# Geographic Information Science Certificate

Also available via Ecampus.

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Oregon State University offers an undergraduate and graduate certificate in Geographic Information Science. Geographic Information Science ("GiScience") is a discipline that combines theory and principles underlying:

- geospatial data collection (remotely sensed imagery from satellites, aircraft, and drones, social media, telemetry, GPS, etc.);
- technologies to manage, analyze, and visualize geospatial data (geographic information systems);
- computational, statistical, and mathematical methods to analyze and model geospatial data (machine learning, Big Data, spatial statistics, spatial modeling, geovisual analytics, etc.);
- digital cartography and geovisualization (the science and practice of creating maps); and
- cognitive, social, and environmental implications of GiScience (professional ethics, privacy, digital divide, etc.).

The OSU GiScience certificate can help lead to certification as a nationally-recognized geographic information systems (GIS) professional (GISP). GIS professionals are in high demand for jobs in government, NGOs, and the private sector, and have rewarding careers in natural resource management, online and interactive mapping, business, planning, and many others.

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td><strong>Required Core</strong></td>
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<tr>
<td>FE 208</td>
<td>FOREST SURVEYING</td>
<td>4</td>
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<tr>
<td>GEOG 201</td>
<td>*FOUNDATIONS OF GEOSPATIAL SCIENCE AND GIS</td>
<td>4</td>
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<td>Select one of the following:</td>
<td>3-4</td>
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<tr>
<td>GEOG 360</td>
<td>GISCIENCE I: GEOGRAPHIC INFORMATION SYSTEMS AND THEORY</td>
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<td>FE 257</td>
<td>GIS AND FOREST ENGINEERING APPLICATIONS</td>
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<td>CE 202</td>
<td>CIVIL ENGINEERING: GEOSPATIAL INFORMATION AND GIS</td>
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<td>GEOG 370</td>
<td>GEOVISUALIZATION: CARTOGRAPHY</td>
<td>4</td>
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<tr>
<td>GEOG 480</td>
<td>REMOTE SENSING I: PRINCIPLES AND APPLICATIONS (EC)</td>
<td>4</td>
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<tr>
<td><strong>Electives</strong></td>
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<td>Select 7-8 credits of the following:</td>
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<tr>
<td>CE 413</td>
<td>GIS IN WATER RESOURCES</td>
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**CROP 414/HORT 414**  
**ECE 468**  
**ENSC 410**  
**or FOR 410**  
**or GEO 410**  
**or GEO 410 INTERNSHIP**  
**FE 209**  
**FE 310**  
**FE 423**  
**FW 303**  
**GEO 401**  
**or GEO 401 RESEARCH**  
**GEO 403**  
**GEO 403 THESIS**  
**GEOG 361**  
**GEOG 371**  
**GEOG 451**  
**GEOG 462**  
**GEOG 463**  
**GEOG 464**  
**GEOG 472**  
**GEOG 481**  
**RNG 430**  
**SOIL 468**

* Baccalaureate Core Course (BCC)

**EC** signifies the course can also be completed through Ecampus - Distance Education

**Major Code:** C540