

Colorado State University Geosciences Department  
Environmental Geology Concentration: 120 Credit Minimum

<b>Freshman Year</b>	<b>Credits</b>	<b>Sophomore Year</b>	<b>Credits</b>
<u>Fall Semester</u> CO 150: College Composition GEOL 150: Physical Geology for Scientists MATH160: Calculus for Physical Sciences I AUCC 3B: Arts and Humanities  <u>Spring Semester</u> GEOL 154: Historical and Analytical Geology MATH 161: Calculus for Physical Sciences II CHEM 111: General Chemistry I CHEM 112: General Chemistry I lab Elective	 3 4 4 3  4 4 4 1 3	<u>Fall Semester</u> GEOL 232: Mineralogy CHEM 113: General Chemistry II CHEM 114: General Chemistry II lab AUCC 3B: Arts and Humanities AUCC 3D: Historical Perspectives  <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 AUCC 3C: Social/Behavioral Sciences	 3 3 1 3 3  4 5 3 3
<b>Junior Year</b>	<b>Credits</b>	<b>Senior Year</b>	<b>Credits</b>
<u>Fall Semester</u> GEOL 344: Sedimentation and Stratigraphy PH 142 or SOCR 470 SOCR 240: Introductory Soil Science STAT 301 or STAT 315  <u>Spring Semester</u> GEOL 372: Structural Geology GEOL 376: Geologic Field Methods NR 319 or NR 322: Geospatial Applications AUCC 3E: Global and Cultural Awareness  <u>Summer Semester</u> GEOL 436: Summer Field Course	 4 3-5 4 3  4 3 4 3  6	<u>Fall Semester</u> GEOL 452: Hydrogeology GEOL 366: Sedimentary Petrology and Geochemistry WR 416: Land Use Hydrology Directed Technical Elective  <u>Spring Semester</u> GEOL 446: Environmental Geology GEOL 454: Geomorphology Directed Technical Elective Electives  *Additional courses may be required to fulfill prerequisite requirements. <b>Program total</b>	 4 4 3 3-4  3 4 3-4 3-7          <b>120</b>

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Directed Technical Elective List

<u>Course Subject Code and Number</u>	<u>Title</u>	<u>Credits</u>
GEOL 424 <sup>P</sup>	Modern Gas and Oil	3
GEOL 442 <sup>P</sup>	Applied Geophysics	4
GEOL 447 <sup>P</sup>	Mineral Deposits	3
GEOL 498 <sup>P</sup>	Undergraduate Research (up to 1 hour may be counted toward directed electives)	V1-6
GEOL 546 <sup>P</sup>	Sedimentary Basin Analysis	4
GEOL 547 <sup>P</sup>	Ore Deposit Geochemistry	3
GEOL 551 <sup>P</sup>	Groundwater Modeling	3
GEOL 552 <sup>P</sup>	Advanced Topics in Hydrogeology	V2-3
GEOL 562 <sup>P</sup>	Statistical Data Analysis in Earth Resources	3
SOCR 440	Pedology	3
SOCR 467 <sup>P</sup>	Soil and Environmental Chemistry	3
SOCR 470 <sup>P</sup>	Soil Physics (if not used to fulfill the physics II requirement)	3
SOCR 478 <sup>P</sup>	Environmental Soil Science	3
WR 418 <sup>P</sup>	Land Use and Water Quality	3
WR 474	Snow Hydrology	3
WR 524 <sup>P</sup>	Modeling Watershed Hydrology	3
CIVE 322 <sup>P</sup>	Basic Hydrology	3
CIVE 413 <sup>P</sup>	Environmental River Mechanics	3
CIVE 440 <sup>P</sup>	Nonpoint Source Pollution	3
CIVE 455 <sup>P</sup>	Applications in Geotechnical Engineering	3
CIVE 538 <sup>P</sup>	Aqueous Chemistry	3
GR 342	Geography of Water Resources	3
GR 410 <sup>P</sup>	Climate Change: Science, Policy, Implications	3
ECON 340 <sup>P</sup>	Introduction: Economics of Natural Resources	3
POLS 361 <sup>P</sup>	U.S. Environmental Politics and Policy	3
SOC 461 <sup>P</sup>	Water, Society, and Environment	3
BZ 471 <sup>P</sup>	Stream Biology and Ecology (must be taken with BZ 472)	3
BZ 472 <sup>P</sup>	Stream Biology and Ecology Laboratory (must be taken with BZ 471)	1
PHIL 565 <sup>P</sup>	Seminar in Environmental Philosophy	3

<sup>P</sup> 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 of the department advisor and department head.**