

Name: _____

ID#: _____



2022-2023: Natural Resources Curriculum Checklist (NR3)

Students who graduate with a BS degree in Natural Resources from Oregon State University will learn to integrate technical field or laboratory skills with analytical skills to solve critical natural resource problems. The curriculum is designed to help students acquire knowledge about a range of natural resource issues, work in interdisciplinary teams, and deal with social and political aspects of resource management.

Students will acquire knowledge in biophysical sciences, social sciences, math and statistics. They will learn holistic resource management approaches that emphasize the interconnectedness of humans and the environment. In addition, students will develop a toolbox of resource management skills such as communication, collaboration, analysis, assessment and planning. They will explore the conservation and management of key resources which include fish and wildlife, land and water resources, and a wide range of ecosystems from forests to rangelands. A disciplinary depth in a focused area is developed through a required specialization option. Students may choose from a number of pre-approved options, or create an individualized (student designed) specialization option.

A specialization "option" is a *required* part of the Natural Resources major that allows the students to develop depth and focus in a particular area of natural resource management. All specialization options are required to have a minimum of 37 credits with at least 20 upper division (300-400 level) courses included.

Natural Resources Requirements:

- OSU Graduation Requirements
- Baccalaureate Core
- Natural Resource Major Requirements
- Specialization Option: *minimum of 37 credits with at least 20 upper division (300-400 level) courses*
- The Natural Resources Specialization Option will have a minimum GPA requirement of 2.25.
- Only two courses used to complete the Natural Resources major requirements may be taken S/U

OSU Graduation Requirements:

Students pursuing a degree at OSU must meet the following requirements in addition to program and college requirements.

- 180—total number of credits required to graduate from OSU
- 60—number of upper division credits required (300-400 level courses)
- 45 of last 75 credits must be OSU credits
- Maintain a 2.0 or better university GPA

Checklist only lists OSU-Cascades Courses

BACCALAUREATE CORE			
Link to OSU Baccalaureate Core Courses https://catalog.oregonstate.edu/earning-degrees/bcc/			
Skills		Fulfilled	Grade
Lifetime Fitness (2)	HHS 231		
Lifetime Fitness II (1)	Physical Activity Course (PAC)		
Mathematics (4)	Fulfilled By Major	X	
Writing I (4)	WR 121		
Writing II (3)	Fulfilled by WR 327 (if selected for Advanced Communication)		
Speech (3)	Visit Bacc Core link above		
Perspectives		Fulfilled	Grade
Cultural Diversity (3-4)	Visit Bacc Core link above		
Literature & Arts	Visit Bacc Core link above		
Soc. Processes & Inst, (3)	Fulfilled by Major (Econ 201)	X	
Western Culture	Visit Bacc Core link above		
Physical Science	Fulfilled by Major	X	
Biological Science	Fulfilled by Major	X	
Additional Phys or Bio Science	Fulfilled by Major	X	
Difference, Power, & Discrim.	Fulfilled by GEOG 333 (if selected for Ethics and Philosophy)		
Synthesis			
Contemporary Global Issues	Fulfilled by FES 365(Social Issues) or SUS 350 (Env. Assessment & Planning)		
Science, Tech & Society	Fulfilled by Major (FES 485)	X	
Writing Intensive Course			
WIC	ENSC 479 recommended can be used in Specialization Option		

NATURAL RESOURCES MAJOR REQUIREMENTS			
2022/2023 Curriculum (NR3)			
IMPORTANT: COURSES CAN'T DOUBLE COUNT IN THIS SECTION			
Interdisciplinary Foundations (13 credits) Required		Fulfilled	Grade
FES 485(3) Consensus and Natural Resources			
NR 201(3) Managing NR for the Future			
NR 202 (3) Natural Resource Problems and Solutions IMPORTANT: THIS IS A REQUIRED CLASS ONLY FOR THOSE STUDENTS ADMITTED IN SUMMER 2021 OR LATER.			
NR 455(4) NR Decision Making (Capstone) (prereq senior standing, FES 485 + WIC course)			
Advanced Communication (choose one)			
COMM 321(3); COMM 322 (3); COMM 324(3); COMM 326(3); COMM 328(3); COMM 385; COMM 440(3); WR 327(3)			
Biophysical Science		Fulfilled	Grade
Biology (choose one sequence)			
[BI 101 (4), BI 102 (4), BI 103(4)] or [BI 221(4), BI 222(4), BI 223 (4)] *Bio 200 level preferred*(Co/prereq for BI221 is Chem 121 or Chem 231/261)			
Chemistry (choose one)			
CHEM 121(5) or CHEM 231/261(5) General Chemistry (Co/prereq MTH 111 or higher)			
Climate Change			
ATS 201(4) Climate Science			
Earth Science <u>OR</u> Soil Science			
SOIL 205 & SOIL 206 lab (4) Soil Science			
Ecology (choose one)			
BI 370(3) Ecology (prereq BI 221-223) or FES 341(3) Forest Ecology (prereq BI 221-223 or BI 211-213)			

Mathematics and Statistics (8)	Fulfilled	Grade
Mathematics (choose one)		
MTH 112(4) Elementary Functions or MTH 241(4) Calculus for Mgmt, Life & Social Sci or MTH 245(4) Mathematics for Mgmt, Life & Social Sci or MTH 251(4) Differential Calculus		
Statistics (choose one)		
ST 201(4) Principles of Statistics or ST 351(4) Intro. to Statistical Methods		
Resource Management	Fulfilled	Grade
Animal ID (choose one)		
FW 312(3) Systematics of Birds or FW 318(2) Systematics of Mammals or Z 477(4) Aquatic Entomology (BI 221-223)		
Environmental Assessment and Planning (choose one)		
FES 445(4) Ecological Restoration (BI 370 + WIC or instructor approval) or SUS 304(4) Sustainability Assessment or SUS 350 (4) Sustainable Communities		
Fisheries and Marine Science (choose one)		
FW 320(4) Intro to Population Dynamics (prereq BI 370 or instructor approval) or FW 323(3) Mgmt of Pacific Salmon or FW 481(3) Wildlife Ecology (prereq BI 370 or instructor approval)		
Forestry (choose one)		
FES 341(3) Forest Ecology (prereq BI 221-223 or BI 211-213) or FES 342(3) Forest Types of the Northwest or FES 440(3) Wildland Fire Ecology or FES 445(4) Ecological Restoration		
Land & Water (choose one)		
GEOG 340 (3) Intro to Water Science or RNG 455(4) Riparian Ecohydrology & Mgmt or FW 326 (3) Integrated Watershed Management		
Range (choose one)		
FES 440(3) Wildland Fire Ecology or FES 445(4) Ecological Restoration or RNG 341(3) Rangeland Ecology Mgmt (BI 221- 223)		
Vegetation ID		
RNG 353(4) Wildland Plant Identification		
Wildlife Management		
FW 251(3) Principles of F&W Conservation or FW 320(4) Intro to Population Dynamics (prereq BI 370 or instructor approval) or FW 481(3) Wildlife Ecology (prereq BI 370 or instructor approval)		
Social and Political Dimensions	Fulfilled	Grade
Ethics and Philosophy (Choose one)		
GEOG 333 (3) Environmental Justice or ANTH 352(3) Anthropology, Health and Environment		
Natural Resource Policy (Choose one)		
PS 475(4) Environmental Politics & Policy or GEOG 340(3) Intro to Water Science		
Political Issues (Choose one)		
FW 350 (3) Endangered Species, Society & Sustainability or PS 475(4) Environmental Politics & Policy		
Economics		
ECON 201(4) Intro to Microeconomics		
Social Issues (choose one)		
FES 365 (3) Issues In NR Conservation or SOC 480 (3) Environmental Sociology or SUS 420 (3) Social Dimensions of Sustainability or TRAL 353 (4) Nature, Eco and Adventure Tourism		
Spatial Analysis	Fulfilled	Grade
GEOG 360 (4) GISCIENCE I: GIS & Theory		

Additional Requirement- AREA OF SPECIALIZATION

A specialization “option” is a **REQUIRED** part of the Natural Resources major that allows the students to develop depth and focus in a particular area of natural resource management. All specialization options are required to have a minimum of 37 credits with at least 20 upper division (300-400 level) credits included. Courses used to complete above major requirements can’t double count in option.

OSU-Cascades- Only offers the Fish & Wildlife Conservation option. Those interested in another option can choose an option available through ecampus or work with the Department Lead to create an Individualized Specialization Option (ISO).

FISH AND WILDLIFE CONSERVATION SPECIALIZATION OPTION REQUIREMENTS			
IMPORTANT COURSES USED FOR NR MAJOR REQUIREMENTS & OPTION CAN'T DOUBLE COUNT			
Minimum of 37 credits is required with at least 20 upper division credits.			
Measurements (choose one)		Fulfilled	Grade
BI 375 (4) Field Methods in Ecological Restoration (prereq BI 221-223) or FW 255 (3) Field Sampling of Fish and Wildlife			
Foundations of Conservation All REQUIRED			
FES 342(3) Forest Types of the Northwest			
FES 440 (3) Wildland Fire Ecology			
FW 370 (4) Conservation Genetics (Prereq BI 221-223)			
FW 251 (3) Principles of Fish & Wildlife Conservation			
Fish and Wildlife Biology (9 credits)			
FW 311 (3) Ornithology (EOY)			
FW 317 (3) Mammalogy (EOY)			
FW 481(3) Wildlife Ecology (EOY) (Prereq BI 370 or instructor approval)			
Habitat Management (6-8 credits) CHOOSE TWO			
FES 445 (4) Ecological Restoration			
RNG 341 (3) Rangeland Ecology & Mgmt. (BI 221-223)			
RNG 455 (4) Riparian Ecolhydrology & Mgmt			
FW 326 (3) Integrated Watershed Management			
NR Resource Policy (3 credits)			
FW 350 (3) Endangered Species, Soc. & Sustainability			
Elective- Select one (3-4 credits)			
*ENSC 479 (3) Environmental Case Studies (WIC) <i>Highly Recommended</i>			
Z 349 (3) Biodiversity: Causes, Conseq., & Conservation			
Z 477 (4) Aquatic Entomology (4) (prereq BI 211-213 or BI 221-223)			
NOTE: Up to 6 Credits of appropriate internships, projects or study abroad may be used to fulfill credit requirements in this option as approved by petition			

ISO- The Individualized Specialty Option is a student designed option that allows a student to tailor the academic program to specific goals or interests related to natural resource management. This is often a good choice for students who have a significant amount of relevant transfer work or those who have a specific career goal that they are working toward. In consultation with NR Department Lead, students will develop a written [proposal](#) for a program of study that meets their goals as well as academic requirements. The proposal is

submitted to the Natural Resources Program Director in Corvallis for approval. This plan should be submitted at least 6 terms prior to the planned graduation term.

ISO Requirements:

- Minimum of 37 credits of coursework with at least 20 upper division (300-400 level) credits included
- Approx. 10-13 classes
- Courses used to complete NR major requirements can't double count in option
- ISO petition must be submitted 6 terms before graduation.
- Petition should be a professionally written document which consists of the proposed program of study and a clear rationale of the courses chose
- 1-2 page essay attached to petition form addressing the GOAL of your program of study and Employment Opportunities

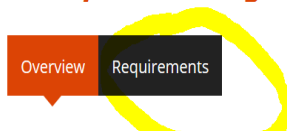
Ecampus options:

- Conservation Law Enforcement
- Ecological Restoration
- Human Dimensions in Natural Resources
- Landscape Analysis
- Natural Resource Education
- Policy and Management
- Urban Forest Landscapes
- Wildland Fire Ecology

How to look up ecampus option requirements.

- Go to the Programs page in the Catalog, <https://catalog.oregonstate.edu/programs/>
- Use the filter tabs on the right side to narrow your search.
 - Under Category select Option
 - Under Level select Undergraduate
 - Under Campus select Ecampus
 - Under College select College of Forestry
 - After you filter your search click on the option you are interested in from the above list and review the requirements.

Policy and Management Opt



This option is offered **within** the following major

› [Natural Resources - College of Forestry](#)

CATEGORY
<input type="checkbox"/> Major
<input type="checkbox"/> Minor
<input checked="" type="checkbox"/> Option
<input type="checkbox"/> Certificate
LEVEL
<input checked="" type="checkbox"/> Undergraduate
<input type="checkbox"/> Graduate
CAMPUS
<input type="checkbox"/> Corvallis
<input type="checkbox"/> Cascades
<input checked="" type="checkbox"/> Ecampus
COLLEGES
<input type="checkbox"/> College of Agricultural Scie
<input type="checkbox"/> College of Business
<input type="checkbox"/> College of Earth, Ocean, ar Atmospheric Sciences
<input type="checkbox"/> College of Education
<input type="checkbox"/> College of Engineering
<input checked="" type="checkbox"/> College of Forestry
<input type="checkbox"/> College of Liberal Arts
<input type="checkbox"/> College of Pharmacy
<input type="checkbox"/> College of Public Health ar Human Sciences
<input type="checkbox"/> College of Science
<input type="checkbox"/> College of Veterinary Medi
<input type="checkbox"/> Defense Education
<input type="checkbox"/> Graduate School
<input type="checkbox"/> International Programs
<input type="checkbox"/> University Honors College