

ENVIRONMENTAL SCIENCE**Department of Earth and Atmospheric Sciences**

The environmental science major is an extended major (no minor required) designed as an entry-level major for MSCD students as well as for students transferring as juniors from the community colleges. In addition, students may choose from five options (concentrations) depending on their areas of interest. The multidisciplinary concentration provides students with a broad-based environmental science background, whereas the concentrations in water quality, environmental chemistry, and ecological restoration are more specialized. The environmental science option for secondary science teacher licensure is the remaining concentration available to students. All concentrations, except for environmental science for teacher licensure, require a unified core. Interested students should go to the Department of Earth and Atmospheric Sciences (Science Building, Room 231) to be assigned an advisor. Students interested in teacher licensure in secondary science should consult an advisor in environmental science and teacher education.

Environmental Science Major for Bachelor of Science - Multidisciplinary Concentration

Students are required to select courses in Biology, Chemistry, Geography, Geology, Mathematics, and Meteorology, as well as elective courses in consultation with a discipline advisor totaling a minimum of 42 hours.

Required General Studies Courses		Semester Hours
___	General Studies – Level I Mathematics: MTH 1110 College Algebra (<i>required</i>)	4
___	General Studies – Level II Natural Science: CHE 1800 General Chemistry I (<i>required</i>)	4
___	General Studies – Level II Natural Science: GEL 1010 General Geology (<i>required</i>)	4
___	Level I Composition	6
___	Level I Communications	3
___	Level II Historical	3
___	Level II Arts & Letters	6
___	Level II Social Sciences	6
<i>Total General Studies courses (see General Requirements Brochure)</i>		<i>33</i>
<i>Total Multicultural requirement</i>		<i>3</i>
<i>(Students who have not had a computer course will be required to take CSS 1010/CMS 1010.)</i>		

Required Core		Semester Hours
___	BIO 1080 General Introduction to Biology	3
___	BIO 1090 General Introduction to Biology Laboratory	1
___	CET 3320 Environmental Impact Statements	3
___	COM 3670 Writing for the Environmental Industry (Prerequisite: COM 2610 or permission of instructor)	3
___	ENV 1200 Introduction to Environmental Science	3
___	ENV 4200 Environmental Policy and Planning	3
___	GEG 1220 Map Use	2
___	MTH 1210 Introduction to Statistics	4
___	MTH 3240 Environmental Statistics	4
<i>Subtotal</i>		<i>26</i>

Students must select one of the following Senior Experience courses:

___	BIO 4510 Microbial Ecology	4
___	BIO 4540 Plant Ecology	4
___	CHE 4950 Senior Experience in Chemistry	3
___	ENV 4960 Global Environmental Challenges	3
___	ENV 4970 Environmental Field Studies	3
<i>Subtotal</i>		<i>3</i>

Students must select one of the following Internships (minimum 3 credit hours):

___	BIO 4990 Internship in Biology	3
___	CHE 4650 Chemistry Work Experience/Cooperative Education	4
___	GEG 4950 Internship in Land Use	3
___	GEL 4950 Internship in Geology	3
<i>Subtotal</i>		<i>3</i>
<i>Total Core Requirements</i>		<i>32</i>

Multidisciplinary Concentration

Biology (9 hours minimum)

___	BIO 1180	General Organismic Biology	4
___	BIO 2100	General Botany	5
___	BIO 2200	General Zoology	5
___	BIO 2400	General Microbiology	5
___	BIO 3140	Plant Physiology	5
___	BIO 3180	Vascular Plant Taxonomy	4
___	BIO 3360	Animal Physiology	4
___	BIO 3550	Urban Ecology	4
___	BIO 4450	Pathogenic Microbiology	5
___	BIO 4510	Microbial Ecology	4
___	BIO 4540	Plant Ecology	4
___	BIO 4550	Animal Ecology	4
<i>Subtotal</i>			9

Chemistry (9 hours minimum)

___	CHE 1810	General Chemistry II (required)	4
___	CHE 1850	General Chemistry Laboratory (recommended)	2
___	CHE 2100	Introduction to Organic and Biological Chemistry	5
___	CHE 3050	Environmental Chemistry	3
___	CHE 3100	Organic Chemistry I	4
___	CHE 3110	Organic Chemistry II	3
___	CHE 3120	Organic Chemistry Laboratory I	2
___	CHE 3130	Organic Chemistry Laboratory II	2
___	CHE 3890	Science and Public Policy: Variable Topics	1 – 3
<i>Subtotal</i>			9

Geography (9 hours minimum)

___	ENV 1400	World Resources	3
___	ENV 3400	Water Resources	3
___	ENV 3620	Population, Resources, and Land Use	3
___	ENV 4410	Water Law	3
___	ENV 4420	Wetlands	3
___	ENV 4430	Habitat Planning	2
___	GEG 4888	Workshop on Environmental Issues (advisor approved)	3
___	GEG 49XX	Environmental Seminar (advisor approved)	3
___	GIS 2250	Introduction to Geographic Information Systems	3
___	GIS 4840	Remote Sensing	3
___	GIS 4850	Advanced Geographic Information Systems	3
___	GIS 4860	Applications of ARC/INFO to Natural Resources Management	3
<i>Subtotal</i>			9

Geology (9 hours minimum)

___	ENV 3540	Advanced Geologic and Environmental Hazards – Denver and Vicinity	2
___	ENV 4000	Environmental Geology (required)	3
___	ENV 4010	Environmental Hazards and Planning	3
___	GEL 3120	Advanced Geomorphology	4
___	GEL 3150	Hydrogeology	3
___	GEL 3420	Soil Resources	4
___	GEL 3440	Energy and Mineral Resources	4
___	GEL 4150	Hydrology	3
<i>Subtotal</i>			9

Mathematics (3 hours minimum)

___	MTH 1120	College Trigonometry	3
___	MTH 1400	Precalculus Mathematics	4
___	MTH 2410	Calculus I (recommended for students considering graduate school)	4
___	MTH 2420	Calculus II	4
<i>Subtotal</i>			3

Meteorology (3 hours minimum)

___	MTR 1400	Weather and Climate	3
___	MTR 2400	Introduction to Atmospheric Science (recommended)	4
___	MTR 3100	Air Pollution	3
___	MTR 3400	Synoptic Meteorology	4
<i>Subtotal</i>			3

<i>Total Multidisciplinary Courses</i>			42
General Studies			33
Multicultural Requirement			3
Total of Core Courses			32
Additional Electives			10
<i>Total for Multidisciplinary Concentration</i>			120