

Courses	Title	Credits	Prerequisites	Semester(s) Offered
<b>Agriculture and Resource Economics</b>				
AREC 442	Water Resource Economics	3	AREC 342; ECON 306 or concurrent registration	S
<b>Atmospheric Science</b>				
ATS 350/351	Introduction to Weather and Climate/Lab	2/1	NONE	F
<b>Bioagricultural Science and Pest Management</b>				
BSPM 445	Aquatic Insects	4	BZ 111 or LIFE 103	F
<b>Botany and Zoology</b>				
BZ 440/441	Plant Physiology/Lab	5	BZ 120 or LIFE 103	S
BZ 471/472	Stream Biology and Ecology	4	LIFE 320 or LAND 220 or LIFE 220	F (odd years)
BZ 474	Limnology	3		
<b>Chemistry</b>				
CHEM 338	Environmental Chemistry	3	CHEM 113; CHEM 245 or CHEM 341 or CHEM 345	S (odd years)
<b>Civil Engineering</b>				
CIVE 322	Basic Hydrology	3	CIVE 202 or STAT 301 or STAT 315; CIVE 300 or CBE 331 or WR 416	F, S
CIVE 330	Ecological Engineering	3	CIVE 300 or LIFE 320; BZ 110; BZ 111 or BZ 120 or LIFE 102 or SOCR 240; CHEM 113	S
CIVE 413*	Environmental River Mechanics	3	CIVE 300 or WR 416	F
CIVE 423	Groundwater Engineering	3	CIVE 300 or CBE 331 or WR 416	S
CIVE 424	Modern Oil and Gas	3	Completion of AUCC Math	S
CIVE 425	Soil and Water Engineering	3	CIVE 300 or CBE 331 or SOCR 240	S
CIVE 440	Nonpoint Source Pollution	3	CIVE 300 or CIVE 322 or SOCR 240 or WR 416	F
*Consult with Faculty Mentor before signing up for this class				
<b>Ecosystem Science and Sustainability</b>				
ESS 311	Ecosystem Ecology	3	PH 121 or 141; LIFE 320	F
ESS 312	Sustainability Science	3	ESS 311	S
ESS 412	Sustainable Cities	3	GR 100 or GR 210 or LIFE 220 or LIFE 320 or NR 120 or NR 130 or GES 101 or ANTH 100 or ANTH 200 or SOC 220	F
ESS 471	Special Topics in Ecosystem Sustainability	1-6	ESS 311	Variable
ESS 474	Limnology	3		
<b>Environmental &amp; Radiological Health Science</b>				
ERHS 448	Environmental Contaminants: Exposure and Fate	3	LIFE 102; CHEM 245 or CHEM 341 or CHEM 345	F

**Fish, Wildlife, and Conservation Biology**

FW 300	Biology and Diversity of Fishes	2	BZ 111 or LIFE 103	S
FW 301	Ichthyology Lab	1	FW 300, may be taken concurrently	F, S

**Forest and Rangeland Stewardship**

F 311	Forest Ecology	3	LIFE 320 or LAND 220 or LIFE 220	F, S
F 324	Fire Effects and Adaptations	3	LIFE 320 or LAND 220 or LIFE 220	

**Global Environmental Sustainability**

GES 470	Applications of Environmental Sustainability	3	GES 101	F, S
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**Geography**

GR 410	Climate Change: Science, Policy, and Implications	3	3 credits of GR coursework	S
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**Geology**

GEOL 424	Modern Oil and Gas	3	Completion of AUCC Math	S
	Environmental Geology	3	GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150; CHEM 111; PH 141.	
GEOL 446	Hydrogeology	4	GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150 or GR 210; MATH 161 or MATH 255; PH 121 or PH 141.	F
GEOL 452	Geomorphology	4	(GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150 or GR 210) and (STAT 301 or STAT 307 or STAT 315)	S
GEOL 454	Groundwater Resources	3	CHEM 107 or CHEM 111; MATH 155 or MATH 160; GEOL 110 or GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150.	S
GEOL 480A3	Groundwater Modeling	3	CIVE 423 or GEOL 452	S
GEOL 551	Advanced Topics in Hydrogeology	2-3	GEOL 452	S
GEOL 552	Use of Tracers in Hydrogeology	3	CIVE 423 or GEOL 452	S (odd)
GEOL 553				

**Graduate Seminar**

GRAD 592	Water Resources Seminar	1	NONE	F
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**Natural Resources**

NR 310	Ecosystem Services and Human Well-Being	3	AREC 202 or ECON 202 or ESS 211 or LAND 220/LIFE 220.	S
NR 320	Natural Resources History and Policy	3	NONE	F, S
NR/GR 323	Remote Sensing and Image Interpretation	3	NONE	F
NR 370	Coastal Environmental Ecology	3	CHEM 107 or CHEM 113	F, S
NR 422	GIS Applications for Natural Resource Management	4	NR 322 or NR 319	S

**Natural Resource Recreation and Tourism**

NRRT 330	Social Aspects of Natural Resource Management	3	NONE	F, S
NRRT 362	Environmental Conflict Management	3	NRRT 262	F

**Rangeland Ecosystem Science**

RS 478	Restoration Ecology	3	(BZ 450 or LAND 220 or LIFE 220 or LIFE 320) and SOCR 240	S
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**Sociology**

SOC 461	Water, Society, and Environment	3	SOC 100 OR SOC 105	F, S, SS
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**Soil and Crop Sciences**

SOCR 322	Principles of Microclimatology	3	3 credits of PH coursework	S
SOCR 370	Irrigation Principles	2	HORT 100 or SOCR 100 or BZ 120; SOCR 240	S
SOCR 371	Irrigation of Field Crops	1	SOCR 370	F
SOCR 440	Pedology	4	NONE	F
SOCR 500	Environmental Measurement Lab	1	PH 110	S

**Watershed Science**

WR 406	Seasonal Snow Environments	3	NONE	S (odd years)
WR 492	Seminar	1-6	NONE	F, S
WR 575	Snow Hydrology Field Methods	1	NONE	S