

Colorado State University Geosciences Department
Geology Concentration: 120 Credit Minimum

Freshman Year	Credits	Sophomore Year	Credits
<u>Fall Semester</u> CO 150: College Composition GEOL 150: Physical Geology for Scientists MATH124: Logarithmic and Exponential Functions MATH 125: Numerical Trigonometry MATH 126: Analytical Trigonometry AUCC 3B: Arts and Humanities <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 AUCC 3D: Historical Perspectives	3 4 1 1 1 3 4 4 4 1 3	<u>Fall Semester</u> GEOL 232: Mineralogy GEOL 332: Optical Mineralogy CHEM 113: General Chemistry II CHEM 114: General Chemistry II lab AUCC 3C: Social/Behavioral Sciences Electives <u>Spring Semester</u> GEOL 364: Igneous and Metamorphic Petrology GEOL 250: The Solid Earth MATH 161: Calculus for Physical Sciences II CO 300 or JTC 300 or CO 301B	3 2 3 1 3 3-4 4 3 4 3
Junior Year	Credits	Senior Year	Credits
<u>Fall Semester</u> GEOL 344: Sedimentation and Stratigraphy PH 141: Physics for Scientists I STAT 301 or STAT 315 AUCC 3B: Arts and Humanities <u>Spring Semester</u> GEOL 372: Structural Geology GEOL 376: Geologic Field Methods Upper Division Geology Course AUCC 3E: Global and Cultural Awareness <u>Summer Semester</u> GEOL 436: Summer Field Course	4 5 3 3 4 3 3-4 3 6	<u>Fall Semester</u> GEOL 366: Sedimentary Petrology and Geochemistry PH 142 or SOCR 470 Technical Elective NR 319 or NR 322: Geospatial Applications <u>Spring Semester</u> GEOL 454: Geomorphology Upper Division Geology Course Electives *Additional courses may be required to fulfill prerequisite requirements. Program total	4 3-5 3 4 4 3-4 6-7 120

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Technical Elective List

Course Subject Code and Number	Title	Credits
AA 301 ^P	Astrophysics I	5
CHEM 245 ^P	Fundamentals of Organic Chemistry	4
CHEM 261 ^P	Fundamentals of Inorganic Chemistry	3
CHEM 334 ^P	Quantitative Analysis Laboratory (must be taken with CHEM 335)	1
CHEM 335 ^P	Introduction to Analytical Chemistry (must be taken with CHEM 334)	3
CHEM 341 ^P	Modern Organic Chemistry I	3
CHEM 471 ^P	Foundations of Physical Chemistry	4
CHEM 474 ^P	Physical Chemistry I (must be taken with CHEM 475)	3
CHEM 475 ^P	Physical Chemistry Laboratory I (must be taken with CHEM 474)	1
CIVE/ENVE 322 ^P	Basic Hydrology	3
CIVE 440 ^P	Non Point Source Pollution	3
ERHS 400 ^P	Radiation Safety	3
MATH 261 ^P	Calculus for Physical Scientists III	4
MATH 340 ^P	Introduction to Ordinary Differential Equations	4
MATH 369 ^P	Linear Algebra	3
NR 300 ^P	Biological Diversity	3
NR 322	Introduction to Geographic Information Systems (if not used to fulfill GIS requirement)	4
NR 323 ^P	Remote Sensing and Image Interpretation	3
NR 370 ^P	Coastal Environmental Ecology	3
NR 422 ^P	GIS Applications in Resource Management	4
PH 314 ^P	Introduction to Modern Physics	4
PH 361 ^P	Physical Thermodynamics	3
SOCR 440	Pedology	4
SOCR 455 ^P	Soil Microbiology	3
SOCR 470 ^P	Soil Physics (if not used to fulfill physics II requirement)	3
STAT 340 ^P	Multiple Regression Analysis	3
STAT 350 ^P	Design of Experiments	3
STAT 372 ^P	Data Analysis Tools	3
WR 406 ^P	Seasonal Snow Environments	3
WR 416 ^P	Land Use Hydrology	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 of the department advisor and department head.