BS in Wildlife & Wildlands Conservation (282023) MAP Sheet

Life Sciences, Plant and Wildlife Sciences

For students entering the degree program during the 2017-2018 curricular year.

University Core and Graduation Requirements

University Core Requirements:

Requirements	#Classes	Hours	Classes
Religion Cornerstones			
Teachings and Doctrine of The Book of Mormon	1	2.0	REL A 275
Jesus Christ and the Everlasting Gospel	1	2.0	REL A 250
Foundations of the Restoration	1	2.0	REL C 225
The Eternal Family	1	2.0	REL C 200
The Individual and Society			
American Heritage	1-2	3-6.0	from approved list
Global and Cultural Awareness	1	3.0	from approved list
Skills			
First Year Writing	1	3.0	from approved list
Advanced Written and Oral Communications	1	3.0	ENGL 316 recommended
Quantitative Reasoning	0-1	0-3.0	from approved list
Languages of Learning (Math or Language)	1	3.0	STAT 121 recommended
Arts, Letters, and Sciences			
Civilization 1	2	3.0	from approved list
Civilization 2	1	3.0	from approved list
Arts	1	3.0	from approved list
Letters	1	3.0	from approved list
Biological Science	1	3.0	PWS 100*
Physical Science	2	6.0	CHEM 101, GEOL 101 recommended
Social Science	1	3.0	ECON 110 recommended
Core Enrichment: Electives			
Religion Electives	3-4	6.0	from approved list
Open Electives	Variable	Variable	personal choice

Graduation Requirements:

Minimum residence hours required	30.0
Minimum hours needed to graduate	120.0

Suggested Sequence of Courses

FRESHMAN YEAR

1st Semester	
Arts or Letters	3.0
Physical Science	3.0
First-Year Writing or A HTG 100	3.0
PWS 115	1.0
Quantitative Reasoning (if needed)	3.0
Religion Cornerstone course	2.0
Total Hours	**15.0**

2nd Semester	
First-Year Writing or A HTG 100	3.0
Major elective	3.0
Civilization 1	3.0
PWS 100	3.0
PWS 113	1.0
Religion Cornerstone course	2.0
Total Hours	**15.0**

SOPHOMORE YEAR

3rd Semester	
PWS 282	3.0
PWS 283	1.0
PWS 350	3.0
Major elective	3.0
Lang. of Learning (recommend: STAT 121)	3.0
Religion Cornerstone course	2.0
Total Hours	**15.0**

4th Semester	
PWS 215	3.0
PWS 330	3.0
PWS 225	3.0
PWS 275	3.0
Religion Cornerstone course	2.0
Total Hours	**14.0**

JUNIOR YEAR

5th Semester	
PWS 344	3.0
PWS 355	3.0
PWS 357	3.0
First-Year Writing or A HTG 100	3.0
Major elective	3.0
Religion elective	2.0
Total Hours	**17.0**

6th Semester	
PWS 375	3.0
Advanced Written & Oral Communication	3.0
Major elective	3.0
Civilization 2	3.0
Religion elective	2.0
Total Hours	**14.0**

SENIOR YEAR

7th Semester	
PWS 416	3.0
Arts or Letters	3.0
Global & Cultural Awareness	3.0
Major elective	1.0
General elective	3.0
BIO 447	3.0
Total Hours	**16.0**

8th Semester	
PWS 335	3.0
PWS 417	3.0
PWS 446	3.0
PWS 492	1.0
Social Science	3.0
Religion elective	2.0
Total Hours	**15.0**

Note: Students are encouraged to complete an average of 15 credit hours each semester or 30 credit hours each year, which could include spring and/or summer terms. Taking fewer credits substantially increases the cost and the number of semesters to graduate

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2017-2018 Program Requirements (67 Credit Hours)

REQUIREMENT 1 Complete 20 courses

BIO 447 - Mammalogy	3.0
*PWS 100 - Plants in the Environment	3.0
PWS 113 - Safety Certifications for Field Biologists	1.0
PWS 115 - Introduction to Wildlife and Wildlands Conservation	1.0
PWS 215 - Principles of Range Management	3.0
PWS 225 - Principles of Wildlife and Fisheries Management	3.0
PWS 275 - Genetics and Reproduction	3.0
PWS 282 - Soil Science	3.0
PWS 283 - (Not currently offered)	
PWS 330 - Rangeland Plant Identification and Ecology	3.0
PWS 335 - Comparative Animal Nutrition	3.0
PWS 344 - Natural History of Wildlife	3.0
PWS 350 - Rangeland Ecology	3.0
PWS 355 - Rangeland Vegetation Measurements and Analysis	3.0
PWS 357 - Techniques for Wildlife Investigations and Management	3.0
PWS 375 - Environmental Policies and Laws	3.0
PWS 416 - Rangeland Improvement and Restoration	3.0
PWS 417 - Rangeland Planning and GIS	3.0
BIO 446 - (Bio - PWS) Ornithology	3.0
PWS 492 - Wildlife and Wildlands Conservation Senior Seminar	1.0

REQUIREMENT 2 Complete 15.0 hours from the following course(s)

COMPLETE 15 ELECTIVE CREDIT HOURS FROM THE FOLLOWING COURSE LIST. WITH THE HELP OF YOUR ADVISOR, SELECT COURSES TO QUALIFY FOR 2-3 FEDERAL JOB SERIES (WILDLIFE BIOLOGIST, ECOLOGIST, RANGE CONSERVATIONIST, GIS SPECIALIST, SOIL CONSERVATIONIST, BOTANIST, FISHERIES BIOLOGIST):

BIO 220 - Biological Diversity: Animals	4.0
BIO 230 - Biological Diversity: Plants	4.0
BIO 235 - Field Botany	3.0
BIO 270 - Animal Restraint	1.0
BIO 380 - Comparative Animal Physiology and Anatomy	4.0
BIO 420 - Evolutionary Biology	2.0
BIO 430 - Plant Classification and Identification	4.0
BIO 441 - Entomology	3.0
BIO 443 - Ichthyology	3.0
BIO 445 - Herpetology	4.0
BIO 450 - Conservation Biology	3.0
BIO 452 - Marine Biology	4.0
BIO 525 - Animal Disease, Biosecurity, and Zoonoses	3.0
BIO 541 - Aquatic Entomology	4.0
BIO 556 - Limnology	3.0
BIO 557 - Stream and Wetland Ecology	4.0
GEOG 211 - Map Use and Interpretation	4.0
GEOG 212 - Introduction to Geographic Information Systems	3.0
GEOG 306 - Global Conservation Designations	3.0
GEOG 412 - Advanced Geographic Information Systems	3.0
PDBIO 382 - Developmental Biology	3.0
PWS 270 - Animal Husbandry	3.0
PWS 301 - Plant Growth and Reproduction	3.0
PWS 303 - Soils Conservation and Resources	3.0
PWS 315 - Conflict Resolution Management	1.0
PWS 324 - Wildlife Law Enforcement	3.0
PWS 325 - Fisheries and Wetlands Management	3.0
PWS 411 - Watershed Management	3.0
PWS 419 - Forest Management and Ecology	3.0
PWS 440 - Plant Physiology	3.0
PWS 511 - Environmental Biophysics: Soil and Plant Water Relations	4.0
PWS 512 - Rangeland Landscape Ecology and Geographic Information Sy	3.0
PWS 547 - Ungulate Conservation and Management	2.0
PWS 553 - Restoration Ecology	3.0
PWS 554 - Wildlife Behavioral Ecology	3.0

RECOMMENDED Complete 10 courses

RECOMMENDED COURSES FOR PREPROFESSIONAL TRACK. THESE RECOMMENDED PREPROFESSIONAL COURSES CAN BE USED TO SATISFY THE ELECTIVE CREDITS ABOVE.

CHEM 105 - General College Chemistry 1 with Lab (Integrated)	4.0
CHEM 106 - General College Chemistry 2	3.0
CHEM 107 - General College Chemistry Laboratory	1.0
CHEM 351 - Organic Chemistry 1	3.0
CHEM 352 - Organic Chemistry 2	3.0
CHEM 353 - Organic Chemistry Laboratory--Nonmajors	2.0v
PDBIO 120 - Science of Biology	3.0
PHSCS 105 - General Physics 1	3.0
PHSCS 106 - General Physics 2	3.0
PHSCS 107 - General Physics Lab 1	1.0
PHSCS 108 - General Physics Lab 2	1.0

RECOMMENDED Complete 1 course

ONE OF THE FOLLOWING COURSES IS RECOMMENDED:

BIO 380 - Comparative Animal Physiology and Anatomy	4.0
PDBIO 305 - Human Physiology	4.0
PDBIO 362 - Advanced Physiology	3.0

Students interested in GIS applications should consider a minor in geographic information systems (20-23 hours). See the Geography Department for details.

THE DISCIPLINE:

The wildlife and wildlands conservation major provides the widest range of employment opportunities in the applied ecological fields of wildlife and rangeland resources management. Prescribed courses meet foundation requirements for a wildlife biologist, range conservationist, botanist, and zoologist, as listed in the Federal Register. Graduating students qualify to work for federal and state wildlife and natural resource agencies. Opportunities exist for those with advanced degrees to work as consultants or to be employed with private companies concerned with natural resource management.

RESEARCH OPPORTUNITIES:

Undergraduates can volunteer to participate in various field and laboratory research projects with faculty and graduate students. Students are often hired to help with research projects and may work part time while in school and full time in the summer months

INTERNSHIPS, CO-OP ED, PRACTICAL EXPERIENCE:

Numerous opportunities exist for students to gain experience and establish working relationships with federal and state natural resource agencies as well as private organizations. Many agencies will hire students full time during the summer. Students often find permanent employment and opportunities for graduate research by participating in these programs.

HONORARY SOCIETIES AND CLUBS:

Students are encouraged to become associated with the BYU Wildlife and Range Club, which represents the Wildlife Society and the Society for Range Management. The club assists students in attending state and national meetings of these professional societies

CAREER SELECTIONS:

Recreation Officer – Supervisor of parks, public conferences, talks and tours.

Wildlife Biologists – Habitat management and development, operational planning. Public relations. Waterfowl and game refuge

development and management. Management of endangered species. Administration. Environmental impact studies. Wildlife Conservation Officer – Collect biological data on wildlife. Monitor availability and condition of wildlife. Enforce game laws, investigate violations of game laws. Public relations include speaking to school and civic groups about game laws, availability of game, conservation, etc.

Range Conservationist – Managing natural resources of rangelands. Oversight of livestock grazing. Wildlife management. Evaluation of mineral leases. Regulation and evaluation of recreation. Develop cooperative relationships with range users. Research new methods and techniques. Environmental impact analysis.
Others – Include Botanist, Zoologist.

(See faculty advisor for additional career choices.)

FINANCING:

Students in this major may apply for university, college, and departmental scholarships. A limited number of research or teaching assistant positions for undergraduate students also exist.

MAP DISCLAIMER

While every reasonable effort is made to ensure accuracy, there are some student populations that could have exceptions to listed requirements. Please refer to the university catalog and your college advisement center/department for complete guidelines.

DEPARTMENT INFORMATION

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ADVISEMENT CENTER INFORMATION

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