography electives:		
340 – Quantitative Methods in Geog.	426 – Remote Sensing	510 – Natural Hazards
352 – Computer Mapping	458 – Climate Change	560 – Geomorphology
354 – Climatology*	468 – GIS and Spatial Data Analysis	594Q – Advanced Remote Sensing

**For further information, contact:*

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