GEOSPATIAL PROGRAMMING AND WEB MAP DEVELOPMENT GRADUATE CREDIT CERTIFICATE PROGRAM

Graduate Program Head   Anthony C. Robinson
Program Code   GEOWBD
Campus(es)   University Park
                             World Campus

The Graduate Certificate in Geospatial Programming and Web Map Development helps geospatial professionals become skillful developers of software for the GIS and mapping industries. These skills include the ability to script the automation of geospatial business processes, to develop custom user interface tools on top of existing desktop applications, and to author web-based mapping applications that support the exploration and analysis of geospatial datasets. Such skills are in high demand in the geospatial industry. This program is designed specifically for geospatial practitioners who seek formal education in geospatial programming and web mapping for the purposes of advancing their professional development or seeking a career change. It covers software development in the uniquely geospatial context using a mixture of proprietary and open source languages and technologies. The core learning objectives for students in this program are:

- Apply contemporary programming principles to automate geospatial analysis and mapping processes.
- Design and implement custom user interfaces to support mapping and spatial analysis.
- Create interactive web-based mapping applications that support spatial data exploration and analysis.

The certificate is offered online through Penn State's World Campus, and students earn the certificate by completing three prescribed courses and two elective courses. Students who successfully complete the program earn 15 academic credits. Students admitted to the Department of Geography's Master of GIS 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 (http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/transfer-credit/). Certificate students who wish to have certificate courses applied towards a graduate degree must apply and be admitted to that degree program. Admission to a graduate degree program is a separate step and is not guaranteed.

Effective Semester: Summer 2023
Expiration Semester: Summer 2028