

LANDSCAPE ANALYSIS OPTION

This option is offered within the following major(s):

- Natural Resources - College of Forestry (<http://catalog.oregonstate.edu/college-departments/forestry/forest-ecosystems-society/natural-resources-bs-hbs>)

Also available via Ecampus.

This option prepares students to work with Geographic Information Science technology in a natural resource field such as wildfire ecology, land use planning, forestry, ecological restoration, and more. The pairing of the technical skills of GIScience with a disciplinary knowledge in a natural resource area will prepare students for the practical application of technical skills in the real world.

In addition, this specialty option will allow students to earn the GIScience Undergraduate Certificate through the College of Earth, Ocean, and Atmospheric Sciences concurrently with their BS degree through the College of Forestry. The student will apply to the GIS Certificate Program as well as the Natural Resources Program.

Students should contact Kuuipo Walsh (kuiuipo.walsh@oregonstate.edu), *GIScience Certificate Program Director*, to enroll in the GIScience Certificate Program.

No S/U grades are accepted for the GEO courses that are counted for the GIS Certificate.

No more than 24 credits from one department; no more than 20 lower-division credits.

Code	Title	Hours
Measurements		
FE 208	FOREST SURVEYING	4
Geographic Information Science Required Courses		
GEOG 201	*FOUNDATIONS OF GEOSPATIAL SCIENCE AND GIS	4
GEOG 360	GISCIENCE I: GEOGRAPHIC INFORMATION SYSTEMS AND THEORY	4
GEOG 370	GEOVISUALIZATION: CARTOGRAPHY	4
GEOG 480	REMOTE SENSING I: PRINCIPLES AND APPLICATIONS	4
Geographic Information Science Electives		
Select 2 courses from below		6-8
CE 413	GIS IN WATER RESOURCES	
CROP 414	PRECISION AGRICULTURE or HORT 414PRECISION AGRICULTURE	
ECE 468	DIGITAL IMAGE PROCESSING	
ENSC 410	ENVIRONMENTAL SCIENCE INTERNSHIP or FOR 410 INTERNSHIP or GEO 410 INTERNSHIP or GEOG 410INTERNSHIP	
FE 209	FOREST PHOTOGRAMMETRY AND REMOTE SENSING	
FE 310	FOREST ROUTE SURVEYING	

FE 423	UNMANNED AIRCRAFT SYSTEM REMOTE SENSING
FW 303	SURVEY OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCE
GEOG 361	GISCIENCE II: ANALYSIS AND APPLICATIONS
GEOG 371	GEOVISUALIZATION: WEB MAPPING
GEOG 451	PLANNING PRINCIPLES AND PRACTICES FOR RESILIENT COMMUNITIES
GEOG 462	GISCIENCE III: PROGRAMMING FOR GEOSPATIAL ANALYSIS
GEOG 463	GISCIENCE IV: SPATIAL MODELING
GEOG 464	GEOSPATIAL PERSPECTIVES ON INTELLIGENCE, SECURITY, AND ETHICS
GEOG 472	GEOVISUALIZATION: GEOVISUAL ANALYTICS
GEOG 481	REMOTE SENSING II: DIGITAL IMAGE PROCESSING
RNG 430	APPLIED GIS IN RANGELAND SCIENCE
SOIL 468	SOIL LANDSCAPE ANALYSIS

12-14

Choose a minimum of 12–14 credits in a disciplinary area related to GIScience to reach a minimum of 40 credits in the option.

Students will be required to submit an academic plan for completion of the option which will be approved by the Natural Resources Program Director.

Total Hours 38-42

* Baccalaureate Core Course (BCC)

^ Writing Intensive Course (WIC)

Option Code: 689