

BS in Natural Resources, Conservation Biology option catalog year 2020-21

General Education Requirements

English Composition

ENGL 101 and ENGL 102	3	3	3
OR ENGL 106, 107 and 108	3	3	3
OR ENGL 109H	3		

2nd Language

(2nd semester proficiency by credit or exam; C or better)

Tier I

Individuals and Societies: Select 2 courses from 150s

_____	3		
_____	3		

Traditions and Cultures: Select 2 courses from 160s

_____	3		
_____	3		

NOTE: you do not need any 170A, B, C courses

Tier II

Art or Humanities

_____	3		
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*Individuals and Societies: ECON 200 suggested

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Diversity requirement: One general education course must have the non-Western Civilization, Gender, Race, Class, Ethnicity designation. Some Tier I and Tier II courses also satisfy this requirement

Supporting Coursework (22 units)

Statistics: MATH 163 or 263, OR PSY 230 OR SBS 200 3

Economics: *ECON 200 3

*If you count ECON 200 towards your Tier II Indiv, substitute a technical elective

General Chemistry: CHEM 151 AND CHEM 152 4 4

General Biology: MCB 181R/L: Intro Biol I 4

ECOL 182R/L: Intro Biol II 4

Natural Resources Core Courses (18 units)

RNR 200: Conservation of Natural Environments (Fall/Sum) 3

RNR 230R/L: Field Botany (Lab is Fall only) 2 1

RNR 316: Natural Resources Ecology (Fall/Spring) 3

RNR 321: Ecological Surveys and Sampling (Fall/Spring) 3

RNR 384: Natural Resources Management Practices (Spring) 3

RNR 480: Natural Resources Policy and Law (Spring) 3

Core Themes (13 units) *select one course from each area*

Math: MATH 113 OR MATH 122B OR MATH 125 3 or 5

Technical Skills: RNR 403, RNR 417, GEOG 330, 3

RNR 429, RAM 456A, RAM 446

Technical Writing: ENGL 308, ENGL 313, ENGL 340, 3

ENGL 414, ENVS 408, ENVS 415

Oral or Media Communication: ALC 422, COMM 119, 3

COMM 113, JOUR 455, JOUR 472, RNR 495A, SBE 202, SCI 401

SNRE requirement

_____ 1

Option Specific Courses (27-28 units)

Genetics: PLS 312 OR ECOL 320/H 4

ECOL 406R Conservation Biology (Spring) 3

Natural Resources Management (select 1)

_____ 3 or 4

Organismal Biology (select 2)

_____ 4

_____ 4

Social Dimensions (select 1)

_____ 3

_____ 3

Environment (select 1)

_____ 3 or 4

Technical Electives (17 units):

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Graduation Requirements

- at least 120 units
 - 42 upper division units
 - 30 or more units completed at the UA
- at least a 2.0 major and cumulative GPA,
 - Mid-career writing assessment fulfilled with a B or higher in English Composition OR with Technical Writing requirement.

Bachelor of Science in Natural Resources: Conservation Biology

		FALL		SPRING		
Course Title	Units	Prerequisite?	Course Title	Units	Prerequisite?	
Freshman	CHEM 151 OR CHEM 141 and 143	4	MATH 112 or placement	CHEM 152 OR CHEM 142 and 144	4	1st semester Chemistry
	ENGL 101 or 109H	3		ENGL 102	3	
	Tier 1 Traditions and Cultures	3		ECOL 182R and L General Biology Lecture and Lab	4	
	RNR 200 Conservation of Natural Environments	3		Calculus: MATH 113, 122B, or 125 (Calculus)	3	MATH 112 or placement test
	Tier 1 Individuals and Societies	3		Tier 1 Individuals and Societies	3	
	TOTAL	16		TOTAL	17	
Sophomore	Tier 2 Individuals and Societies	3		Tier 2 Arts or Humanities	3	
	RNR 316 Natural Resources Ecology	3	ECOL 182R and L, RNR 230R	Tier 1 Traditions and Cultures	3	
	Statistics: MATH 163 or 263, or PSY 230, or SBS 200	3	MATH 112 or placement	ECON 200	3	
	RNR 230R and 230L Field Botany	3		Technical Writing: ENGL 308, 313, 340, or 414, ENVS 408 or 415	3	
	MCB 181R and L General Biology Lecture and Lab	4	MATH 112 or placement; CHEM 151	RNR 384 Natural Resources Management Practices	3	
TOTAL	16		TOTAL	15		
Junior	Technical Skills: RNR 403, 417, 429, GEOG 330, RAM 456A, 446	3/4		RNR 321 Ecological Surveys and Sampling	3	statistics
	Natural Resources Management course (see list)	4	RNR 316 recommended	ECOL 406R: Conservation Biology	3	
	Organismal Biology Course (see list)	4		Technical Electives	3	
	Environment Elective	3/4		Organismal Biology Course (see list)	4	
	TOTAL	14		TOTAL	13	
Senior	Social Dimensions course (see list)	3		PLS 312 or ECOL 320 Genetics	4	MCB 181R and L; CHEM 151 and 152
	SNRE Requirement	1		Oral or Media Communication: ALC 422, COMM 113, COMM 119, JOUR 455, JOUR 472, SBE 202, SCI 401, RNR 495A	3	
	Technical Electives	12		Technical Electives	3	
	TOTAL	16		RNR 480 Natural Resources Policy and Law	3	RNR 200
			TOTAL	16		

Diversity Emphasis: One general education course must have the non-Western Civilization, Gender, Race, Class, Ethnicity designation

2nd semester language proficiency required

Catalog Year 2020-2021

CONSERVATION BIOLOGY COURSE SELECTIONS

Natural Resource Management

RA M 446 –Management and Restoration of Wildland Vegetation (4)
RNR 441A – Nat Res Management in Native American Communities (3)
WFSC 444 – Wildlife Ecology, Conservation and Management (4)
WFSC 445 – Population Ecology (3)
WFSC 455R and L – Fishery Management (4)
WS M 462 – Watershed Management (4)

Organismal Biology

ECOL 472 -- Systematic Botany (4)
ECOL 475 -- Freshwater and Marine Algae (4)
ECOL 482 -- Ichthyology (4)
ECOL 483 -- Herpetology (4)
ECOL 484 -- Ornithology (4)

ECOL 485 -- Mammalogy (4)

ENTO 405 -- Aquatic Entomology (4)
ENTO 415R -- Insect Biology (3)
MIC 329A Microbial Diversity (3)

Social Dimensions

RNR 440 - Climate Change Adaptation
RNR 448 Conservation Planning and Recreation (3)
RNR 472—Environmental Land Use Planning (3)
RNR 485 – Economic and Social Connections to Nat Resources (3)
AREC 217 -- Resources and Environmental Econ (3)
GEOG 404 – The Politics of Nature
ANTH 307 -- Ecological Anthropology (3)
HIST 355 -- U.S. Environmental History (3)
PA 481 -- Environmental Policy (3)

Environment

GEOS 251- Geology (4)
RNR 429 Ecosystem Climatology (3)
RNR 458 -- Ecosystem Ecology (3)
WSM 452 – Vegetation Dynamics and Dryland Ecohydrology
WS M 460A -- Watershed Hydrology (4)
WS M 468 -- Wildland Water Quality (3)
GEOG 430 -- The Climate System (3)
GEOS 478 -- Global Change (3)
SWES 200 -- Soils (3)

Marine Sciences Minor courses

ECOL 496O- Galapagos Marine Ecology
GEOS 212 Introduction to Oceanography
ENVS 475 - Freshwater and Marine Algae
ECOL 404R and L Biology of the Oceans (Fall)
ECOL 412A and B Ocean Sciences
ECOL 360 Marine Ecology and Conservation
ECOL 450 Marine Discovery

Other Electives

ECOL 401 -- Teaching Biology (2)
ECOL 450 -- Marine Discovery (4)
ECOL 464—Sonoran Desert Discovery (3)
ENTO 407—Insect Discovery (3)
RNR 495xx –Study Abroad (Namibia, Ecuador, Mex, Nepal, plus)
RAM 436A—Grazing Ecology and Management (2)
RNR 355 -- Introduction to Wildland Fire (3)
RNR 438 -- Fire Ecology (3)
WFSC 471 – Stream Ecology (3)
WFSC 430—Conservation Genetics (3)
AREC 373 – Environmental Economics (3)
ECOL 335—Evolution (3)

ECOL 426 -- Population Genetics (3)

GEOG 338—Biogeography (3)
ANTH 469 -- Ethnobotany (3)
AREC 476 -- Environmental Law and Economics (3)
SWES 461 -- Soil and Water Conservation (3)
ACBS 403R -- Biology of Animal Parasites (3)
ENVS 310 Ecosystem Health and Justice
ENVS 300 Soil Ecology and Sustainable Systems
WFSC 447- Wildlife Conservation Behavior
WFSC 385 – Zoo and Aquarium Conservation

Consider an Undergraduate Certificate in:

- Rangeland Management
- Geographic Information Systems
- Zoo and Aquarium Conservation