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

Courses Required for Natural Resources Major

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<td>FES 485</td>
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<td>Managing Nat Res for the Future</td>
<td>NR 201</td>
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<td>Natural Resource Problems &amp; Solutions</td>
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<td>Natural Resources Decision Making</td>
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<td>Intro to Communication Theory</td>
<td>COMM 321</td>
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<td>Small Group Problem Solving</td>
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<td>Communication in Organizations</td>
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<td>Intercultural Communication</td>
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<td>Theories of Conflict and Conflict Management</td>
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<td>Bargaining and Negotiating Processes</td>
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<td>Forest as Classroom</td>
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<td>Effective Comm of Environmental Change Sci</td>
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<td>Environmental Interpretation</td>
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<tr>
<td>Principles of Biology: Populations</td>
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<td>CH 231 &amp; 261</td>
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<td><strong>Environ. Assessment &amp; Planning</strong></td>
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<td>Agriculture &amp; Environmental Predicaments</td>
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<td>Ecological Restoration</td>
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<td>Land Use Planning for Sust. Communities</td>
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<td>Planning Principles for Resilient Communities</td>
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<td>Habitat Analysis I</td>
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<td>Planning for Sustainable Recreation</td>
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<td>Mgmt Principles of Pacific Salmon in the NW</td>
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<td>Coastal Ecology and Resource Management</td>
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<td>Fishery Biology</td>
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<td>Silviculture Principles</td>
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<td>Soil Morphology and Classification</td>
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<td>Range Ecology I – Grasslands</td>
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<td>Range Ecology II – Shrub Lands</td>
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<td>Rangeland-Animal Relations</td>
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### NR Core Requirements (continued)
*Complete one course per category*

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<td>Avian Conservation and Management</td>
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<td>Biodiversity Conservation in Managed Forests</td>
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<td>Mammal Conservation and Management</td>
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<td>Wildlife Ecology</td>
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<td>Animal Behavior</td>
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<td><strong>Ethics &amp; Philosophy</strong></td>
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<td>Ecosystems Science of the PNW Indians</td>
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<td>Anthropology, Health, and the Environment</td>
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<td>Ecological Anthropology</td>
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<td>Natural Resources and Community Values</td>
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<td>Anthropology of International Development</td>
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<td>Multicultural Perspectives in NR</td>
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<tr>
<td>Environmental Justice</td>
<td>GEOG 330</td>
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<tr>
<td>Environmental History of the United States</td>
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<td>Nature in Storytelling over the Centuries</td>
<td>NR 380</td>
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<td>World View and Environmental Values</td>
<td>PHL/REL 443</td>
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<tr>
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<tr>
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<td>Fish &amp; Wildlife Law and Policy</td>
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<td>Introduction to Ocean Law</td>
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<td>U.S. Energy Policy</td>
<td>PS 473</td>
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<td>Environmental Politics and Policy</td>
<td>PS 475</td>
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<td>International Environmental Politics &amp; Policy</td>
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<td><strong>Political Issues</strong></td>
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<td>The Politics of Climate Change</td>
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<td>Environmental Politics and Policy</td>
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<td>Wilderness Management</td>
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<td><strong>Economics</strong></td>
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## NR Core Requirements (continued)

*Complete one course per category*

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<th>Requirements</th>
<th>Clackamas Course</th>
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<td>Human Ecology</td>
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<td>Global Crises in Resource Ecology</td>
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<td>Sustainability for the Common Good</td>
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<td>Climate Change, Water and Society</td>
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<td>Transforming Environmental Conflicts</td>
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<td>Resilience-Based Natural Resource Mgmt</td>
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<td>Global Resource Development</td>
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<td>When Science Escapes the Lab</td>
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<td>Oceans, Coasts &amp; People</td>
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<td>Social Dimensions of Sustainability</td>
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<td>Rural Sociology</td>
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<td>Environmental Sociology</td>
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<td>Society and Natural Resources</td>
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<td>Recreation Resource Management</td>
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<td>Outdoor Recreation on Public Lands</td>
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<td>Wilderness Management</td>
<td>TRAL 352</td>
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<tr>
<td>Nature, Eco, and Adventure Tourism</td>
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<td>Communities, Natural Areas, and Tourism</td>
<td>TRAL 354</td>
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<td>Parks &amp; Protected Areas</td>
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<td>Women and Natural Resources</td>
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<td>Precision Agriculture</td>
<td>CROP/HORT 414</td>
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<tr>
<td>GIS and Forest Engineering Applications</td>
<td>FE 257</td>
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<tr>
<td>Survey of Geographic Information Systems</td>
<td>FW 303</td>
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## Courses Required for Landscape Analysis Option

*Complete one course per category unless otherwise noted*

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<tr>
<th>Requirement</th>
<th>Clackamas Course</th>
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<th>Notes</th>
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<td><strong>Measurements</strong></td>
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<td>Forest Surveying</td>
<td>ENGR 226</td>
<td>FE 208</td>
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<tr>
<td>Foundations of Geospatial Science &amp; GIS</td>
<td>GIS 201</td>
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<tr>
<td>Geoscientific I: GIS Systems &amp; Theory</td>
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<tr>
<td>GIS &amp; Forest Engineering Applications</td>
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<tr>
<td><strong>GIS Electives</strong></td>
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<td>GIS Electives – choose two courses</td>
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<td>GIS in Water Resources</td>
<td>CE 413</td>
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<td>Precision Agriculture</td>
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<td>Internship</td>
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<td>Forest Photogrammetry &amp; Remote Sensing</td>
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<td>Forest Route Surveying</td>
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<td>Unmanned Aircraft Systems Remote Sensing</td>
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<td>Survey of Geographic Information Systems</td>
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<tr>
<td>GIS I: Analysis &amp; Applications</td>
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<td>GIS I: Programming for Geo. Analysis</td>
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<td>Geovisualization: Web Mapping</td>
<td>GEOG 451</td>
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<td>Plan Prin and Pract for Resilient Communities</td>
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<tr>
<td>GIS II: Programming for Geo. Analysis</td>
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<td>Geospatial Perspectives</td>
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<td>Remote Sensing II: Digital Image Processing</td>
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<td><strong>Natural Resource Electives – 11-14 cr.</strong></td>
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*Courses related to GI Science and Natural Resources*
**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](admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-clackamas-community-college)

| SKILLS COURSES | 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 |

| PERSPECTIVE COURSES | 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 |

| DPD COURSE | Difference, Power, & Discrimination  
| Can be completed as part of major: see advisor |

| SYNTHESIS COURSES | 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](visitosu.oregonstate.edu/visit-campus) to schedule your personalized visit.

<table>
<thead>
<tr>
<th>Clackamas Community College Advising</th>
<th>clackamas.edu/academics/academic-support/academic-advising-and-education-planning</th>
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</thead>
</table>
| OSU College of Forestry Student Services Office | 541-737-1594  
| forestrystudentservices@oregonstate.edu |