

Environmental Science, Water Management & Hydrologic Science Concentration

Department of Earth & Atmospheric Sciences, 303-556-3143, Science 2028

College of Letters, Arts, and Sciences

Catalog 16-17

This sheet applies to the 2016-17 catalog *only*. It does not replace the full catalog as an official statement of requirements. Students with declared majors *must* work with a faculty advisor on course selection and sequencing to ensure a timely graduation.

General Studies	36 min
Environmental Science Required Courses	37
Water Management & Hydrologic Science Requirements	47
Unrestricted Electives	0
Total to Graduate (Min. 40 hrs. Upper-Division)	120 min

Students who have reached junior standing (60 hrs.) should run a Degree Progress Report and review it with a faculty advisor.

General Studies Course Requirements Credits

***TO BE COMPLETED WITHIN FIRST 30 COLLEGE-LEVEL CREDIT HOURS**

Written Communication min. 6 credits

___ ENG 1010 Composing Arguments*	3
___ ENG 1020 Freshman Comp: Analysis, Research, & Doc. <i>(ENG 1020 must be completed within 45 credit hours)</i>	3

Oral Communication* min. 3 credits

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Quantitative Literacy*

___ MTH 1210 Intro to Statistics	4
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Arts and Humanities min. 6 credits

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Historical min. 3 credits

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Natural and Physical Sciences min. 6 credits

___ CHE 1800 General Chemistry I <i>(Preq. MTH 1110 or MTH1112)</i>	4
___ GEL 1010 Physical Geology	4

Social and Behavioral Sciences I min. 3 credits-

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Social and Behavioral Sciences II min. 3 credits

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Global Diversity

___ May be satisfied within General Studies (GD code)

Multicultural Requirement

___ May be satisfied within General Studies (MC code)

Environmental Science Required Core Courses Credits

___ ENV 1200 Intro to Environmental Science	3
___ ENV 4960 Global Environmental Challenges <i>(Preq. 12 credits Upper Division of GEL, GEG, MTR, & Senior Standing)</i>	3
___ BIO 1080 General Biology I <i>(Co: BIO 1090)</i>	3
___ BIO 1090 General Biology Laboratory I <i>(Co: BIO 1080)</i>	1
___ BIO 1081 General Biology II <i>(Preq. BIO 1080 & BIO 1090; Co: BIO 1091)</i>	3
___ BIO 1091 General Biology Laboratory II <i>(Preq. BIO 1080 & BIO 1090; Co: BIO 1081)</i>	1
___ CHE 1810 General Chemistry II <i>(Preq. CHE 1800 & MTH 1110, MTH 1120, MTH 1400, MTH 1410, MTH 2410, or MTH 2420)</i>	4
___ CHE 1850 General Chemistry Laboratory <i>(Preq. or Co. CHE 1810)</i>	2
___ CET 3320 Environmental Impact Statements <i>(Preq. Junior Standing)</i>	3
___ MTH 3240 Environmental Statistics <i>(Preq. MTH 1210 & MTH 1110 or MTH 1112)</i>	4
___ GIS 1220 Introduction to Geospatial Science <i>(Preq. CSS 1010 or CMS 1010 Recommended)</i>	3
___ GIS 2250 Geographic Information Systems <i>(Preq. GIS 1220)</i>	3

Choose one of the following:

___ MTH 1110 College Algebra	4
___ MTH 1400 Precalculus Mathematics <i>(Preq. MTH 1110 & MTH 1120)</i>	4
___ MTH 1410 Calculus I <i>(Preq. MTH 1110 & MTH 1120 or MTH 1400)</i>	4

Water Management & Hydrologic Science Required Courses Credits

___	ENV 2100	Basic Water Sampling and Analysis	3
___	ENV 3400	Water Resources (Preq. ENV 1200 or GEG 1920)	3
___	ENV 4410	Water Law (Preq. ENV 1200 or ENV 1400 or ENV 3400)	3
___	ENV 4440	Limnology (Preq. ENV 1200, BIO 1081, & BIO 1091)	3
___	ENV 4450	Stream Ecology (Preq. ENV 1200, BIO 1081, & BIO 1091)	3
___	ENV 4460	Advanced Water Quality Analysis (Preq. CHE 1800, CHE 1810, CHE 1850, ENV 2100, & ENV 3400)	3
___	GEL 4150	Hydrology (Surface Water) (Preq. GEG 1100 or GEG 1910 or ENV 3400; Preq. or Co: CSS 1010 or CIS 1010, MTH 1210)	4
___	GEL 4250	Hydrogeology (Groundwater) (Preq. GEL 1010, CHE 1800, MTH 1110; Preq or Co: GEL 3420)	4

Electives (min 15 credits) Credits

___	BIO 3200	Invertebrate Zoology (Preq. BIO 1080 & BIO 1090, BIO 1081 & BIO 1091)	4
___	BIO 3260	Vertebrate Zoology (Preq. BIO 1080 & BIO 1090, BIO 1081 & BIO 1091)	4
___	BIO 4230	Issues in Conservation Biology (Preq. BIO 1080, BIO 1090, Senior Standing)	3
___	ENV 2000	Applied Pollution Science (Preq. ENV 1200, CHE 1800 & CHE 1810)	3
___	ENV 3700	Mountain Environments (Preq. ENV 1200, 9 credits of ENV, GEL, Physical GEG, BIO, CHE, MTR, Junior Standing)	3
___	ENV 3710	Environmental Remediation (Preq. ENV 1200, BIO 1091, CHE 1800, Junior Standing)	3
___	ENV 3720	Waste Management (Preq. ENV 1200, BIO 1091, CHE 1800, Junior Standing)	3
___	ENV 3920	Directed Study in Environmental Science	2-6
___	ENV 4010	Environmental Hazards and GIS (Preq. ENV 4000; GEG 3610 recommended)	3
___	ENV 4200	Environmental Policy and Planning (Preq. ENV 1200)	3
___	ENV 4420	Wetlands (Preq. ENV 1200)	3
___	ENV 4430	Habitat Planning (Preq. ENV 1200)	3

Electives Continued (min 15 credits) Credits

___	ENV 4500	Environmental Biogeochemistry (Preq. ENV 1200, BIO 1091, CHE 1850, Junior Standing)	3
___	WQM 100	Introduction to Water Quality Management*	
___	WQM 105	Specific Calculations for Water Quality Management*	
___	WQM 119	Basic Water Quality Analysis*	
___	WQM 121	Environmental Sampling and Volume Measurement*	
___	WQM 200	Hydraulics for Water Quality Management*	
___	WQM 216	Biological and Bacteriological Water Quality Analysis*	

*Note: Offered at Red Rocks Community College, please see Catalog for details

Internship Requirement (min 3 credits) Credits

___	ENV 4950	Internship in Environmental Science (Preq. Junior standing, 12 credits of ENV, EAS Permission)	2-15
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Senior Experience Requirement (min 3 credits) Credits

___	ENV 4970	Environmental Field Studies (Preq. 12 credits of upper-division courses in GEL, Physical GEL, BIO, and/or MTR, and/or Senior standing)	3
___	CHE 4950	Senior Experience in Chemistry (Preq. Senior standing, CHE 3000, CHE 3110, & CHE 3190 or CHE 3250)	3