

Courses	Title	Credits	Prerequisites	Semester(s) Offered
Agriculture and Resource Economics				
AREC 311	Agricultural and Resource Product Marketing	3	AREC or ECON 202	F
AREC 340	Introduction to Economics of Natural Resources	3	AREC or ECON 202	S
AREC 375	Agricultural Law	3	Junior standing or above	F
AREC 442	Water Resource Economics	3	AREC 342; ECON 306, may be taken concurrently	S
Atmospheric Science				
ATS 350/351	Introduction to Weather and Climate/Lab	2/1	NONE	F
Botany and Zoology				
BZ 440/441	Plant Physiology/Lab	5	BZ 120 or LIFE 103	S
BZ 471/472	Stream Biology and Ecology/Lab	4	LIFE 320 or LAND 220 or LIFE 220	F (odd years)
Chemistry				
CHEM 334	Quantitative Analysis Laboratory	1	CHEM 114, CHEM 335 (may be taken concurrently)	F, S
CHEM 335	Introduction to Analytical Chemistry	3	CHEM 113 with minimum grade of C, CHEM 334 (may be taken concurrently)	F, S
CHEM 338	Environmental Chemistry	3	CHEM 107 or CHEM 113 or CHEM 120 or CHEM 231; CHEM 245 or CHEM 341 or CHEM 345	S
Civil Engineering				
CIVE 322	Basic Hydrology	3	CIVE 203 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 and 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 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				
Economics				
ECON 340	Introduction to Economics of Natural Resources	3	AREC or ECON 202	S
Ecosystem Science and Sustainability				
ESS 311	Ecosystem Ecology	3	PH 121 or 141; LIFE 320	F
ESS 312	Sustainability Science	3	LIFE 320	S
ESS 353	Global Change Impacts, Adaptation, Mitigation	3	LAND 220 or LIFE 220 or LIFE 320	S
ESS 365	Global Climate Justice	3	NONE	F

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ESS 400	Global Perspectives on Sustainability	3	ESS 311	S
ESS 471	Special Topics in Ecosystem Sustainability	1-6	ESS 311	Variable
ESS 474	Limnology	3	LAND 220 or LIFE 220 or LIFE 320	F (even years)
Environmental & Radiological Health Science				
ERHS 448	Environmental Contaminants	3	CHEM 241 or 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	S
Forest and Rangeland Stewardship				
F 311	Forest Ecology	3	LIFE 320 or LAND 220 or LIFE 220 or F 209	F, S
F 324	Fire Effects and Adaptations	3	LIFE 320 or LAND 220 or LIFE 220 or F 209	S
Global Environmental Sustainability				
GES 440	Sea Level Rise and a Sustainable Future	3	NONE	S
GES 450	Global Sustainability and Health	3	GES 101	F, S
GES 470	Applications of Environmental Sustainability	3	GES 101	F, S
Geography				
GR 320	Cultural Geography	3	GR 100	F (odd years)
GR 330	Urban Geography	3	GR 100	F, S, SS
GR 331	Geography of Farming Systems	3	GR 100	S (odd years)
GR 323	Remote Sensing and Image Interpretation	3	NONE	F, S
GR 333	Glaciers and Climate Change	3	GR 100 or GR 210 or GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150	F
GR 345	Geography of Hazards	3	GR 210	S (odd years)
GR 348	Biogeography	3	3 credits of GR coursework	F, S
GR 410	Climate Change: Science, Policy, and Implications	3	3 credits of GR coursework	S
Geology				
GEOL 446	Environmental Geology	3	GEOL 110 or GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150; CHEM 111; MATH 155 or 160; PH 121 or PH 141.	S
GEOL 452	Hydrogeology	4	GEOL 110 or 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 454	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 551	Groundwater Modeling	3	CIVE 423 or GEOL 452	S
GEOL 552	Advanced Topics in Hydrogeology	2-3	GEOL 452	S
GEOL 553	Use of Tracers in Hydrogeology	3	CIVE 423 or GEOL 452	S (odd)

GEOL 554	Remote Sensing of the Earth	3	GEOL 110 or GEOL 120 or GEOL 122 or GEOL 124 or GEOL 150; PH 122 or PH 142	S
Graduate Seminar				
GRAD 592	Water Resources Seminar	1	NONE	F
Natural Resources				
NR 310	Ecosystem Services and Human Well-Being	3	AREC 202 or ECON 202 or ESS 211 or LAND 220/LIFE 220.	F
NR 320	Natural Resources History and Policy	3	NONE	F, S, SS
NR 323	Remote Sensing and Image Interpretation	3	NONE	F, S
NR 330	Human Dimensions of Natural Resources	3	NR 120A or NR 120B	F
NR 365	Environmental Education	3	NONE	F
NR 370	Coastal Environmental Ecology	3	CHEM 107 or CHEM 113	F, S
NR 375	Environmental and Natural Resources Leadership	1	NONE	S
NR 400	Public Communication in Natural Resources	3	Completion of AUCC 2; Junior standing or above	F, S, SS
NR 422	GIS Applications for Natural Resource Management	4	NR 319	S
NR 425	Natural Resource Policy and Sustainability	3	NR 320	S
NR 450	Geospatial Project Design and Analysis	4	GR 420 or NR 319	F
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	Ecological Restoration	3	(BZ 450 or F 209 or LAND 220 or LIFE 220 or LIFE 320) and SOCR 240	S
Sociology				
SOC 322	Environmental Justice	3	SOC 100 OR SOC 105	F, S
SOC 323	Soc. Of Environmental Cooperation & Conflict	3	SOC 100 OR SOC 105	S
SOC 461	Water & Social Justice	3	SOC 100 OR SOC 105	F, S, SS
SOC 463	Sociology of Disaster	3	SOC 100 OR SOC 105	S
Soil and Crop Sciences				
SOCR 322	Principles of Microclimatology	3	3 credits of PH coursework	S
SOCR 370	Climate-Smart 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 375	Soil Biogeochemistry	3	SOCR 240	S
SOCR 440	Pedology	4	NONE	F
SOCR 500	Environmental Measurement Lab	1	PH 110	S

Watershed Science

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