

# TRANSFER GUIDE FOR OREGON STATE UNIVERSITY

Major Offered At:

CORVALLIS

ECAMPUS

**Clackamas  
Community College**

## Natural Resources Major with Landscape Analysis Option

Natural Resources students are passionate about the world around them. They collaborate to preserve and protect the natural world for future generations. This option prepares students to work with Geographic Information Science (GIS) technology

in a Natural Resource field such as wildfire ecology, land use planning, ecological restoration, etc. In addition, students will earn an undergraduate certificate in GIScience.

## Your Bachelor's Degree (BS) in Natural Resources



- A minimum of 180 credits are required for graduation; 60 must be upper division (300 and 400-level courses).
- A maximum of 135 credits earned at a community college may be applied toward a bachelor's degree at OSU.
- Only courses with letter prefixes and numbers above 100 are accepted.
- [More info forestry.oregonstate.edu/undergraduate-programs/natural-resources/landscape-analysis](http://moreinfo.forestry.oregonstate.edu/undergraduate-programs/natural-resources/landscape-analysis)

## Courses Required for Natural Resources Major

NR Core Requirements	Clackamas Course	OSU Course	Notes
<i>Complete one course per category</i>			
Consensus and Natural Resources		FES 485	Available online at OSU
Managing Nat Res for the Future		NR 201	Available online at OSU
Natural Resource Problems & Solutions		NR 202	Available online at OSU
Natural Resources Decision Making		NR 455	Available online at OSU
<b>Advanced Communication:</b> Communication in Global Agriculture Intro to Communication Theory Small Group Problem Solving Communication in Organizations Intercultural Communication Non-Verbal Communication Communication and Culture in Cyberspace Theories of Conflict and Conflict Management Bargaining and Negotiating Processes Forest as Classroom Effective Comm of Environmental Change Sci Critical thinking for NR Challenges Environmental Interpretation Science Writing Environmental Writing		AG 351 COMM 321 COMM 322 COMM 324 COMM 326 COMM 328 COMM 385 COMM 440 COMM 442 FES 430 GEOG 453 NR 312 TRAL 493 WR 362 WR 462	Available online at OSU  Available online at OSU Available online at OSU Available online at OSU
<b>Biology I</b> General Biology I with Lab Introduction to Biology I Principles of Biology: Cells	BI 101 BI 211	BI 101 BI 204 BI 221	Available online at OSU

<b>NR Core Requirements</b> (continued) <i>Complete one course per category</i>	<b>Clackamas Course</b>	<b>OSU Course</b>	<b>Notes</b>
<b>Biology II</b> General Biology II with Lab Introduction to Biology II Principles of Biology: Organisms	BI 102 BI 213	BI 102 BI 205 BI 222	Available online at OSU Available online at OSU
<b>Biology III</b> General Biology III with Lab Introduction to Biology III Principles of Biology: Populations	BI 103 BI 212	BI 103 BI 206 BI 223	Available online at OSU Available online at OSU
<b>Chemistry</b> General Chemistry I with Lab General Chemistry (Majors) I with Lab	CH 2221	CH 121 CH 231 & 261	Available online at OSU Available online at OSU
<b>Climate Science</b> Climate Science Global Change Biology Climatology Intro to Climate Change		ATS 201 FW 345 GEOG 323 SUS 103	Available online at OSU Available online at OSU Available online at OSU
<b>Earth Science</b> The Solid Earth Physical Geology Earth Systems Science Environmental Geology Physical Geography	G 101 G 201 G 202 G 102	GEO 101 GEO 201 GEO 202 GEO 221 GEOG 102	Available online at OSU Available online at OSU Available online at OSU
<b>Ecology</b> Marine Ecology General Ecology Plant Ecology Forest Ecology		BI 351 BI 370 BOT 341 FES 341	Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Mathematics</b> Elementary Functions Calculus for Mgmt, Life, and Social Science Math for Mgmt, Life, and Social Science Differential Calculus	MTH 112Z	MTH 112Z MTH 241 MTH 245 MTH 251	Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Statistics</b> Principles of Statistics Intro to Statistical Methods	STAT 243Z	ST 243Z ST 351	Available online at OSU Available online at OSU
<b>Animal ID</b> CCC Course: Bird ID and Taxonomy Terrestrial Vertebrate ID & Natural History Forest Entomology Systematics of Birds Systematics of Fishes Systematics of Mammals Biology of Insects Herpetology Aquatic Entomology	BI 160	BI LDT FOR 210 FES 412 FW 312 FW 316 FW 318 Z 365 Z 473 Z 477	Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Environ. Assessment &amp; Planning</b> Agriculture & Environmental Predicaments Ecological Restoration Ecosystems Services Land Use Planning for Sust. Communities Land Use in the American West Planning Principles for Resilient Communities Sustainable Site Planning Wildland restoration and Ecology Habitat Analysis I Rangeland Management and Planning Sustainability Assessment Sustainable Communities Planning for Sustainable Recreation Planning for Sustainable Tourism Scientific Methods for Analyzing NR Problems		CROP/SOIL/SUS 325 FES/FW 445 FW 462 GEOG 250 GEOG 450 GEOG 451 GEOG 452 RNG 421 RNG 457 RNG 490 SUS 304 SUS 350 TRAL 456 TRAL 457 NR 325	Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU

<b>NR Core Requirements</b> (continued) <i>Complete one course per category</i>	<b>Clackamas Course</b>	<b>OSU Course</b>	<b>Notes</b>
<b>Fish &amp; Marine Sciences</b> Intro to Marine Biology Biology of Marine Mammals Oceans in Peril Marine Ecology Intro to Population Dynamics Mgmt Principles of Pacific Salmon in the NW Coastal Ecology and Resource Management Fishery Biology Fish Ecology Wildlife Ecology Oceanography Coastal Oceanography		BI 150 FW 302 BI 347 BI 351 FW 320 FW 323 FW 426 FW 454 FW 473 FW 481 OC 201 OC 332	Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Forestry</b> International Forestry Forest Biology Forest Ecology Forest Types of the Northwest Urban Forestry Wildland Fire Ecology Ecological Restoration Biodiversity Conservation in Managed Forests Agroforestry Topics in Wildland Fire Silviculture Principles		FE/FOR 456 FES 240 FES 341 FES 342 FES/HORT 350 FES 440 FES/FW 445 FES/FW 452 FES/NR 477 FOR 346 FOR 441	Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Land &amp; Water</b> Watershed Processes Forest Watershed Management Integrated Watershed Management Freshwater Ecology and Conservation Wetlands and Riparian Ecology Minerals, Energy, Water and the Environment National Park Geology and Preservation Global Change and Earth Sciences Introduction to Water Science & Policy Water Resources Management in the U.S. International Water Resource Management Riparian Ecohydrology and Management Ecosystems of Wildland Soils Soil Systems and Plant Growth World Soil Resources Soil Morphology and Classification		FE 430 FE 434 FW 326 FW 456 FW 479 GEO 306 GEO 307 GEO 308 GEOG 340 GEOG 440 GEOG 441 RNG 455 SOIL 366 SOIL 388 SOIL 395 SOIL 466	Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Range</b> Wildland Fire Ecology Ecological Restoration Topics in Wildland Fire Rangeland Ecology and Management Range Ecology I – Grasslands Range Ecology II – Shrub Lands Wildland Restoration and Ecology Rangeland Analysis Rangeland-Animal Relations Rangeland Management and Planning		FES 440 FES/FW 445 FOR 346 RNG 341 RNG 351 RNG 352 RNG 421 RNG 441 RNG 442 RNG 490	Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Vegetation ID</b> CCC course: Plant Identification/winter Plant Systematics Agrostology Flora of the Pacific Northwest Mycology Dendrology Landscape Plant Materials I: Decid & Conifers Landscape Plant Materials II: Shrubs Wildland Plant Identification	HOR 227      HOR 226 HOR 228	HORT LDT BOT 321 BOT 414 BOT 425 BOT 461 FES 241 HORT 226 HORT 228 RNG 353	Available online at OSU Available online at OSU Available online at OSU Available online at OSU

<b>NR Core Requirements</b> (continued) <i>Complete one course per category</i>	<b>Clackamas Course</b>	<b>OSU Course</b>	<b>Notes</b>
<b>Wildlife Management</b> Principles of Fish & Wildlife Conservation Introductory Population Dynamics Applied Community and Ecosystem Ecology Wildlife in Agricultural Ecosystems Avian Conservation and Management Biodiversity Conservation in Managed Forests Mammal Conservation and Management Wildlife Ecology Animal Behavior		FW 251 FW 320 FW 321 FW 435 FW 451 FES/FW 452 FW 458 FW 481 Z 350	Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Ethics &amp; Philosophy</b> Ecosystems Science of the PNW Indians Anthropology, Health, and the Environment Ecological Anthropology Natural Resources and Community Values Anthropology of International Development Multicultural Perspectives in NR Transforming Environmental Conflicts Environmental Justice Environmental History of the United States Critical Thinking for NR Challenges Nature in Storytelling over the Centuries Environmental Ethics World View and Environmental Values Sustainability, Justice & Engagement		AG 301 ANTH 352 ANTH 477 ANTH 481 ANTH 482 FW 340 GEOG 241 GEOG 330 HST 481 NR 312 NR 380 PHL 440 PHL/REL 443 SUS 331	Available online at OSU Available online at OSU Available online at OSU Available online at OSU  Available online at OSU Available online at OSU Available online at OSU Available online at OSU  Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Natural Resource Policy</b> Environmental Law Public Lands Policy & Management Forest Policy Forest Policy Analysis Fish & Wildlife Law and Policy Introduction to Ocean Law U.S. Energy Policy Environmental Politics and Policy International Environmental Politics & Policy		AEC 432 FES 486 FOR 460 FOR 461 FW 415 FW 422 PS 473 PS 475 PS 477	Available online at OSU Available online at OSU  Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Political Issues</b> Plagues, Pests, and Politics Endangered Spec, Society and Sustainability When Science Escapes the Lab The Politics of Climate Change Environmental Politics and Policy Science and Politics International Environmental Politics & Policy Wilderness Management		ENT/HORT 300 FW 350 NR 351 PS 455 PS 475 PS 476 PS 477 TRAL 352	Available online at OSU Available online at OSU  Available online at OSU Available online at OSU Available online at OSU Available online at OSU Available online at OSU
<b>Economics</b> Intro to Environmental Economics & Policy Intro to Microeconomics	EC 201	AEC 250 ECON 201	Available online at OSU Available online at OSU

<b>NR Core Requirements</b> (continued) <i>Complete one course per category</i>	<b>Clackamas Course</b>	<b>OSU Course</b>	<b>Notes</b>
<b>Social Issues</b> Human Impacts on Ecosystems Human Ecology Issues in Natural Resource Conservation Global Crises in Resource Ecology Sustainability for the Common Good Climate Change, Water and Society Transforming Environmental Conflicts Resilience-Based Natural Resource Mgmt Global Resource Development When Science Escapes the Lab Oceans, Coasts & People Social Dimensions of Sustainability Rural Sociology Environmental Sociology Society and Natural Resources Social Dimensions of Sustainability Recreation Resource Management Outdoor Recreation on Public Lands Wilderness Management Nature, Eco, and Adventure Tourism Communities, Natural Areas, and Tourism Parks & Protected Areas Women and Natural Resources		BI 301 BI 348 FES 365 FW 325 GEOG 300 GEOG 240 GEOG 241 GEOG 430 GEOG 431 NR 351 OC 333 SOC 381 SOC 475 SOC 480 SOC 481 SUS 420 TRAL 251 TRAL 351 TRAL 352 TRAL 353 TRAL 354 TRAL 357 WGSS 440	Available online at OSU Available online at OSU Available online at OSU  Available online at OSU Available online at OSU  Available online at OSU Available online at OSU Available online at OSU Available online at OSU  Available online at OSU Available online at OSU Available online at OSU  Available online at OSU Available online at OSU
<b>Spatial Analysis</b> Precision Agriculture GIS and Forest Engineering Applications Survey of Geographic Information Systems		CROP/HORT 414 FE 257 FW 303	Available online at OSU Available online at OSU Available online at OSU

## Courses Required for Landscape Analysis Option

<b>Requirement</b> <i>Complete one course per category unless otherwise noted</i>	<b>Clackamas Course</b>	<b>OSU Course</b>	<b>Notes</b>
<b>Measurements</b>			
Forest Surveying	ENGR 226 substitutes	FE 208	Available online at OSU
Foundations of Geospatial Science & GIS	GIS 201	GEOG 201	Available online at OSU
Geoscience I: GIS Systems & Theory		GEOG 360	Available online at OSU
GIS & Forest Engineering Applications		FE 257	Available online at OSU
Geo-visualization: Cartography		GEOG 370	Available online at OSU
Forestry Remote Sensing & Photogrammetry		FE 444	
Remote Sensing I: Principles & Applications		GEOG 380	Available online at OSU
<b>GIS Electives – choose two courses</b>			
GIS in Water Resources		CE 413	Available online at OSU
Precision Agriculture		CROP/HORT 414	Available online at OSU
Internship		NR 410	
Forest Photogrammetry & Remote Sensing		FE 209	
Forest Route Surveying		FE 310	
Unmanned Aircraft Systems Remote Sensing		FE 423	
Forestry Remote Sensing & Photogrammetry		FE 444	
Survey of Geographic Information Systems		FW 303	Available online at OSU
GIScience II: Analysis & Applications		GEOG 361	Available online at OSU
Geovisualization: Web Mapping		GEOG 371	Available online at OSU
Plan Prin and Pract for Resilient Communities		GEOG 451	Available online at OSU
GIS & Spatial Data Science		GEOG 460	Available online at OSU
GIScience III: Programming for Geo. Analysis		GEOG 462	Available online at OSU
Geospatial Perspectives		GEOG 464	Available online at OSU
Remote Sensing II: Digital Image Processing		GEOG 481	Available online at OSU
Soil Landscape Analysis		SOIL 468	Available online at OSU
<b>Natural Resource Electives – 11-14 cr.</b> <i>Courses related to GI Science and Natural Resources</i>			

## General Education Courses (called the Baccalaureate Core)

- Complete one course in each Perspective category with no more than two in the same department.
- Full listing of Clackamas courses that fulfill Bacc Core requirements: [admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-clackamas-community-college](https://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-clackamas-community-college)

<b>SKILLS COURSES</b>	Math Writing I Writing II Speech (Writing III) Fitness	Completed as part of major: MTH 112Z or higher WR 121Z. Required to transfer. Can be completed as part of major: see advisor Choose one course from Bacc Core link above HPE 295 @ Clackamas
<b>PERSPECTIVE COURSES</b>	Biological Science Physical Science Additional Biological or Physical Science Cultural Diversity Literature and the Arts Social Processes and Institutions Western Culture	Completed as part of major: Biology I Completed as part of major: Chemistry Completed as part of major: Biology II Choose one course from Bacc Core link above Choose one course from Bacc Core link above Completed as part of major: EC 201 Choose one course from Bacc Core link above
<b>DPD COURSE</b>	Difference, Power, & Discrimination	Can be completed as part of major: see advisor
<b>SYNTHESIS COURSES</b>	Contemporary Global Issues Science, Technology, & Society	Upper division course, take through OSU Upper division course, take through OSU

## Advising Contacts

Academic advisors at your community college and OSU are available to answer your questions and assist you in creating a transfer plan. **See your community college advisor first and use this Transfer Guide to help you plan.** It is important to speak with your OSU academic advisor early on, and often, to ensure correct course selection and sequencing. See [visitosu.oregonstate.edu/visit-campus](https://visitosu.oregonstate.edu/visit-campus) to schedule your personalized visit.

<b>Clackamas Community College Advising</b>	<a href="https://clackamas.edu/academics/academic-support/academic-advising-and-education-planning">clackamas.edu/academics/academic-support/academic-advising-and-education-planning</a>
<b>OSU College of Forestry Student Services Office</b>	541-737-1594 <a href="mailto:forestrystudentservices@oregonstate.edu">forestrystudentservices@oregonstate.edu</a>