WILDLIFE CONSERVATION AND MANAGEMENT OPTION (Major: Natural Resources)

This guide is to aid students in selecting courses. Changes may be made but only in consultation with an advisor. Students must meet all program, Natural Resource Core Curriculum, and University general education requirements for graduation. (See SNR Web Site: www.srnr.arizona.edu)

	Fall		Spring	
Freshman Year	Tier 1 Nat Sci – CHEM 151 (Chem I)	4	Tier 1 Nat Sci – CHEM 152 (Chem II)	4
	ENGL 101 or 103H (Freshman Composition)	3	ENGL 102 or 104H (Freshman Composition)	3
	Tier 2 Nat Sci – MCB 181R/L (Life Sci. of Bio & Lab)	4	ECOL 182R/L (Life Sci. of Bio & Lab)	4
	Tier 1 Individuals and Societies	3	MATH 113, 124, or 125 (Calculus)	3/5
			Tier 1 Tier 1 Individuals and Societies	3
	TOTAL	14	TOTAL	17/19
Sophomore Year	Tier 2 Ind & Soc – ECON 201a or Econ 200 (Econ)	3	Tier 1 Traditions and Cultures[1]	3
	CHEM 241a, 243a or PHYS 102, 181 or SWES 200, 201	4	Tier 1 Traditions and Cultures	3
	MATH 160 or 263 (Statistics)	3	ENGL 308 (Tech. Writ) or SWES 408 or AED 422	3
	RNR 200 (Foundations in History & Policy)	3	COMM 119 (Public Speaking)[2] or Technical Elective	3
	RNR 230 (Nat. Resources – Field Botany)	3	**RNR 321 (Natural Resources – Measurements)**	3
	TOTAL	16	TOTAL	15
Junior Year	**RNR 316 (Natural Resources – Ecology)**	3	**RNR 384 (Natural Resources – Manag. Practices)**	3
	Tier 2 Arts or Humanities Elect.	3	RAM 382 (Rangeland Plant Communities)	3
	WFSC "ology" (e.g. Mammalogy)[3]	4	WFSC "ology" (e.g. Ornithology or Herpetology)	4
	RNR 403 or RNR 417 or Technical Elective	3	Technical Elective	3
			PL S 312 or ECOL 320 (Genetics)	4
	TOTAL	13	TOTAL	17
Senior Year	WFSC 444 (Wildlife Management – Mammals)	4	WFSC 446 (Wildlife Management – Avian Species)	4
	Technical Electives	11	Technical Electives	6
			RNR 480 (Natural Resources – Policy & Law)	3
	TOTAL	15	TOTAL	13

Bold = SNR Core

[1] One general education course must have the non-Western Civilization, Gender, Race, Class, Ethnicity designation
[2] Required for certification as a wildlife biologist by the Wildlife Society. If you opt against certification, you must take a technical elective.
[3] Students must complete 2 "ology" courses from ECOL 483 (Herpetology), 484 (Ornithology), and 485 (Mammalogy).

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Suggested Technical Electives (Complete at least 12 units)

Ecology/Zoology/Animal Health
AN S 215 Animal Anatomy and Physiology
ECOL 335 (Evolution)
ECOL 473 (Topics in Behavioral Ecology)
ECOL 487 (Animal Behavior)
ECOL 403 (Biology of Animal Parasites)
3rd "Ology" of ECOL 483 (Herpet), 484 (Ornith), 485 (Mammal), 482 (Ichthy)
NSC 408 (Nutritional Biology)
VSC 449 (Diseases of Wildlife)

Economics/Policy/Planning
AREC 217 (Resources & Environmental Econ)
AREC 350 (Econ, Ethics & Environmental Management)
AREC 375 (Econ of Land & Water in the American West)
AREC 377 (Econ of Environ. Resource Conservation)
POL 481 (Environmental Policy)

Botany/Plant Science
RAM 436 (Grazing Ecology and Management)
RAM 446 (Vegetation Management of Wildlands)
RAM 456 (Rangeland Inventory & Monitoring)

Tools/Techniques/Internships
RNR 419 (Cartographic Modeling for Natural Resources)
RNR 420 (Advanced GIS)
RNR 422 (Resource Mapping)
RNR 493 (Internship)
RNR/WFSC 499 (Independent Study)

Natural Resources
RNR 438 (Fire Ecology)
RNR 489a & 489b (Advanced Environmental Interpretation)
ECOL 442 (Marine Ecology)
ECOL 450 (Marine Discovery)

Courses Required for Certification by the Wildlife Society

1. Biological Sciences: 36 semester hours; must include subcategories a-e. (Sum of hours in a-e is 33, the other 3 hours may be in any of the 5 subject areas):
    a. Wildlife Management: Courses emphasizing principles and practices of wildlife management. (6 hours)
    b. Wildlife Biology: Biology and behavior of birds, mammals, reptiles, or amphibians; must include 1 course concerning birds or mammals. (6 hours)
    c. Ecology: Courses in general plant or animal ecology (not human ecology). (3 hours)
    d. Zoology: Taxonomy, biology, behavior, physiology, anatomy, and natural history or vertebrates and invertebrates. Courses in genetics, nutrition, physiology or plant taxonomy. (9 hours)
    e. Botany: Courses in general botany, plant genetics, plant morphology, plant physiology, or plant taxonomy. (9 hours)
2. Physical Sciences: 9 semester hours in chemistry, physics, geology, or soils, with at least 2 disciplines represented.
3. Quantitative Sciences: 9 semester hours that must include:
    a. Basic Statistics (3 hours)
    b. Quantitative Sciences: calculus, biometry, advanced algebra, systems analysis, mathematical modeling, sampling, computer science, or other quantitative science (6 hours)
4. Humanities and Social Sciences: 9 semester hours in economics, sociology, psychology, political science, government, history, literature, or foreign language.
5. Communications: 12 semester hours designed to improve communication skills such as English composition, technical writing, journalism, public speaking, or use of mass media.
6. Policy, Administration, and Law: 6 semester hours in courses that focus on natural resource policy and/or administration, wildlife or environmental law, or natural resource/land use planning; and courses that focus on the understanding of social, political and ethical decisions for wildlife or natural resource management. Tools supporting professional practice (e.g., photogrammetry, Land-Sat mapping, GIS) or more general courses such as criminology, political science, and introductory survey courses in conservation will *not* apply.