

Wildlife Ecology & Conservation Sciences



**School of the Environment
B.S. in Earth & Environmental
Sciences Advising Sheet • Fall – 2018**

Student Name _____

ID# _____

Email _____

Advisor: _____

Academic Coordinators: 509-335-6166 or 509-335-8538; Webster 1227 and 1229

BASIC REQUIREMENTS:

46 Credit minimum required (no more than three, three-credit courses within the major)

First Year Experience (3 credits)	Cr	Term	Offered
Roots of Contemporary Issues (HISTORY 105)	3		F,S,SS
Foundational Competencies (10 cr min.)			
<i>Written Communication</i>			
ENGL 101: Intro Writing [WRTG]	3		F,S,SS
<i>Communication</i>			
HD 205 or COM 102 [COMM]	3-4		F,S,SS
<i>Quantitative Reasoning</i>			
STAT 212 [QUAN], MATH 140 [QUAN] or MATH 171 [QUAN]	4		F,S,SS
Ways of Knowing (20 credits min.)			
<i>Inquiry in the Social Sciences (3)</i>			
ECONS 101 [SSCI]	3		F,S,SS
<i>Inquiry in the Humanities (3)</i>			
Elective [HUM]	3		.S,SS
<i>Additional Inquiry (3)</i>			
Elective [HUM, ARTS or SSCI]	3		F, S, SS
<i>Inquiry in Creative and Professional Arts (3)</i>			
Elective [ARTS]	3		F, S, SS
<i>Inquiry in the Natural Sciences (7 min.)</i>			
BIOLOGY 106 Intro to Organismal [BSCI]	4		F,S, SS
CHEM 101 Intro to Chem OR [PSCI]	4		F,S, SS
CHEM 105 Principles of Chem I [PSCI]			
Integrative & Applied Learn –Included in EES Core			
Global Diversity (3)			
SOE 312 [DIVR]	0		
Integrative Capstone (3)			
SOE 454 [M] [CAPS]	0		
Other Required Courses (13 cr.)			
MATH 106 College Algebra	3		F,S,SS
MATH 108 Trigonometry	2		F,S,SS
BIOLOGY 107 Cell Biology & Genetics	4		F,S,SS
CHEM 102 Chemistry Related to Life Sci. OR	4		S
CHEM 106 Principles of Chem II			F,S,SS

Writing in the major requirement: 1) _____ 2) _____

Writing Portfolio/Writing Exam Yes No

2-years of high school foreign language Yes ____ **OR**
at least 2-semesters at college level (required to graduate) Yes ____

Note: To certify in the major you must have at least 24 credits and a 2.0 cum GPA.

CHECKLIST:

- Basic Requirements (46 Cr.)
- EES Common Core (19-23 Cr.)
- WECS Core (42-43 Cr.)
- Professional Electives (10-13 Cr.)
- TOTAL (at least 120 credits with 40 in upper division courses)

EARTH & ENVIRONMENTAL SCIENCE DEGREE COMMON CORE REQUIREMENTS: (19-23 Cr)

Advanced Writing	Cr	Term	Offered
Writing in the Major ²	-		F,S
Earth Systems			
SOE 210 Earth History & Evolution	4		F,S
Water Science			
SOE 460 Watershed Management OR	3		S
SOE 315 Water & Earth ¹	3		S
Ecology			
SOE 300 Natural Resources Ecology OR	3		F,S
BIOL 372 General Ecology [M]	4		F, S, SS
Society & Environment			
SOE 312 Nat Res & Society [DIVR]	3		S, SS
Spatial Analysis			
SOIL_SCI 368 Introduction to GIS	3		F
Integrated Capstone (UCORE Requirement)			
SOE 454 [M] [CAPS] Restoration Ecology	3		F
Experiential			
Milestone: 135 approved work experience ⁷	0		F,S,SS
OR SOE 495 Undergraduate Internship OR	3		F,S,SS
SOE 499 Special Problems	3		F,S,SS

*F = Fall; S = Spring; SS = Summer Session;
FAYO = Fall Alt.Yr. Odd; FAYE = Fall Alt. Yr. Even;
SAYO = Spring Alt. Yr. Odd; SAYE = Spring Alt. Yr. Even*

¹SOE 315 requires SOE 101 or 102 as prerequisite
²Writing in the Major courses completed as part of WECS major – SOE 454, 446 and 450.

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WILDLIFE ECOLOGY & CONSERVATION SCIENCES MAJOR

First Year

First Term

	<i>Hours</i>
BIOLOGY 106 [BSCI]	4
ECONS 101 [SSCI]	3
HISTORY 105 [Roots]	3
Humanities [HUM]	3
MATH 106 or electives ¹	3

Second Term

	<i>Hours</i>
Arts [ARTS]	3
BIOLOGY 107	4
CHEM 101 [PSCI] or 105 [PSCI]	4
ENGLISH 101 [WRTG]	3
MATH 108 or electives ¹	2

Second Year

First Term

	<i>Hours</i>
COM 102 [COMM] or HD 205 [COMM]	3-4
SOE 204	2
SOE 300 or BIOLOGY 372 [M] ²	3-4
SOE 301	3
SOE 310	4

Second Term

	<i>Hours</i>
CHEM 102 or 106	4
SOE 302	3
SOE 312 [DIVR]	3
STAT 212 [QUAN], MATH 140 [QUAN] or 171 [QUAN]	4
Complete Writing Portfolio	

Third Year

First Term

	<i>Hours</i>
Animal Systematics/Genetics Course ³	3-4
Additional [HUM, ARTS, or SSCI]	3
GEOLOGY 210	4
SOIL_SCI 368	3
Foreign Language, if needed ⁴	0-4

Second Term

	<i>Hours</i>
SOE 431	3
SOE 450 [M]	3
SOE 460 or GEOLOGY 315 ⁵	3
Professional Elective ⁶	3
STAT 412	3
Foreign Language, if needed ⁴	0-4

Fourth Year

First Term

	<i>Hours</i>
SOE 435	4
SOE 454 [M] [CAPS]	3
Professional Electives ⁶	4
SOE Experiential Requirement or Prof. electives if milestone hours ⁷	0-3

Second Term

	<i>Hours</i>
Animal Systematics/Genetics Course ³	4
SOE 438	3
SOE 441	4
SOE 446 [M]	3
Professional Electives ⁶	3

Total Hours Minimum **120**

WECS SCIENCE CORE (42 minimum.)

Courses	Cr	Term	Offered
SOE 204 Nat Res Measurements	2		F,S
SOE 301 Forest Plants & Ecosystems	3		F
SOE 302 Arid Land Plants & Ecosystem	3		S
SOE 310 Methods in Wildlife Ecology	4		F
STAT 412 Statistical Methods in Research	3		F
SOE 431 Wildlife Nutrition	3		S
SOE 435 Wildlife Ecology	4		F
SOE 438 Nat Res Policy & Law	3		S
SOE 441 Population Ecology	4		S
SOE 446 [M] Wildlife Habitat Ecol	3		S
SOE 450 [M] Conservation Biology	3		S

Plus 2 of the following 4 Animal Systematics or Genetics Courses

Courses	Cr	Term	Offered
BIOL 428 Mammalogy	4		F
BIOL 423 Ornithology	4		S
BIOL 432 Bio of Amphibians & Reptiles	4		SAYE
BIOL 412 Bio of Fish	4		FAYE
SOE 318 Wildlife Genetics	3		FAYE

Professional Electives - 10-13⁷ cr. @ 200-400 level, at least 6 cr at 300-400 level

FOOTNOTES

¹ MATH 106 and 108 are required courses. However, if students have tested into or taken MATH 140, 171, 172 or ALEKS with an 80% or better, MATH 106 and 108 will be waived. If waived, students would need to take 3-5 additional credits.

² Alternative to SOE 300 is BIOLOGY 372 [M].

³ Choose two of the following Animal Systematics/Genetics Courses:

BIOLOGY

412, 423, 428 or 432[M] or SOE 318.

⁴ Two years of high school foreign language or at least two semesters of college-level foreign language are required by the College of Arts and Sciences for graduation.

⁵ Alternative to SOE 460 is GEOLOGY 315 which requires an additional prerequisite of GEOLOGY 101 or 102.

⁶ Professional electives are courses selected by students in concert with their advisor and pertain to their major and/or to a specific sub-discipline of interest. Approved courses include but are not limited to any CRM J course or any 200-400-level ANIM SCI, BIOLOGY, ENVR SCI, MBIOS, SOE or SOIL SCI course.

⁷ Certified students in the School of the Environment are required to fulfill the SOE Experiential Requirement before graduation. This requirement is designed to give students experience that they will not receive in the traditional classroom oriented course, and to better prepare them for a successful career after graduation. There are various ways to complete this requirement and students are encouraged to choose an experience of interest to them. Approved courses include ENVR SCI 492, 495, 499 and SOE 479; or as approved by advisor. . In lieu of a course, students can complete a milestone of 135 hours of relevant practical experience, but may need another 3 cr. of professional electives.

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NOTES:

Wildlife Biologist, Federal - Wildlife Biology Series, 0486

For more information see <https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/0400/wildlife-biology-series-0486/>

Requires no extra credits

Fisheries Biologist, Federal – Fish Biologist Series, 0482

For more information see: <https://www.opm.gov/policy-data-oversight/classification-qualifications/general-schedule-qualification-standards/0400/fish-biology-series-0482/>

- Take BIOLOGY 412, Biology of Management of Fishes as animal systematics elective
- Use professional 9 credits aquatic subjects such as SOE 411 Limnology, ENVR_SCI 275 Rivers, ENVR_SCI 417 Fisheries Science, ENVR_SCI 430 Stream Ecology, BIOL 410 Marine Biology, or general zoology courses such as invertebrate or vertebrate zoology, comparative anatomy, histology physiology, embryology, genetics, entomology, parasitology, development or cell biology

Certified Professional Wildlife Biologist, The Wildlife Society

For more information see: www.wildlife.org/learn/professional-development-certification/certification-programs.

- For professional electives, take at least 3 **additional** credits of communication (writing, speaking, media)
- Take 3 **additional** credits of humanities or social sciences (can use course used to fill additional SSCI or HUM elective for UCORE requirements).

“WECS” COURSES *with Prerequisites*

BIOL 372 (F/S/SS) Or SOE 300 (F/S) SOE 315 (SAYO)	BIOL 106 and CHEM 102 or 105 No prereq's SOE 101, 102, PHYS 101 or 201; CHEM 102 or 106; MATH 108, 140 or 171
SOE 204 (F)	MATH 106/108 or 108 c// if 106 taken, or 140, 171
SOE 301 (F)	SOE 300 or c//
SOE 302 (S)	SOE 301
SOE 310 (F)	BIOL 106 and 107
SOE 430 (FAYE)	SOE 301
SOE 435 (F)	BIOL 372 or SOE 300 and STAT 212 or 412
SOE 438 (S)	Junior standing or permission of instructor. Recommended SOE 312
SOE 441 (S)	SOE 300 or BIOL 372 and STAT 212 or 412
SOE 450 (S)	Junior standing
SOE 454 (F)	Senior standing
SOE 455 (F)	BIOL 107
SOE 460 (S)	Recommended SOE 204 or sufficient background in spreadsheets
SOE 464 (S)	Junior standing and recommended Soils
STATS 412 (F/S)	368 STATS 212, MATH 140 or 171
BIOL 412	BIOL 106
BIOL 423	BIOL 106
BIOL 428	BIOL 106

- S = Spring; F = Fall, SS = Summer
 - c// = concurrent

BIOLOGY 107:	<i>CHEM 101,102,105,106 or concurrent enrollment</i>
BIOLOGY 301:	<i>BIOLOGY 106 or 120; BIOLOGY 107; CHEM 101 or 105; CHEM 102 or 106.</i>
BIOLOGY 372:	<i>BIOLOGY 106 and CHEM 102 or 105 (SOE 300 – has no prereq)</i>
CHEM 101:	<i>ALEKS score of 45% or placement/concurrent enrollment into MATH 105, 106, 107, 108, 140, 171, 172.</i>
CHEM 105:	<i>MATH 106 or c// or ALEKS score 70% or higher or MATH 107, 108, 140, 171, 172...</i>
CHEM 345:	<i>CHEM 102 w/C or better or CHEM 106 w/C or better</i>
MBIOS 303:	<i>CHEM 102 or 345</i>
PHYSICS 101:	<i>MATH 107 or 108 w/grade of C or better, ALEKS placement score 80% or higher or passing MATH 140, 171, 202 or 206.</i>