



Geospatial Education



PennState
World Campus

A world of possibilities.
Online.

Online

Geospatial Education



“I was given the flexibility to craft my educational agenda based on my career aspirations. That’s what made my Penn State experience life-changing.”

—Sarah L.
Master of Geographic Information Systems

8 Online Programs

As a student in one of our eight online geospatial programs, you will have the opportunity to learn career-relevant skills and competencies that can be put to work in a number of commercial and public sector fields. All of our programs are offered completely online, with no residency requirements.

Recognized, award-winning online programs

For more than two decades, Penn State World Campus and the College of Earth and Mineral Sciences’ Department of Geography have been offering high-quality online geospatial education, conferring degrees and certificates to thousands of working professionals.

Our comprehensive curriculum has been carefully designed to prepare you for challenging positions in a wide range of geospatial fields, with fresh, innovative course content focused on cutting-edge technologies and concepts.

Let Penn State help you prepare to work at the forefront of the industry.



All programs
are eligible for
financial aid!

Online Geospatial Master's Degree Programs

Topics covered

may include open web mapping, cartography, programming, remote sensing and imagery analysis, domain applications, project management, and spatial database design.

Master of Geographic Information Systems (MGIS)

Gain the skills you need to effectively apply spatial analysis and mapping methods to solve real-world problems as a student in this 36-credit online MGIS program. You can:

- › design, manage, and leverage geographic information systems and spatial analysis tools to tackle issues that impact people and our planet
- › develop the technical and analytical competencies required to serve as a geospatial leader in public and private sector organizations
- › concentrate your course work by adding options in GEOINT or geodesign, or by choosing a customized set of electives that match your career goals

See a complete course list:

worldcampus.psu.edu/mgiscourses

Topics covered

may include GIS programming and application development, advanced Python programming, geographic information analysis, system analysis and design, geovisual analytics, applied data mining and statistical learning, and predictive analytics.

Master of Science in Spatial Data Science (SDS)

Learn to develop new geospatial solutions that will have a positive impact on people's lives. This 33–36 credit program combines programming, spatial analysis methods, and applied domain experiences to help you solve critical problems where typical GIS applications fall short. Graduates can learn to:

- › integrate computational, spatial data, and visualization frameworks
- › develop workflows that leverage advancements in geocomputation, geovisual analytics, open geospatial data, and spatial thinking
- › research, critique, and communicate data quality and map spatial analysis results

See a complete course list:

worldcampus.psu.edu/sdscourses

Choose from
30 courses

to customize
your learning

Topics covered

include homeland security policies and organizations, problem-solving with GIS, cyber and human social networks, the intelligence process, and analytic methods for geospatial intelligence.

Master of Professional Studies in Homeland Security— Intelligence and Geospatial Analysis option

This 33-credit master's program is designed to help you increase the skills and knowledge you need as an analyst to produce accurate intelligence to help save lives, improve government, and mitigate threats to private and public sector organizations. As a student, you will:

- › study domestic and global issues related to homeland security
- › discover how geospatial intelligence (GEOINT) is applied in national security, international relief work, and disaster management
- › see how spatial data and GIS are used to improve decision-making

See a complete course list:

worldcampus.psu.edu/hlsgeocourses

Online Geospatial Postbaccalaureate Certificate Programs



Geographic Information Systems (GIS)

Gain a strong foundation in GIS skills and spatial analysis methods by using the most up-to-date tools and methods and applying them to real-world problems. Focus on the essentials if you are new to the geospatial industry, or boost your existing skill set if you're already a seasoned professional.

GEOINT Applications

Acquire fundamental knowledge of key geographic concepts, geospatial problem-solving techniques, and geographic information technologies necessary to confront a wide array of challenges, including location intelligence, emergency management, and military operations.

View more details:

worldcampus.psu.edu/geospatial

GRE waivers

available for
experienced
applicants

Earn a Penn State
certificate in
as little as
9 months

Online Geospatial Graduate Certificate Programs

GEOINT Analytics

Enhance your ability to apply spatial tools and analyze data to solve problems and then effectively communicate and leverage your findings. This program is an ideal choice if you work in national security, disaster response, resource preservation, or business intelligence.

Geospatial Programming and Web Map Development

Learn to script the automation of spatial analysis processes, develop custom user interfaces on top of existing desktop applications, and create web-based interactive mapping applications that support spatial data science.

Remote Sensing and Earth Observation

Leverage data gathered from satellites, drones, sensors, and lidar to solve complex geospatial problems. Discover how to apply computational methods to automate the analysis of Earth observation data and integrate those skills into a GIS workflow.

View more details:

worldcampus.psu.edu/geospatial



Flexible, Personalized Learning

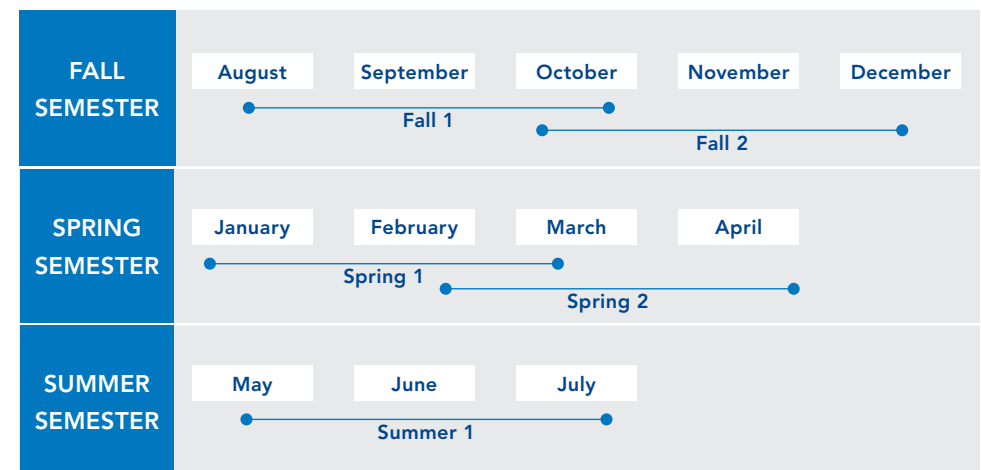
Stackable options

Many students begin their Penn State geospatial studies in one of our online postbaccalaureate or graduate certificate programs. Credits earned while completing a certificate can also be applied toward a master's degree, if you are accepted into a program.

Flexible scheduling

Our geospatial courses are offered in five 10-week terms. You have the freedom to schedule your courses with or without overlap, taking simultaneous courses to finish sooner or extending your education over a longer duration. You can choose the learning style that works best for you!

Online geospatial courses are available year-round





100% Online Learn From the Leader

A pioneer in online education

Penn State has been offering online geospatial education longer than any other provider in the United States. Additionally, World Campus was the first to offer a comprehensive GEOINT program in a 100% online format, delivering courses on emerging topics like lidar, drone mapping, and open web mapping.

Our faculty members bring a wealth of real-world experience into their teaching and are wholly dedicated to helping you succeed in your field of choice.

“The program gave me the chance to broaden my horizons. The breadth of the material, combined with the diverse backgrounds of students and faculty, provided me with opportunities to rethink my understanding of what GIS is and what it can be used for.”

—John P.
Master of Geographic Information Systems

“I’ve learned how to do something extremely valuable from every class I’ve taken, whether it’s using new imaging techniques, measuring the slopes of mountains to determine boundaries, or developing a geodatabase. It’s all helped me to significantly expand my knowledge base.”

—Parrish H.
GEOINT Analytics certificate and
Master of Geographic Information Systems

Service members, veterans, and their families have access to benefits including specialized support services, tuition reductions, and academic flexibility during deployment.

Learn more:
worldcampus.psu.edu/gis4military

The Penn State difference

Penn State World Campus, a top-ranked provider of online education, partners with distinguished Penn State academic colleges to offer a high-quality education to students everywhere. Our convenient online learning format allows you to pursue your education at your own pace without interfering with your professional and personal responsibilities.

As a Penn State World Campus student, you’ll enjoy the same support services as a resident student: admissions counseling, assistance with course scheduling and registration, 24/7 HelpDesk, career services, and more. Upon graduation, your diploma will be identical to one earned by a resident student, with no indication that your courses were completed online.

Visit us: worldcampus.psu.edu/geospatial

20+ years
of quality online
GIS education

Accredited and recognized for excellence in online education



Penn State College of Earth and Mineral Sciences

Department of Geography

GIS inquiries—info@gis.psu.edu

GEOINT inquiries—info@geoint.psu.edu

814 865 2557

gis.e-education.psu.edu | [@PennStateGIS](https://twitter.com/PennStateGIS)

Penn State World Campus

The Pennsylvania State University

128 Outreach Building

University Park, PA 16802

Start your application today!

Visit worldcampus.psu.edu and click “Apply Now.”



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Please note that application requirements may vary by program. All applicants must hold a baccalaureate degree from a regionally accredited U.S. institution, or a postsecondary degree that is deemed comparable.

Landsat images courtesy of the U.S. Geological Survey.

This publication is available in alternative media on request.

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