

**School of Environment and Natural Resources  
Forestry, Fisheries & Wildlife**

**New GE for Autumn 2022**

COURSE & NUMBER	Units		COURSE & NUMBER	Units	
<b>UNIVERSITY REQUIREMENTS (GE)</b>					
<b>Foundations</b>		<b>25 Hours</b>	<b>SENR CORE REQUIREMENTS</b>		<b>16 Hours</b>
Writing and Information Literacy <i>English 1110</i> ❖	3		ENR 1100 (ENR Survey)	1	
Mathematical and Quantitative Reasoning or Data Analysis <i>Math 1151 or 1156</i> ❖	5		ENR 2100 (Intro to Environmental Science)	3	
Literary, Visual, and Performing Arts	3		ENR 2300 (Society and Natural Resources)		GE Foundation
Historical and Cultural Studies	3		ENR 3300 (Intro to Forestry, Fisheries & Wildlife)	3	
Natural Science <i>Chemistry 1210</i> ❖	5		ENR 3400 (Psychology of Environmental Problems) <sup>▲</sup> or ENR 3500 (Community, Environment & Development) <sup>▲</sup>	3	
Social and Behavioral Sciences <i>ENR 2300</i> ❖	3		ENR 3200 (Natural Resources Policy) <sup>▲</sup>		Overlap with GE
Race, Ethnic, and Gender Diversity	3		ENR 3700 (Intro to Spatial Info for Natural Resources)	3	
<b>Thematic Pathways</b>		<b>8-12 Hours</b>	ENR 4900.02 (Senior Capstone) (Natural Resources Mgt)	3	
Citizenship for a Diverse and Just World	4-6		<b>FFW MAJOR SPECIALIZATIONS:</b>		
Theme of Choice <i>Overlap with SENR core</i>	4-6		<b>Fisheries &amp; Aquatic Science</b>	<b>51</b>	
<b>Bookend Courses</b>		<b>2 hours</b>	<b>Forest Ecosystem Science &amp; Management</b>	<b>51</b>	
Launch seminar	1		<b>Forestry &amp; Wildlife (dual specialization)</b>	<b>51</b>	
Reflection seminar	1		<b>Wildlife &amp; Fisheries Science (dual specialization)</b>	<b>51</b>	
<b>Major Supporting Courses</b>		<b>18 Hours</b>	<b>Wildlife &amp; Pre-Veterinary Science (pre-professional)</b>	<b>51</b>	
Biology 1113.01 (Biological Sciences: Energy Transfer & Development)	4		<b>Wildlife Science</b>	<b>51</b>	
Biology 1114.01 (Biological Sciences: Form, Function, Diversity, & Ecology)	4				
ENR 3000 (Soil Science)	3				
ENR 3001 (Soil Science Laboratory)	1				
ENR 2000 (Natural Resource Data Analysis)	3				
ENR 2367 (Communicating Environmental and Natural Resources Information)	3				
			❖ Prerequisite and/or corequisite to FFW major; recommend taking as part of GE Foundation.		
			<sup>▲</sup> GE Theme Course		
<b>MINIMUM HRS FOR GRADUATION</b>				<b>122 Hours</b>	

<b>Fisheries and Aquatic Sciences Specialization</b>	<b>Units</b>	
<b>Fisheries and Aquatic Sciences</b>	<b>19-20</b>	
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	
ENR 5250.01/5250.02 Wetland Ecology and Restoration	4	
ENR 4345 Methods in Aquatic Ecology	4	
ENR 5355 Aquaculture	3	
<b>Additional Biological Sciences</b>	<b>11</b>	
EEOB 3310 Evolution	4	
EEOB 3320 Organismal Diversity	3	
EEOB 3410 Ecology	4	
<b>Additional Physical Sciences</b>	<b>7-8</b>	
ENR 4285 Watershed Hydrology or AGSYSMGT 2370 Environmental Hydrology	2-3	
CHEM 1220 General Chemistry II	5	
<b>Specialization Electives</b>	<b>12-14</b>	
Elective courses 2000-level and above that support major with advisor consent. Courses not taken from the Fisheries & Aquatic Sciences section above may be taken. Other options include:		
EEOB 3420 Behavioral Ecology	4	
EEOB 5420 Aquatic Ecosystems—Ecology of Inland Waters	4	
EEOB 5430 Aquatic Ecosystems—Fish Ecology	3	
EEOB 5920 Field Biology of Aquatic and Wetland Plants (Stone Lab)	3 - 4	
EEOB 5930 Ichthyology (Stone Lab)	3 - 4	
ENR 3280 Water Quality Management	2	
GEOG 5210 Fundamentals of GIS	3	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves	5	
<i>Other courses may be added with faculty advisor approval.</i>		
<b>Fisheries and Aquatic Science Major Option Total</b>	<b>51</b>	

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

<b>Recommended Additional Courses (for American Fisheries Society certification, not counted in degree total)</b>		
One Additional Communications Course- suggestions include: COMM 3620 Intro to Interpersonal Communication, COMM 2110 Principles of Effective Public Speaking, ENR 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.		

<b>Forest Ecosystem Science and Management Specialization</b>	<b>Units</b>	
<b>Required Hours</b>	<b>37-38</b>	
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 Management of Recreation 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	
<b>Specialization Electives</b>	<b>13-14</b>	
Elective Courses 2000-level and above that support major with advisor consent (soils, recreation, wildlife, geo-spatial analysis, etc.)		
<b>Forest Ecosystem Science and Management Major Option Total</b>	<b>51</b>	

<b>Forestry and Wildlife Specialization</b>	<b>Units</b>	
<b>Wildlife Management</b>	<b>6</b>	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
<b>Wildlife Biology</b>	<b>6</b>	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
<b>Zoology</b>	<b>7</b>	
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	
<b>Botany</b>	<b>2</b>	
EEOB 2210 Biodiversity of Ohio- Plants	2	
<b>Communications</b>	<b>3</b>	
ENR 4611 Environmental Interpretation & Visitor Services	3	
<b>Policy Administration and Law</b>	<b>3</b>	
ENR 5649 Wildlife Conservation Policy or ENR 3600 Management of Recreation Lands	3	
<b>Forestry</b>	<b>21</b>	
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/PLNTPH 5110 Ecology & Management of Pathogens and Insects Affecting Trees in Forest and Urban Environments	3	
<b>Directed Elective (2000 level or above with faculty mentor approval)</b>	<b>3</b>	
<b>Wildlife-Forestry Major Option Total</b>	<b>51</b>	

<b>Recommended Additional Courses (for TWS certification, not counted in degree total) *</b>	<b>3*</b>	
COMM 3620 Intro to Interpersonal Communication or COMM 2110 Principles of Effective Public Speaking	3	
<b>Recommended Electives (for grad school, not counted in degree total) *</b>	<b>14*</b>	
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	

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

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

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

<b>Wildlife and Pre-Veterinary Science Specialization</b>	<b>Units</b>	
<b>Wildlife Management</b>	<b>6</b>	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
<b>Wildlife Biology</b>	<b>6</b>	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
<b>Botany</b>	<b>3</b>	
ENR 3321 Biology & Identification of Woody Forest Plants	3	
<b>Communications</b>	<b>3</b>	
ENR 4611 Environmental Interpretation & Visitor Services	3	
<b>Policy Administration and Law</b>	<b>3</b>	
ENR 5649 Wildlife Conservation Policy	3	
<b>Additional Physical Sciences</b>	<b>5</b>	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves (can be used toward the 35 hour science elective vet med admission requirement)	5	
<b>Pre-Veterinary Requirements</b>	<b>25</b>	
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	
<b>Wildlife and Pre-Veterinary Science Major Option Total</b>	<b>51</b>	

<b>Recommended Additional Courses (for TWS certification, not counted in degree total)*</b>	<b>2</b>
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.

<b>Wildlife Science Specialization</b>	<b>Units</b>	
<b>Wildlife Management</b>	<b>9</b>	
ENR 5360 Principles of Wildlife Ecology & Management	3	
ENR 5362 Wildlife Ecology Methods	3	
ENR 5370 Management of Wildlife Habitat	3	
<b>Wildlife Biology</b>	<b>6</b>	
ENR 5364.01 Mammalian Wildlife Biology and Management	3	
ENR 5364.02 Avian Wildlife Biology and Management	3	
<b>Zoology</b>	<b>7</b>	
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	
<b>Botany</b>	<b>5</b>	
EEOB 2210 Biodiversity of Ohio- Plants	2	
ENR 3321 Biology & Identification of Woody Forest Plants	3	
<b>Additional Physical Sciences</b>	<b>10</b>	
CHEM 1220 General Chemistry II	5	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves	5	
<b>Communications</b>	<b>6</b>	
COMM 3620 Intro to Interpersonal Communication or COMM 2110 Principles of Effective Public Speaking	3	
ENR 4611 Interpretation & Visitor Services	3	
<b>Policy Administration and Law</b>	<b>3</b>	
ENR 5649 Wildlife Conservation Policy	3	
<b>Directed Elective (2000 level or above with faculty mentor approval)</b>	<b>5</b>	
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	
<b>Wildlife Science Major Option Total</b>	<b>51</b>	