The Postbaccalaureate Certificate Program in Geographic Information Systems (GIS) helps professionals in a variety of fields become knowledgeable and skillful users of geographic information systems. The program was designed specifically for experienced GIS practitioners who lack formal education in geography and GIS and wish to advance their careers, and for those who seek to make career changes. The program is offered through Penn State World Campus.

Students subsequently admitted to the Department of Geography Master of Geographic Information Systems degree program may count up to 15 credits of certificate program courses toward the M.G.I.S. degree, subject to restrictions outlined in GCAC-309 Transfer Credit. Certificate students who wish to have certificate courses applied towards a graduate degree in Geographic Information Systems must apply and be admitted to that degree program. Admission to the Geographic Information Systems graduate degree program is a separate step and is not guaranteed.

Effective Semester: Fall 2017
Expiration Semester: Fall 2022

Admission Requirements
Applicants apply for admission to the program via the Graduate School application for admission. Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies. International applicants may be required to satisfy an English proficiency requirement; see GCAC-305 Admission Requirements for International Students for more information.

Certificate Requirements
Requirements listed here are in addition to requirements listed in Graduate Council policy GCAC-212 Postbaccalaureate Credit Certificate Programs.

Students earn the Postbaccalaureate Certificate by completing four instructor-led online courses — three required and one elective. Students who successfully complete the program earn 12 academic credits.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 482</td>
<td>Making Maps That Matter With GIS</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 483</td>
<td>Problem-Solving with GIS</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 484</td>
<td>GIS Database Development</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Electives</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Select one of the following:</td>
<td></td>
</tr>
<tr>
<td>GEOG 485</td>
<td>GIS Programming and Software Development</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 486</td>
<td>Cartography and Visualization</td>
<td></td>
</tr>
<tr>
<td>GEOG 487</td>
<td>Environmental Applications of GIS</td>
<td></td>
</tr>
</tbody>
</table>

Total Credits: 12

Courses
Graduate courses carry numbers from 500 to 699 and 800 to 899. Advanced undergraduate courses numbered between 400 and 499 may be used to meet some graduate degree requirements when taken by graduate students. Courses below the 400 level may not. A graduate student may register for or audit these courses in order to make up deficiencies or to fill in gaps in previous education but not to meet requirements for an advanced degree.

Learning Outcomes
- Develop the technical and analytical competencies required to serve as leaders within private and public geospatial technology enterprises.
- Demonstrate effective design, management, and application of geographic information technologies to support complex problems solving.
- Combine prior knowledge and career experiences with technical competencies to become broadly-equipped geospatial technology practitioners.

Contact
World Campus
Graduate Program Head
Anthony C Robinson
Director of Graduate Studies (DGS) or Professor-in-Charge (PIC)
Fritz Connor Kessler
Program Contact
Angela Packer
418 Earth Engr Sciences
University Park PA 16802
amp13@psu.edu
(814) 865-2557

Program Website
View (https://gis.education.psu.edu/cpgis/)