GEOGRAPHIC INFORMATION SCIENCE, MINOR

Requirements for a minor may be completed at any campus location offering the specified courses for the minor. Students may not change from a campus that offers their major to a campus that does not offer their major for the purpose of completing a minor.

Program Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements for the Minor</td>
<td>18</td>
</tr>
</tbody>
</table>

Requirements for the Minor

A grade of C or better is required for all courses in the minor, as specified by Senate Policy 59-10 (https://senate.psu.edu/policies-and-rules-for-undergraduate-students/59-00-minors-and-certificates/#59-10). In addition, at least six credits of the minor must be unique from the prescribed courses required by a student’s major(s).

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 160</td>
<td>Mapping Our Changing World</td>
<td>3</td>
</tr>
</tbody>
</table>

Additional Courses

Select 6 credits of the following: 6

- GEOG 361 Cartography–Maps and Map Construction
- GEOG 362 Image Analysis
- GEOG 363 Geographic Information Systems

Select 9 credits (at least 6 credits at the 400-level) of the following: 9

- GEOG 323
- GEOG 417 Satellite Climatology
- GEOG 461W Dynamic Cartographic Representation
- GEOG 463 Geospatial Information Management
- GEOG 467 Applied Cartographic Design
- GEOG 468 Geographic Information Systems Design and Evaluation
- GEOG 485 GIS Programming and Software Development