



Office of
Transfer Relations

Catalog: 2026-2027 University of Wyoming Catalog
Program: Energy Resource Management and Development,
B.S. -Energy & Environmental Systems Concentration

Wyoming Transfer Alignment Guide (WyoTAG)

Energy Resource Management and Development, B.S. -Energy & Environmental Systems Concentration

EES graduates can become environmental scientists who collect and analyze samples of air, soil, and water to identify environmental impacts, resolve environmental threats, provide guidance on quality regulation, and manage natural resources.

University Studies Program

This degree requires that The University Studies Program 2015 requirements are met before graduation. Some of the courses required for this major fulfill USP requirements, but not all. Students should check their degree evaluations and consult with their assigned academic advisor to discuss their specific course plan.

Course Name	Credits	UW Course in Major	AA/AS/AB/ADN satisfies this USP
C 1-Communication 1 (U5C1) (COM1)	3		X
C 2-Communication 2 (U5C2) (COM2)	3		X
C 3-Communication 3 (U5C3) (COM3)	3	(Must be completed at UW)	
Q-Quantitative Reasoning (U5Q)	3		X
PN-Physical and Natural World (1) (U5PN)	3		X
PN-Physical and Natural World (2) (U5PN)	3		X
H-Human Culture (1) (U5H)	3		X
H-Human Culture (2) (U5H)	3		X
V-US & WY Constitution (U5V)	3		X
FYS or USP Elective-Any 3-credit hour of FYS or 3-credit hours of USP electives	3		X

Note: FYS courses have been paused. 3 hours from any additional USP designated courses is still required.

Energy and Environmental Systems (EES) Core Curriculum

Students must earn a letter grade of C or better in each course, or an S in an S/U course, and a cumulative GPA of 2.00 or better. Students will complete 120 credit hours, including 42 upper division credit hours (30 of which must be earned at UW), for the B.S. in Energy Resource Management and Development (ERMD).

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ACCT 2010-Principles of Accounting I	3	x	x	x	x	x	x	X
AGEC/ECON 1020-Principles of Microeconomics (H)	3	x	x	x	x	x	x	x
CHEM 1000 - Introductory Chemistry (PN)	4	x	x	x	x	x	x	x
DSCI 4260-Project Management OR ERS 4900-Energy Resource Management Capstone (C3)	1-6							
ECON 1300-Oil: Business, Culture, and Power (H)	3							
ENGL 1010-College Composition and Rhetoric (C1)	3	x	x	x	x	x	x	x
ENR 1000-Energy and Society (PN)	3							
ENR 4750-ENR Law and Policy OR RMAL 3020 - Public Policy and Regulatory Considerations for Ranch & Rangeland Mgmt (AGEC 2020 will be waived)	3							
ERS 3010 - Air Quality Management	3							
ERS 4120 - Federal Public Land Law	3							
GIST 2200 - Spatial Data Visualization	3			x				
GIST 2310 - Intro to Geographic Information Systems	4		x		x	x	x	
LIFE 1010 - General Biology (PN)	4							

Energy and Environmental Systems (EES) Core Curriculum Continued

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
LIFE 2023 - Biology of Plants and Fungi	4							
LIFE 3400 - General Ecology	3							
MATH 2200 - Calculus I (Q)	4	x	x	x	x	x	x	X
PLNT 1000 - Agroecology (PN)	4							
PLNT 4070 - Weed Science and Technology	4							
POLS 1000 - American and Wyoming Government (V)	3	x	x	x	x	x	x	x
REWM 2000 - Principles of Rangeland Management	3	x	x	x	x	x	x	x
REWM 2400 - Range Ecosystems and Plants	4				x			
ENR/REWM 3100 - Principles of Wildland Water Quality	3							
REWM 4200 - Reclamation of Drastically Disturbed Lands	3							
REWM 4580 - Rangeland Restoration Ecology	3							
REWM 4700 - Wildland Watershed Management OR REWM 4710 - Watershed Water Quality Management	3							
RMAL 4990 - Topics: Ranching in the West	1-3							
SOIL 2010 - Introduction to Soil Science	4	x	x	x	x	x	x	
STAT 2050 - Fundamentals of Statistics (Q)	4	x	x	x	x	x	x	x

COM2 Elective, Pick ONE:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COMM 2010-Public Speaking (C2)	3	x	x	x	x	x	x	x
ECON 2400-Economics of the Environment (C2)	3	x				x		
ENGL 2005-Writing in Technology and the Sciences (C2)	3	x					x	x
ENR 2000-Environment and Society (C2)	3	x						
ENR/ZOO 2450 - Fish and Wildlife Management in the Anthropocene	4							
ENR 3300-Environmental Policy, Conservation and Development in India	3							
ERS 3000 - Energy Project Outreach and Communications (Recommended) (C2)	3							
GEOL 2220 - Communicating Earth Science (C2)	3							
HP 2020 - Honors Colloquium II USP (C2)	3							

COM3 Elective, Pick ONE:

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
COJO 3010 - Business and Professional Communication	3							
ENGL 4010 - Technical Writing in the Professions	3						Note 1	
ENGL 4075 - Writing for Non-Profits	3							
ENR 4900 - Capstone in ENR Concurrent ENR majors must take ENR 4900	3							
ESS 4950 - Environmental Systems Synthesis	3							
POLS 4840 - Seminar in Public Law	3							
REWM 4900 - Rangeland Management Planning	3							
ZOO 4100 - Scientific Communication	2							

Data Analysis Elective, Pick ONE

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ENR 4500 - Risk Analysis	4							
ENR/GEOL 4525 - Environmental Data Analysis	4							
ES 1060 - Introduction to Engineering Problem Solving	3	x			x	x	x	x
GEOL 2120 - Quantitative GeoMethods (Q)	3							
GEOL 4250 - Mathematical Geosciences	3							
GIST 4211 - Advanced Remote Sensing	3							

Data Analysis Elective, Pick ONE Continued

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
IMGT 2400 - Introduction to Information Management (Recommended)	3	x	x	x	x	x	x	x
RMAL 2040 - Quantitative Tools for Managing Agricultural Resources	3							
STAT 3050 - Statistical Methods	3							
ZOO 4400 - Population Ecology	3							

Economics Elective, Pick ONE

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
AGEC/ENR 3750 - Natural Resource Planning and Economics	3							
AGEC 4600 - Community Economic Analysis (H)	3							
AGEC 4700 - Economics of Range Resources	3							
AGEC 4720 - Water Resource Economics	3							
ECON 4420 - Seminar: Economics for ENR	2-4							
ECON/ERS 3400 - Energy Markets & Policy (Recommended)	3							

General Elective, 10 credits in total, 1 credits must be upper division

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
AGCM 1010 - Principals of Agricultural Communications (H)	3							
AGCM 4010 - Advanced Campaign Design in Agricultural Communications	3							
CHE 2005 - Chemical Process Analysis	3							
CHE 4050 - Unit Operations Laboratory II	3							
CM 3140 - Built Environment Markets	3							
DSCI 2100 - Introduction to Operations and Supply Chain Management	3							
AGEC/ECON 1010 - Principles of Macroeconomics (H)	3	x	x	x	x	x	x	x
ECON 1200 - Economics, Law and Government (V)	3				X			
ECON 4430 - Energy Economics	3							
EDSE 3040 - Energy and Power Technology	3							
ENR 1200 - Environment (PN)	4	x						
ENR 2300 - Foundations of Sustainability (H)	3							
ENR 4320 - Experience of Place	3							
ENR 4600 - Community Sustainability	3							
ERS/GEOL 1310 - The Water-Energy-Climate (PN)	3							
ERS 2010 - Introduction to Land Management	3							
CHEM/ERS 4050 - Solar Energy Conversion	3							
ERS 4100 - Property I	3							
ERS 4105 - Property II	3							
ERS 4110 - Contract Law	3							
ERS 4130 - Oil and Gas and the Law of Subsurface Property	3							
ERS 4135 - Advanced Energy Law	3							
ERS 4200 - Law and Nuclear Technology	3							
CHEM/ERS 4201 - Nuclear Fuel Cycles	3							
CHEM/ERS 4202 - Nuclear Forensics	3							
ERS/ME 4203 - Nuclear Materials								
ERS/ME 4204 - Nuclear Energy Physics	3							

General Elective, 10 credits in total, 1 credits must be upper division

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ERS/ME 4205 - Nuclear Power Systems	3							
CE/ERS 4480 - Carbon Capture and Storage	3							
CHE/ERS 4481 - Geological Carbon Sequestration	3							
ERS 4482 - Global Climate Governance	3							
ERS 4502 - Energy Finance	3							
ERS 4960 - Energy Field Studies	1-3							
ERS 4965 - Undergraduate Research	1-6							
ERS 4970 - Internship	1-6							
ERS 4975 - Global Experience in Energy	1-6							
ERS 4985 - Seminar	1-6							
ERS 4990 - Topics in Energy Resource Development and Management	1-6							
ESE/ME 4460 - Solar and Geothermal Engineering	3							
ESE/ME 4470 - Wind and Ocean Energy Engineering	3							
ESS 4950 - Environmental Systems Synthesis (C3)	3							
GEOG/GEOL 4470 - Fire Ecology	3							
GEOG 4550 - Geography of Wine	3							
GEOG 4880 - Current Topics	1-6							
GEOG 4885 - Seminar: (TOPICS)	1-3							
GEOL 1001 - Earth Science and Society	1							
ASTR/GEOL 1070 - The Earth: Its Physical Environment (PN)	4	x	x			X		
GEOL 1320 - Global Sustainability: Managing Earth's Resources	4							
ENR/GEOL 1330 - Water, Dirt, and Earth's Environment (PN)	4	x						
ESS/GEOL 2000 - Geochemical Cycles and the Earth System	4	x					x	
GEOL 2080 - General Field Geology	3	x						
GEOL 2400 - Exploring the Inaccessible Earth - Geophysics and the Environment	3							
GEOL 3250 - Geosciences and Computers	4							
GEOL 3500 - Global Change: A Geological Perspective	4							
GEOL 3600 - Earth and Mineral Resources (PN)	4							
GEOL 3650 - Energy for Society: Addressing the Energy Grand Challenge (PN)	4							
GEOL 4001 - Modeling the Earth System	4							
ERS/GEOL 4010 - Exploration Geoscience	3							
GEOL 4060 - Rocky Mountain Field Trip	1							
GEOL 4080 - Field Methods in Geology	2							
GEOL 4190 - Petroleum Geology	3							
GEOL 4191 - Methods in Petroleum Geology	3							
GIST 1001 - GIST Orientation and Portfolio	1							
GIST 1200 - Geospatial Foundations	3		x					
GIST 2110 - Techniques in Cartography (C2)	3		x					
GIST 2140 - Survey of Remote Sensing Applications (PN)	3		x					
GIST 2190 - Introduction to Programming in Geospatial Information Science and Technology	3		x					

General Elective, 10 credits in total, 1 credits must be upper division

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
GIST 3140 - Introduction to Remote Sensing	3							
GIST 4410 - UAS Sensors and Platforms	1							
GIST 4420 - UAS Mission Planning	1							
GIST 4430 - UAS Regulations and Safety	1							
GIST 4440 - UAS Ground School and Operations	2							
GIST 4450 - UAS Data Acquisition and Processing	3							
GIST 4790 - Special Topics in Geospatial Information Science and Technology	1-6							
GIST 4870 - Internship in Geospatial Information Science and Technology	1-12							
GIST 4950 - Undergraduate Research in Geospatial Information Science and Technology	1-6							
HIST 4535 – History of Oil	3							
LIFE 1002 - Discovering Science (PN)	3				Note 2			
LIFE 1003 - Current Issues in Biology (PN)	4				Note 3			Note 3
LIFE 1020 - Life Science (PN)	4		x			x		
LIFE 1101 - Introduction to Ecological Research (FYS)	3							
LIFE 2100 - Intro Research and Analysis	4							
LIFE 3410 - Introduction to Field Ecology	2							
LS 2010 - Engineering Surveying Lecture	2					x		
LS 2015 - Engineering Surveying Laboratory	1							
LS 2020 - GPS for Land Surveyors	4					x		
LS 2100 - Records Research for Surveyors	3					x		
LS 2110 - Real Property Law	3					x		
LS 2410 - GIS in Surveying	3							
LS 2499 - Sophomore Land Surveying Topics	1-6							
LS 3100 - Real Property Descriptions	2					x		
LS 3110 - Boundary Evidence	2					x		
LS 3120 - Boundary Principles	2					x		
LS 3130 - Public Land Surveys	3					x		
LS 3200 - Route Surveying	3					x		
LS 3210 - Advanced Surveying	4					x		
LS 3300 - Ethics for the Professional Surveyor	1							
ME 1000 - Introduction to Mechanical Engineering	1							
ME 2065 - Introduction to Mechanical Engineering Design	2							
MGT 2030 - Principle-Based Ethics	3							
MGT 2100 - Management and Organizations	3	x		x	x	x		x
MGT 3410 – Human Resources Management	3					Note 1		
MGT 3420 - Organizational Behavior and Leadership	3							
MGT 4240 - Performance and Compensation	3							
MGT 4260 - Training and Development	3							Note 1
MGT 4340 - Law for Managers	3							Note 1
MGT 4350 - Commercial Law	3							
MGT 4360 - Business Law for Entrepreneurs	3							
MGT 4370 - Employment Law	3							
MGT 4800 - Business Strategy and Policy (C3)	3							
MGT 4900 - Independent Study in Management	1-4							
MGT 4910 - Topics in Management	3							

General Elective, 10 credits in total, 1 credits must be upper division

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
MKT 2100 - Introduction to Marketing	3	x		x	x	X		
NAIS 4340 - Natural Resource Management on Western Reservations	3		x					
PETE 4860 - Energy, Environment, and Materials	3							
PHIL 2420 - Critical Thinking (H)	3	x	X					
PLNT 3030 - Ecology of Plant Protection	3							
INST/POLS 4385 - Environment and Resource Conflict	3							
INST/POLS 4455 - Energy Security	3							
INST/POLS 4555 - Political Ecology	3							
REWM 4850 - Rangeland Vegetation Management Techniques	3							
RMAL 2040 - Quantitative Tools for Managing Agricultural Resources	3							
RMAL 3000 - Beginning Ranch & Rangeland Problem Solving and Planning	3							
LEAD/RMAL 3110 - Foundations for Leadership	3		x					
RMAL 4700 - Elements of Leadership	3							
SOIL 4160 - Soil Health and Nutrient Cycling	3							
MICR/MOLB/SOIL 4540 - Microbial Diversity and Ecology	4							
SOWK 4780 - Seminar:	1-9							
UWYO 1019 - UWYO Saddle Up (FYS)	1							

Negotiation Elective, Pick ONE

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
AGEC/ENR 4450 - Negotiation	3							
AGEC/ENR 4550 - Negotiation Analysis	3							
MGT 4470 - Negotiations and Conflict Resolution	3							
POLS 4545 - Conflict Resolution and Management	3							

Technical Elective, Pick ONE

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ENR 3000 - Approaches to ENR Problem Solving (H)	3							
AMST/ENR/GWST 3050 - Cultures of Nature in the United States	3							
ENR/SOIL 3130 - Environmental Quality	3							
ENR/GEOG/GEOL 3450 - Weather and Climate	3							
ENR/POLS 3620 - Environmental Justice	3							
ENR 3700 - Wyoming Conservation Corps Practicum	1							
ENR 3900 - Seminar in Environment and Natural Resources	1-3							
ENR/SOC 3950 - Environmental Sociology	3							
ENR 4010 - Winter Ecology: Skills of the Winter Naturalist	1							
ENR 4011 - Winter Ecology: Snowpack Science and Dynamics	1							
ENR 4012 - Winter Ecology: Wildlife and Plant Adaptations	1							
AMST/ENR 4030 - Ecology of Knowledge	3							

Technical Elective, Pick ONE Continued

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
ENR/GEOG 4040 - Conservation of Natural Resources	3							
AMST/ENR/GEOG/POLS/REWM 4051 - Environmental Politics	3							
AMST/ENR/GEOG/POLS/REWM 4052 - Federal Land Politics	3							
ENR/PATB 4240 - Disease Ecology	3							
ENR/REWM 4285 - Wildland Hydrology	3							
ANTH/ENR 4310 - Environmental Anthropology	3							
ENR/HIST 4412 - Global Environment History (H)	3							
BOT/ENR/ZOO 4420 - Conservation Biology	3							
CE/CHE/ENR 4430 - Green Chemistry and Global Environmental Problems	3							
ENR 4560 - Conservation Entrepreneurship	3							
ENR 4600 - Community Sustainability	3							
COJO/ENR 4700 - Media, Science, and Society	3							
AMST/ENR 4800 - Historic Preservation	3							
ENR 4890 - Topics in Environment and Natural Resources	1-6							
ENR 4950 - Leadership in Natural Resources Management	2							
ENR 4960 - Field Studies in:	1-6							
ENR 4970 - ENR Internship	1-6							
ENR 4975 - Independent Study	1-6							
GEOG 3010 - Geomorphology of Earth's Dynamic Landscapes	3							
GEOG 3030 - Geography and Development	3							
GEOG 3050 - Economic Geography	3							
GEOG 3280 - Spatial Methods	4							
GEOG/NAIS 3400 - Traditional Ecological Knowledge	3							
GEOG 3480 - Environmental Change	3							
GEOG 3550 - Natural Hazards and Society	3							
GEOG 4000 - Terrain Analysis	3							
GEOG/INST 4013 - Political Geography	3							
GEOG 4080 - Management of Major River Basins	3							
GEOG/GEOL 4113 - Geological Remote Sensing	4							
REWM 3000 - Plant Ecophysiology/Plant Form and Function	4							
REWM 3390 - Range Judging	2							
REWM 3500 - Rangeland Plant Ecophysiology	3							
REWM 4000 - Poisonous Plants and Plant Toxins	3							
REWM 4100 - Nutritional Ecological Management of Range Herbivores	3							
REWM 4103 - Range and Ranch Recreation	3							
REWM 4150 - Behavior Modification for Production of Grazing Herbivores	3							
REWM 4300 - Grass Taxonomy	3							
REWM 4330 - Rangeland Ecosystem Assessment and Monitoring	4							

Technical Elective, Pick ONE Continued

Course Name	Credits	Casper	CWC	EWC	LCCC	NWCCD	Northwest	Western
REWM 4340 - Reclamation Techniques Field Trip	2							
REWM 4440 - Applied Fire Ecology	3							
REWM 4500 - Rainfall-Runoff Modeling	3							
REWM 4530 - Seminar	1							
REWM 4540 - Problems	1-4							
REWM 4550 - Internship in:	1							
REWM 4600 - Drone-Based Remote Sensing	3							
REWM 4750 - Wildlife Habitat Restoration Ecology	3							
REWM 4830 - Ecological Applications for Wildland Management	3							
RNEW 4990 - Topics in:	1-4							
RNEW 3000 - Tropical Ecology	3							
GIST/PLNT/REWM 4130 - Applied Remote Sensing	3							
PLNT 4400 - Invasive Plant Ecology	3							
BOT/RNEW 4775 - Forest Ecology	4							
RNEW 4800 - Undergraduate Research	1-3							
PLNT/SOIL 3000 - Irrigated Agriculture	3							
SOIL 4100 - Soil Physics	3							
SOIL 4105 - Soil Physics Laboratory	2							
SOIL 4120 - Genesis, Morphology and Classification of Soils	4							
SOIL 4130 - Chemistry of the Soil Environment	3							
MICR/SOIL 4140 - Soil Microbiology	4							
SOIL 4150 - Forest and Range Soils	3							

Notes:

Note 1 – This course must be taken at UW.

Note 2 LIFE 1002 = BIOL 1002

Note 3 LIFE 1003 = BIOL 1003

COURSE SUBSTITUTIONS: WyoTAGs reflect published equivalencies. UW academic departments occasionally arrange for course substitutions when indirect equivalencies exist. Please contact your UW Academic Advisor for details.

EFFECTIVE DATE: This document is in effect as of the 2026-2027 catalog year; it reflects the published UW curriculum as of that date. Any changes to the UW curriculum or the WYCC course equivalents will require this document to be updated. To request an updated document, faculty should contact transfer@uwyo.edu via email.