

Colorado State University Geosciences Department
Hydrogeology Concentration: 120 Credit Minimum

Freshman Year	Credits	Sophomore Year	Credits
<u>Fall Semester</u> CO 150: College Composition GEOL 150: Physical Geology for Scientists MATH 124: Logarithmic & Exponential Functions MATH 125: Numerical Trigonometry MATH 126: Analytical Trigonometry AUCC 3C: Social/Behavioral Sciences AUCC 3D: Historical Perspectives <u>Spring Semester</u> GEOL 154: Historical and Analytical Geology MATH 160: Calculus for Physical Sciences I CHEM 111: General Chemistry I CHEM 112: General Chemistry I lab	3 4 1 1 1 3 3	<u>Fall Semester</u> GEOL 232: Mineralogy CHEM 113: General Chemistry II CHEM 114: General Chemistry II lab MATH 161: Calculus for Physical Sciences II AUCC 3B: Arts and Humanities <u>Spring Semester</u> GEOL 364: Igneous and Metamorphic Petrology PH 141: Physics for Scientists and Engineers I CO 300 or JTC 300 or CO 301B MATH 261: Calculus for Physical Sciences III	3 3 1 4 3 4 5 3 4
Junior Year	Credits	Senior Year	Credits
<u>Fall Semester</u> GEOL 344: Sedimentation and Stratigraphy WR 416: Land Use Hydrology PH 142 or SOCR 470 MATH 340: Intro to Ordinary Differential Equations <u>Spring Semester</u> GEOL 372: Structural Geology GEOL 376: Geologic Field Methods STAT 301 or STAT 315 AUCC 3E: Global and Cultural Awareness <u>Summer Semester</u> GEOL 436: Summer Field Course	4 3 3-5 4 4 3 3 3 6	<u>Fall Semester</u> GEOL 452: Hydrogeology GEOL 366: Sedimentary Petrology and Geochemistry Directed Technical Elective NR 319 or NR 322 <u>Spring Semester</u> AUCC 3B: Arts and Humanities GEOL 454: Geomorphology Directed Technical Elective Elective *Additional courses may be required to fulfill prerequisite requirements. Program total	4 4 3-4 4 3 4 3-4 3 120

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Directed Technical Elective List

<u>Course Subject Code and Number</u>	<u>Title</u>	<u>Credits</u>
GEOL 424 ^P	Modern Gas and Oil	3
GEOL 442 ^P	Applied Geophysics	4
GEOL 446 ^P	Environmental Geology	3
GEOL 447 ^P	Mineral Deposits	3
GEOL 546 ^P	Sedimentary Basin Analysis	4
GEOL 551 ^P	Groundwater Modeling	3
GEOL 552 ^P	Advanced Topics in Hydrogeology	V2-3
GEOL 498 ^P	Undergraduate Research (up to 1 hour may be counted toward directed electives)	V1-6
CIVE 423 ^P	Groundwater Engineering	3
CIVE 440 ^P	Nonpoint Source Pollution	3
CIVE 532 ^P	Wells and Pumps	3
MATH 332 ^P	Partial Differential Equations	3
MATH 369 ^P	Linear Algebra	3
MATH 450 ^P	Introduction to Numerical Analysis I	3
SOCR 470 ^P	Soil Physics (if not used to fulfill physics II requirement)	3
WR 418 ^P	Land Use and Water Quality	3

^P This course has at least one prerequisite. Check the Courses of Instruction of the catalog at <http://catalog.colostate.edu> to see the course prerequisites.

Classes outside of this list may be taken with approval from department advisor and department head.