William & Mary Geology Major Requirements (≥ 36 credit hours)

If students know which subdisciplines they might want to explore for senior research, they should take those courses <u>before</u> the end of their junior year.

INTRODUCTORY SEQUENCE		
Choose one:		
☐ 101&160	Physical Geology + Intro Geology Lab	All semesters (4)
☐ 110&160	Earth's Environmental Systems + Intro Geology Lab	All semesters (4)
☐ 250	Geologic Evolution of Virginia	Spring (4)

CORE COURSES (all require Introductory Sequence)		
☐ 321	Rock-Forming Minerals	Fall (4)
☐ 323	Earth Structure and Dynamics	Spring (4)
Choose one:	**Group A**	
☐ 315	Hydrology (prereq: Math 111)	Alternate Spring (4)
☐ 316	Environmental Geochemistry (prereq Chem 103)	Fall (3)
☐ 320	Earth Surface Processes	Fall (4)
☐ 327	Igneous & Metamorphic Petrology (prereq: Geol 321)	Spring (3)
Choose one:	**Group B**	
☐ 322	The Sedimentary Record	Fall (4)
☐ 324	Paleoclimatology & Paleoceanography	Spring (4)
☐ 325	Paleontology	Spring (3)
☐ **Choose one more** from A or B to total at least 10 credits		

SENIOR RESEARCH (must pass with C- or better)		
☐ 404	Introduction to Geological Research	Spring (1)
Choose one:		
☐ 491&492	Senior Research	Fall&Spring (3/1)
☐ 495&496	Honors Research	Fall&Spring (3/3)

RELATED SCIENCE PROFICIENCIES: Choose two courses to total 8 credits. These courses do not count towards the minimum 36 credits in geology.	
☐ Chem 103&Lab (4) Fall	☐ Chem 206&Lab (4) Spring (prereq Chem 103)
☐ Chem 208&254 (4) Spring (prereq Chem 103)	
☐ Phys 101 (4) Fall (prereq Math 111)	☐ Phys 102 (4) Spring (prereq Phys 101)

A year of calculus (or advanced statistics), a year of chemistry, a year of physics, and geology field camp are helpful for certain careers and graduate programs in the earth sciences

ELECTIVE COURSES: Totaling ≥ 9 credits.

- Additional courses from Groups A and B can be used for elective credits, but only one of the following courses can count towards the major:
  - Age of Dinosaurs (GEOL 203), Planetary Geology (GEOL 207), **<u>OR</u>** Global Climate Change (GEOL 212)
  - Watersheds (GEOL 314) **<u>OR</u>** Hydrology (GEOL 315)
  - Coastal & Marine Geology (MSCI 305)

See next page

GEOLOGY CONCENTRATION (G)
ENVIRONMENTAL GEOLOGY CONCENTRATION (EG):

- Must take 314 or 315, but only one counts towards the major.
- Must take (BIOL 204 or 318 or 417 or 426 or 427 or 461) or ENSP 440: Restoration Ecology

ELECTIVES (all require Intro Sequence EXCEPT GEOL 203, 207, 212; GIS 201)			
☐ 203	Age of Dinosaurs	Occasional (3)	G
☐ 207	Planetary Geology	Occasional (3)	G
☐ 212	Global Climate Change	Fall (3)	G, EG
☐ 305	Environmental Geology	Occasional (3)	G, EG
☐ 310	Regional Field Geology	Spring (3)	G
☐ 311	Field Methods in Earth Sciences	Occasional (3)	G
☐ 314	Watershed Dynamics	Alternate Spring (4)	G, EG
☐ 350	Earth Science for Environmental Justice	Fall (3)	G, EG
☐ MSCI 305	Coastal & Marine Geology	Fall (3)	G
☐ 424-6	Geology Seminars	Rarely (1, 2, or 3)	G
☐ 427-9	Env Geology Seminars	Rarely (1, 2, or 3)	G, EG
☐ 437	Special Topics Seminar	Rarely (1, 2, or 3)	G, EG*
☐ GIS 201	Introduction to GIS	All (3)	G, EG

*With Chair permission only