WASHINGTON STATE UNIVERSITY

Degree: Bachelor of Science in Earth & Environmental Sciences
Major: Environmental & Ecosystem Science

Advising Guide for Students on the WSU Pullman Campus

University Core Requirements (UCORE):	Credits	Offered	Term
HIST 105 [ROOT]	3	F, S, Su	
ENGLISH 101 [WRTG]	3	F, S, Su	
HD 205 or COM 102 [COMM]	3-4	F, S, Su	
ECONS 101 [SSCI] & SOE Core requirement	3	F, S, Su	
Humanities Elective [HUM]	3	F, S, Su	
Creative & Professional Arts Elective [ARTS]	3	F, S, Su	
Additional CAS Elective [ARTS, HUM or SSCI]	3	F, S, Su	

Introductory Science and Math: (fills [QUAN], [BSCI] and [PSCI] requirements for UCORE)			
beginning Fall 2020: EES majors must make grades of C or higher in all science & math courses			
SOE 110 Environment, Human Life, and Sustainability	4	F, S, Su	
SOE 101 Introduction to Geology ***- or -*** SOE 102 Geology for Science Majors	4	F, S, Su	
Math 106 College Algebra (Pre-Calculus)	3	F, S, Su	
Math 108 Trigonometry	2	F, S, Su	
STAT 212 [QUAN] OR Math 140 or 171 Calculus	4	F, S, Su	
BIOLOGY 106 Organismal Biology	4	F, S, Su	
BIOLOGY 107 Cell Biology and Genetics	4	F, S, Su	
CHEM 101 Introduction to Chemistry ***- or -*** CHEM 105 Principles of Chemistry I	4	F, S, Su	
CHEM 102 Chemistry Related to Life Sciences ***- or -*** CHEM 106 Principles of Chemistry II	4	F, S, Su	

School of the Environment (SoE) Core (*three Writing in the Major [M] courses are required*)			
Introdution to School of the Environment (SOE)			
SOE 100 An Introduction to Our Environment: Geology, Ecology, and Environmental Stewardship	1	F	
Earth Science:			
SOE 210 Earth History & Evolution	4	F, S, Su	
Water Science:			
SOE 315 Water & Earth ***- or -***	3	S	
SOE 461 Watershed Management	3	S	
Ecology:			
SOE 300 Natural Resources Ecology	3	F, S	
Society & Environment:			
SOE 312 Natural Resources & Society [DIVR]	3	S	
Spatial Analysis:			
SOIL_SCI 368 Introduction to Geographic Information Systems (GIS)	3	F	
Integrative Capstone:			
SOE 454 Restoration Ecology [CAPS] [M]	3	F	
Experiential:			
SOE 479 or SOE 495 Internship (not TA-ship) ***- or -***	3	F, S, Su	
SOE 420 Yosemite Practicum ***- or -***	2-3	Su	
SOE 499 Special Topics/Problems	3	F, S, Su	
135 hours of advisor approved work experience	0-3	F, S, Su	

Environmental & Ecosystem Sciences Major Core:			
200-Level Required Elective: (choose one)			
SOE 204 Natural Resources Measurements ***- or -***	4	F	
SOE 230 Oceanography ***- or -***	3	F, S	
SOE 275 Rivers: Form, Function, and Management ***- or -***	3	F	
SOE 285 Science and Policy of Climate Change	3	S	
Advanced Statistics Elective:			
STAT 412 Statistical Methods in Research I ***- or -***	3	F, S, Su	
Professional Electives: (31 credits, including a maximum of nine credits at the 200-level)			
SOE 200+			
SOE 200+			
SOE 200+			
SOE 300+			

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Professional Electives: suggested emphasis areas

Natural Resource Ecology (Wildlife; Forestry)	Credits	Offered	Term
SOE 301 Forest Plants & Ecosystems	3	F	
SOE 302 Arid Land Plants & Ecosystems	3	S	
SOE 305 Silviculture	3	F	
SOE 310 Methods in Wildlife Ecology	4	F	
SOE 318 Wildlife Genetics	3	SAYO	
SOE 411 Limnology [M]	3	F	
SOE 417 Fisheries Science and Management	3	F	
SOE 430 Introduction to Wildland Fire	3	F	
SOE 431 Wildlife Nutrition	3	S	
SOE 435 Wildlife Ecology	4	S	
SOE 441 Population Ecology & Conservation	4	F	
SOE 446 Habitat Ecology [M]	3	F	
SOE 450 Conservation Biology [M]	3	S	
SOE 461 Watershed Management	3	S	
SOE 464 Landscape Ecology [M]	3	SAYO	
SOE 465 Aquatic Microbial Ecology	4	S	
SOE 471 International Wildlife Conservation	3	SAYE	
SOE 485 Disturbance Ecology	3	SAYO	
Environmental Science & Climate			
SOE 250 Introduction to Earth System Science	3	S	
SOE 285 The Science and Policy of Climate Change	3	S	
SOE 311 Modeling the Environment	4	F	
SOE 335 Environmental Policy [M]	3	F	
SOE 390 Living on the Edge: Global Climate Change and Earth History	3	F	
SOE 402 Human Health and the Environment	3	F	
SOE 404 The Ecosystem [M]	3	S	
SOE 412 Global Biogeochemistry [M]	3	F	
SOE 444 Environmental Assessment	3	F, S	
SOE 445 Hazardous Waste Management	3	F	
SOE 460 Biotechnology and the Environment	3	F	
SOE 483 Sustainability: Applied Improvement or Promotion Projects	3	S	
BIOLOGY 469 Ecosystem Ecology and Global Change [M]	3	F	
BIOLOGY 330 Principles of Conservation	3	S, Su	
CE 401 Climate Change Science and Engineering	3	S	
CE 403 Air Quality Management	3	S	
Water Science			
SOE 230 Oceanography	3	F, S	
SOE 250 Introduction to Earth System Science	3	S	
SOE 275 Rivers: Form, Function, and Management	3	F	
SOE 311 Modeling the Environment	4	F	
SOE 315 Water and the Earth	3	S	
SOE 390 Living on the Edge: Global Climate Change and Earth History	3	F	
SOE 411 Limnology [M]	3	F	
SOE 417 Fisheries Science and Management	3	F	
SOE 461 Watershed Management	3	S	
SOE 463 Water and the Environment	3	S	
SOE 465 Aquatic Microbial Ecology	4	S	
SOE 475 Groundwater	3	F	
BIOLOGY 410 Marine Ecology	3	F	
BIOLOGY 412 Biology of Fishes	3	SAYE	
Earth Sciences			
SOE 207 Geology Field Camp	3	SS	
SOE 230 Oceanography	3	F, S	
SOE 303 Environmental Geology	3	S	
SOE 315 Water and the Earth	3	S	
SOE 320 Sedimentary Petrology and Sedimentation	3	F	
SOE 340 Structural Geology [M]	4	S	
SOE 350 Mineralogy and Crystallography	4	F	
SOE 356 Igneous and Metamorphic Petrology	4	S	
SOE 405 Near Surface Geophysics	4	F	
SOE 408 Field Geology [M]	3	SS	
SOE 412 Global Biogeochemistry [M]	3	F	
SOE 416 Soil Processes in the Earth's Critical Zone	3	F	
SOE 463 Water and the Environment	3	S	
SOE 467 Volcanology	4	FAYE	
SOE 470 Economic Geology	3	S	
SOE 474 Physics and Chemistry of the Earth	4	S	
SOE 475 Groundwater	3	F	
SOIL_SCI 374 Introduction to Remote Sensing	3	S	
SOIL_SCI 441-442 Soil Fertility (with lab)	4	S	
SOIL_SCI 414-415 Environmental Biophysics (wityh lab)	3	S	
Policy and Planning			
SOE 285 The Science and Policy of Climate Change	3	S	
SOE 335 Environmental Policy [M]	3	F	
SOE 390 Living on the Edge: Global Climate Change and Earth History	3	F	
SOE 438 Natural Resource and Environmental Policy and Law	3	S	
SOE 444 Environmental Assessment	3	F, S	
SOE 460 Biotechnology and the Environment	3	F	
SOE 483 Sustainability: Applied Improvement or Promotion Projects	3	S	
ECONS 326 Aspects of Sustainable Development	3	S	
ECONS 330 Natural Resource Economics	3	F	
ECONS 430 Managing the Global Environment	3	F	
ECONS 431 Economic Analysis of Environmental and Natural Resource Policies	3	F	
H_D 487 Special Topics: Global Issues in Agricultural, Human, and Natural Resource Sciences	3	S	
PHIL 370 Environmental Ethics	3	S	
POL_S 316 American Public Policy	3	F	
POL_S 430 The Politics of Natural Resource and Environmental Policy [M]	3	TBD	
SOC 332 Sustainability and Society	3	F	
SOC 336 Sociology of Food	3	S	
Plants/Horticulture			
BIOLOGY 332 Systematic Botany	4	S	
BIOLOGY 401 Plants and People	3	S	
BIOLOGY 409 Plant Anatomy	4	FAYE	
BIOLOGY 420 Plant Physiology	3	F	
CROP_SCI 202 Crop Growth and Development	3	S	
CROP_SCI 360 World Agricultural Systems	3	F, S	
CROP_SCI 411 Crop Environment Interactions [M]	3	F	
CROP_SCI 443 Plant Breeding for Organic Agriculture	3	FAYO	
CROP_SCI 445 Plant Breeding [M]	4	SAYE	
CROP_SCI 480 Plant Genomics and Biotechnology	3	FAYE	
HORT 330 Landscape Plants for Urban and Community Environments	3	F	
HORT 331 Landscape Plant Installation and Management	3	S	
HORT 332 Interior Plantscaping	3	F	
HORT 351 Plant Propagation	4	S	
HORT 357/358 Greenhouse Management and Crop Production (and lab)	4	S	
HORT 416 Advanced Horticultural Crop Physiology	3	S	
PL_P 429 General Plant Pathology	3	F	
SOIL_SCI 302 Introduction to Agroecology [M]	3	S	

These are suggested emphasis areas; students may work with their advisor to develop different emphasis areas that meet their career objectives.