

GEODESIGN GRADUATE CREDIT CERTIFICATE PROGRAM

Person-in-Charge	Roxi Thoren
Program Code	GEODZ
Campus(es)	World Campus

The purpose of the graduate certificate in Geodesign is to provide students with a foundation in geospatially-oriented design through investigating interdisciplinary methods and the collaborative nature of the Geodesign process. This program is for current or aspiring practitioners, from a variety of professional backgrounds, employed in government agencies, businesses, and non-profit organizations, who see limitations in how regional and urban planning and design challenges are currently addressed. The program is designed for professional practitioners who wish to advance their careers, and for those seeking to make career changes, while remaining in their current location or maintaining full-time professional responsibilities.

Effective Semester: Fall 2023

Expiration Semester: Fall 2028

Admission Requirements

Applicants apply for admission to the program via the Graduate School application for admission (<https://gradschool.psu.edu/graduate-admissions/how-to-apply/>). Requirements listed here are in addition to Graduate Council policies listed under GCAC-300 Admissions Policies (<https://gradschool.psu.edu/graduate-education-policies/>). International applicants may be required to satisfy an English proficiency requirement; see GCAC-305 Admission Requirements for International Students (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-300/gcac-305-admission-requirements-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 (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-212-postbaccalaureate-credit-certificate-programs/>).

The certificate consists of a five-course, 15-credit curriculum that can be completed in one year and is delivered online through the World Campus. Students must earn a “C” or better in each course that is intended to count toward the certificate.

Code	Title	Credits
Required Courses		
GEODZ 511	Geodesign History, Theory, Principles	3
GEODZ 822	GeoDesign Models I: Evaluation and Decision	3
GEODZ 824 or GEODZ 826	GeoDesign Models II: Process and Impact ¹ GeoDesign Models III: Representation and Change	3
Electives		

In addition to the 9 required credits specified above, students must select at least 6 credits of GEOG courses at the 400 level or higher; courses must be approved in advance by the student’s adviser. A list of acceptable electives is maintained by the program office. 6

Total Credits 15

¹ Students will take one of these two “Models” courses; placement is dependent on previous experience.

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

1. Discern the core principles of historic and contemporary foundations of geodesign theory.
2. Identify cumulative affects of changes in population, climate, and biodiversity, and their impacts to food and water to understand how to influence major environmental and social change.
3. Comprehend the definition of geographic space in its broadest context, including temporal, cultural, economic and other social and environmental systems – essentially nD thinking.
4. Demonstrate knowledge of the multidimensional scope and scale of projects to which geodesign can be applied.
5. Appreciate the importance of balancing the creative and scientific processes and their influence on geodesign solutions.
6. Ascertain the appropriate application of key design methodologies specific to geospatial issues, such as systems thinking, and design as an operations/resources problem.
7. Assess how to balance instant feedback with sound decision–# support tools to effectively incorporate myriad data in combination with user needs and preferences.
8. Combine design – the proposed changes to a place – with relevant science–#based and value–#based information, in a manner that explores alternative solutions from a cross–#disciplinary, decision–# driven approach.
9. Critically develop and apply ethical frameworks to appropriately evaluate culturally, socially and economically diverse environments.
10. Develop a collective understanding of other disciplines, the multidisciplinary geodesign process, and how different specialists engage and intersect with one another.
11. Demonstrate proficiency in collaboration tools for team communication, efficient document sharing, topological diagraming, time/dynamics management, and media archiving.
12. Integrate contextual data, objects, and media to represent and discover relationships and constraints of a study area.
13. Apply a working knowledge of geospatial modeling tools that assess, visualize, and compare social, economic, and environmental consequences of design configurations over time.

Contact

Campus	World Campus
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Program Website	View (http:// www.worldcampus.psu.edu/ degrees-and-certificates/geodesign- certificate/overview/)