SENR
Forestry, Fisheries & Wildlife
122 Hours - Autumn Semester 2016

COURSE & NUMBER	Units		COURSE & NUMBER	Units	
UNIVERSITY REQUIREMENTS (GE)			**SENR REQUIREMENTS**		
Writing Skills	**6 Hours**		***SENR CORE REQUIREMENTS***	**22 Hours**	
English 1110 (First Year Writing Course)	3		ENR 1100 (ENR Survey)	1	
ENR 2367 (Communicating Environmental and Natural Resources Information)	3		ENR 2100 (Intro to Environmental Science)	3	
Arts & Humanities	**12 Hours**		ENR 2300 (Society and Natural Resources)	3	
GE Literature Course ●▲	3		ENR 3300 (Intro to Forestry, Fisheries & Wildlife)	3	
GE Arts Course ●▲	3		ENR 3400 (Psychology of Environmental Problems) or ENR 3500 (Community, Environment & Development)	3	
GE History Course ▲	3		ENR 3200 (Natural Resources Policy)	3	
GE Culture & Ideas or other Humanities course ●▲ [Recommended: ENR 3470 (Religion & Environmental Values in America)]	3		ENR 3700 (Intro to Spatial Info for Natural Resources)	3	
Social Sciences	**6 Hours**		ENR 4900.02 (Senior Capstone) (Natural Resources Mgt)	3	
Rural Sociology 1500 ● (Recommended) or GE Social Science ●▲	3		***FFW MAJOR SPECIALIZATIONS:***		
AED Econ 2001 or Economics 2001.01 (Microeconomics)	3		***Fisheries & Aquatic Science***	**51**	
Diversity Courses	**overlapping**		***Forest Ecosystem Science & Management***	**51**	
Social Diversity in US ●	**----**		***Forestry & Wildlife (dual specialization)***	**51**	
Global Studies Course 1 ▲	**----**		***Wildlife & Fisheries Science (dual specialization)***	**51**	
Global Studies Course 2 ▲	**----**		***Wildlife & Pre-Veterinary Science (pre-professional)***	**51**	
Data Analysis, Quantitative & Logical Skills	**8 Hours**		***Wildlife Science***	**51**	
ENR 2000 (Recommended) or STAT 1450 (or other approved course)	3				
Math 1151 or 1156 (Calculus for the Biological Sciences)	5				
Natural Sciences	**17 Hours**				
Chemistry 1210 (General Chemistry I)	5				
Biology 1113 (Biological Sciences: Energy Transfer & Development)	4				
Biology 1114 (Biological Sciences: Form, Function, Diversity, & Ecology) or an additional Biological Science or Physical Science Course*	4				
ENR 3000 (Soil Science)	3				
ENR 3001 (Soil Science Laboratory)	1				
			MINIMUM HRS FOR GRADUATION	**122 Hours**	

*Biology 1114 required for all specializations except FEM and WPV

Updated 01/11/22

Fisheries and Aquatic Sciences Specialization	Units	
Fisheries and Aquatic Sciences	**19-20**	
ENR 4342 Freshwater Fisheries Management	3	
ENR 5350.01 Taxonomy and Behavior of Aquatic Invertebrates	3	
ENR 5350.02 Taxonomy and Behavior of Fishes	3	
ENR 5348 Conservation & Management of Aquatic Populations or ENR 5358 Applied Vertebrate Physiological Ecology	3	
ENR 5280 Stream Ecology	4	
Additional class in Fisheries and Aquatic Sciences- Suggestions include: ENR 4345 Methods in Aquatic Ecology (4), ENR 5355 Aquaculture (3), ENR 5250.01 Wetland Ecology and Restoration (3) *Note: any course not chosen may be taken as a Specialization Elective.*	3-4	
Additional Biological Sciences	**11**	
EEOB 3310 Evolution	4	
EEOB 3320 Organismal Diversity	3	
EEOB 3410 Ecology	4	
Additional Physical Sciences	**8**	
ENR 4285 Watershed Hydrology	3	
CHEM 1220 General Chemistry II	5	
Specialization Electives	**12-13**	
Elective courses 2000-level and above that support major with advisor consent. **Potential Options :**		
EEOB 3420 Behavioral Ecology	4	
EEOB 5420 Aquatic Ecosystems—Ecology of Inland Waters	4	
EEOB 5430 Aquatic Ecosystems—Fish Ecology	3	
EEOB 5930 Ichthyology (Stone Lab)	3 - 4	
ENR 3280 Water Quality Management	2	
ENR 5355 Aquaculture	3	
GEOG 5210 Fundamentals of GIS	3	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves*	5	
Other courses may be added with faculty advisor approval.		
University GE Total/SENR Core Total	**71**	
Fisheries and Aquatic Science Major Option Total	**51**	
Degree Total	**122**	

Recommended Electives (for grad school, not counted in degree total) *	4*
CHEM 2310 Introductory Organic Chemistry or BIOCHEM 4511 Intro to Biological Chemistry (prereq: CHEM 1220 or 1250 and 2310 or 2510)	4

Recommended Additional Courses (for American Fisheries Society certification, not counted in degree total)		
One Additional Communications Course- suggestions include: COMM 3620 Intro to Interpersonal Communication, COMM 2110 Principles of Effective Public Speaking, ENR 3612 (Previously 3611) Foundations for Environmental Communications, Education and Interpretation, ENR 4611 Environmental Interpretation & Visitor Services	2 - 3	
*Physical Science- If Physics 1200 is taken (from Specialization Electives above), no additional physical science course is required. If Physics 1200 is not taken, additional course in chemistry, physics, soils, geology, hydrology, earth science, astronomy, or meteorology is required to meet certification requirements.		

Forest Ecosystem Science and Management Specialization	Units	
Required Hours	**37-38**	
AGSYSMGT 2370 Environmental Hydrology or ENR 4285 Watershed Hydrology	2-3	
ENR 3321 Biology and Identification of Woody Forest Plants	3	
ENR 3322 Forest Ecosystems	3	
ENR 3323 Forest Biometrics	3	
ENR 3333 Silviculture	3	
ENR 3600 Recreation Management on Public Lands	3	
ENR 3335.01 Introduction to Wildland Fire Management	2	
ENR 4320 Sustainable Forest Products	3	
AEDECON 4310 Environmental & Natural Resources Economics	3	
ENR 5642 Environment and Natural Resources Administration	3	
ENR 5320 Forest Management	3	
ENR 5340 Forest Ecosystem Management	3	
ENTMLGY/PLNTPTH 5110 Ecology & Management of Pathogens and Insects Affecting Trees in Forest and Urban Environments	3	
Specialization Electives	**13-14**	
Elective Courses 2000-level and above that support major with advisor consent (soils, recreation, wildlife, geo-spatial analysis, etc.)		
University GE Total/SENR Core Total	**71**	
Forest Ecosystem Science and Management Major Option Total	**51**	
Degree Total	**122**	

Forestry and Wildlife Specialization	Units	
Wildlife Management	**6**	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
Wildlife Biology	**6**	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
Zoology	**7**	
EEOB 3310 Evolution	4	
ENR 5350.01 Taxonomy and Behavior of Aquatic Invertebrates or ENR 5350.02 Taxonomy and Behavior of Fishes or EEOB 3320 Organismal Diversity	3	
Botany	**2**	
EEOB 2210 Biodiversity of Ohio- Plants	2	
Communications	**3**	
ENR 4611 Environmental Interpretation & Visitor Services	3	
Policy Administration and Law	**3**	
ENR 5649 Wildlife Conservation Policy or ENR 3600 Recreation Management on Public Lands	3	
Forestry	**21**	
ENR 3321 Biology and Identification of Woody Forest Plants	3	
ENR 3322 Forest Ecosystems	3	
ENR 3323 Forest Biometrics	3	
ENR 3333 Silviculture	3	
AEDECON 4310 Environmental & Natural Resources Economics	3	
ENR 5320 Forest Management	3	
ENTMLGY/PLNTPTH 5110 Ecology & Management of Pathogens and Insects Affecting Trees in Forest and Urban Environments	3	
Directed Elective (2000 level or above with faculty mentor approval)	**3**	
University GE Total/SENR Core Total	**71**	
Wildlife-Forestry Major Option Total	**51**	
Degree Total	**122**	

Recommended Additional Courses (for TWS certification, not counted in degree total)	**3**	
COMM 3620 Intro to Interpersonal Communication or COMM 2110 Principles of Effective Public Speaking	3	
Recommended Electives (for grad school, not counted in degree total)	**14**	
CHEM 1220 General Chemistry II	5	
CHEM 2310 Introductory Organic Chemistry or BIOCHEM 4511 Intro to Biological Chemistry (prereq: CHEM 1220 or 1250 and 2310 or 2510)	4	
PHYSICS 1200 General Physics: Mechanics, Kinematics, Fluids, Waves	5	

Wildlife and Fisheries Sciences Specialization	Units	
Wildlife Management	**6**	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
Wildlife Biology	**6**	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
Zoology	**4**	
EEOB 3310 Evolution	4	
Botany	**5**	
EEOB 2210 Biodiversity of Ohio- Plants	2	
ENR 3321 Biology & Identification of Woody Forest Plants	3	
Communications	**6**	
ENR 4611 Environmental Interpretation & Visitor Services	3	
COMM 3620 Intro to Interpersonal Communication or COMM 2110 Principles of Effective Public Speaking	3	
Policy Administration and Law	**3**	
ENR 5649 Wildlife Conservation Policy	3	
Fisheries and Aquatic Science	**13**	
ENR 4342 Freshwater Fisheries Management	3	
ENR 5350.01 Taxonomy and Behavior of Aquatic Invertebrates (3) or 5350.02 Taxonomy and Behavior of Fishes	3	
ENR 5280 Stream Ecology	4	
One of the following classes:		
ENR 5350.01 Taxonomy and Behavior of Aquatic Invertebrates, ENR 5350.02 Taxonomy and Behavior of Fishes, ENR 5348 Conservation and Management of Aquatic Populations, or ENR 5355 Aquaculture	3	
Additional Physical Science	**8**	
ENR 4285 Watershed Hydrology	3	
CHEM 1220 General Chemistry II	5	
University GE Total/SENR Core Total	**71**	
Wildlife and Fisheries Science Major Option Total	**51**	
Degree Total	**122**	

Recommended Electives (for grad school, not counted in degree total)	4	
CHEM 2310 Organic Chemistry or BIOCHEM 4511 Intro Biochemistry (prereq: CHEM 1220 or 1250 and 2310 or 2510)	4	

Recommended Additional Courses (for American Fisheries Society certification, not counted in degree total)		
Physical Science- additional courses in chemistry, physics, soils, geology, hydrology, earth science, astronomy, and meteorology.		

Wildlife and Pre-Veterinary Science Specialization	Units	
Wildlife Management	**6**	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
Wildlife Biology	**6**	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
Botany	**3**	
ENR 3321 Biology & Identification of Woody Forest Plants	3	
Communications	**3**	
ENR 4611 Environmental Interpretation & Visitor Services	3	
Policy Administration and Law	**3**	
ENR 5649 Wildlife Conservation Policy	3	
Additional Physical Sciences	**5**	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves (can be used toward the 35 hour science elective vet med admission requirement)	5	
Pre-Veterinary Requirements	**25**	
CHEM 1220 General Chemistry II (prerequisite for Biochem 4511, can be used toward the 35 hour science elective vet med admission requirement)	5	
CHEM 2510 Organic Chemistry I (prerequisite for Biochem 4511, can be used toward the 35 hour science elective vet med admission requirement)	4	
PHYSIO 3200 Physiology	5	
BIOCHEM 4511 Introduction to Biological Chemistry	4	
MICRBIOL 4000 Basic & Practical Microbiology	4	
COMM 2110 Principles of Effective Public Speaking or 2131 Business and Professional Speaking	3	
University GE Total/SENR Core Total	**71**	
Wildlife and Pre-Veterinary Science Major Option Total	**51**	
Degree Total	**122**	

Recommended Additional Courses (for TWS certification, not counted in degree total)	**2**
EEOB 2210 Biodiversity of Ohio- Plants	2

Admission to the OSU College of Veterinary Medicine requires 35 hours of science electives. In addition to chemistry, biology and physics, the following ENR courses are able to be counted as science electives: ENR 5360, 5362, 5364.01, 5364.02, 3321, and 2100.

Wildlife Science Specialization	Units	
Wildlife Management	**9**	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
ENR 5370 Management of Wildlife Habitat	3	
Wildlife Biology	**6**	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
Zoology	**7**	
EEOB 3310 Evolution	4	
ENR 5350.01 Taxonomy and Behavior of Aquatic Invertebrates or ENR 5350.02 Taxonomy and Behavior of Fishes or EEOB 3320 Organismal Diversity	3	
Botany	**5**	
EEOB 2210 Biodiversity of Ohio- Plants	2	
ENR 3321 Biology & Identification of Woody Forest Plants	3	
Additional Physical Sciences	**10**	
CHEM 1220 General Chemistry II	5	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves	5	
Communications	**6**	
COMM 3620 Intro to Interpersonal Communication or COMM 2110 Principles of Effective Public Speaking	3	
ENR 4611 Interpretation & Visitor Services	3	
Policy Administration and Law	**3**	
ENR 5649 Wildlife Conservation Policy	3	
Directed Elective (2000 level or above with faculty mentor approval)	**5**	
CHEM 2310 Introductory Organic Chemistry or BIOCHEM 4511 Intro to Biological Chemistry (prereq: CHEM 1220 or 1250 and 2310 or 2510) (recommended for graduate school)	4	
University GE Total/SENR Core Total	**71**	
Wildlife Science Major Option Total	**51**	
Degree Total	**122**	