

## Furthering Your GIS Education

For GIS jobs requiring further education, continue your GIS education at one of these New Jersey colleges and universities:

- **Fairleigh Dickinson University**  
Computer Science
- **Kean University**  
Meteorology and Geology
- **Montclair State University**  
Earth and Environmental Studies
- **Monmouth University**  
Criminal Justice  
History and Anthropology
- **New Jersey City University**  
Environmental Science  
Information Systems and Computer Science
- **New Jersey Institute of Technology**  
Environmental and Civil Engineering
- **Princeton University**  
Geosciences
- **Ramapo College**  
Environmental Science
- **Richard Stockton College**  
Environmental Studies  
Natural Sciences
- **Rider University**  
Environmental Science  
Geological, Environmental  
and Marine Sciences
- **Rowan University**  
Geography
- **Rutgers University**  
Environmental and Natural Resources  
Urban Planning
- **William Paterson University**  
Geography and Urban Studies

## Atlantic Cape GeoWEP

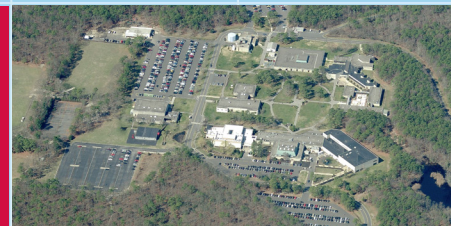
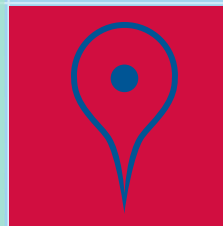
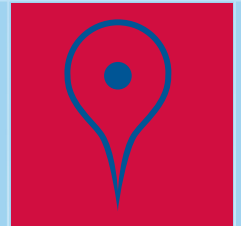
To meet the need for professionals trained in the use of GIS and related technologies in the region, Atlantic Cape has developed the Geospatial Workforce Education Program (GeoWEP). GeoWEP is a partnership among academia, employers, government and other stakeholders.

Key goals of the GeoWEP are to:

- Evaluate the GIS skill and workforce needs of employers in the southern New Jersey coastal region and assess the capacity of local education systems to meet those needs;
- Attract and train students and incumbent workers for entry-level through senior-level jobs that use GIS;
- Promote GIS-based career ladders in multiple fields through the integration of geospatial education into multiple academic disciplines; and
- Establish a pipeline of skilled GIS workers in the region by partnering with stakeholders to improve the science, technology, engineering and math education available in the region's high schools and vocational-technical schools.

For more information, visit [www.atlantic.edu/gis](http://www.atlantic.edu/gis) or call (609) 343-5607.

# find your career with GIS



*Geospatial Workforce  
Education Program*

[www.atlantic.edu/gis](http://www.atlantic.edu/gis)

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The GIS Workforce Education Project of Southern New Jersey is federally funded by a \$1.25 million grant from the U.S. Department of Labor Employment and Training Administration.



## What is GIS?

Geographic Information Systems (GIS) use digital data to represent real objects, such as roads, rivers, elevation and land use. GIS can generate maps and other displays of information that help decision-makers in government and in an expanding number of private industries to understand and view data in new, powerfully visual ways.

GIS is a computer-based system that can provide assistance in the storage, editing, manipulation, analysis and presentation of data that is linked to location. Essentially, GIS allows for any data that has been collected into a database to be represented on a map.

Many GIS databases consist of sets of information called layers. Each layer represents a particular type of geographic data. For example, one layer may include information on the streets in an area. Another layer may contain information on the soil in that area, while another records elevation. The GIS can combine these layers into one image, showing how the streets, soil, and elevation relate to one another. Engineers might use this image to determine whether a particular part of a street is more likely to crumble.

The applications of a GIS are vast and continue to grow. By using a GIS, scientists can research changes in the environment; electrical companies can manage their complex networks of power lines; governments can track the uses of land; and fire and police departments can plan emergency routes.

## Why Choose a Career Using GIS?

People trained in GIS and geographic analysis work in a variety of industries, government agencies, and educational settings. Workers ranging from sales representatives and engineers to law enforcement officers and urban planners must learn new skills and knowledge in addition to their core job skills to use GIS effectively and to keep pace with this rapidly evolving technology.

Key local industries using GIS include:

- Transportation, Logistics and Distribution
- Utilities
- Law Enforcement and Public Safety
- Government and Urban Planning
- Private Sector/Professional Services

As GIS technology becomes easier to use, experts and employers in the region expect the demand for skilled GIS workers to grow.

## What Questions Can GIS Answer?

- Where is the best location for my new business?
- Which buildings can't be reached from our town's fire hydrants?
- Where are the highest occurrences of Lyme disease?
- Which homes are most at risk for flooding?

## GIS at Atlantic Cape

### Geographic Information Systems, Associate in Science

To meet the increased demand from area business and industry for trained geographic information systems professionals, Atlantic Cape offers a new GIS option to the computer information systems associate in science degree. The option provides an introductory sequence of courses in GIS with an emphasis on the business applications of GIS, along with the application of geospatial technology to such areas as route planning, remote sensing, map-making, land use and data collection. Students who complete the degree option may transfer to bachelor of science programs.

### Computer Information Systems, Associate in Science

This program emphasizes the business applications of the computer. Graduates will have the theoretical, conceptual and practical background to use computers in business settings. Designed to facilitate transfer to bachelor of science programs, it provides a general education base, which enables students to have career mobility and/or to continue study beyond an associate degree.

## Professional Series:

### Geographic Information Systems Office Specialist

This series provides students with an opportunity to learn and develop expertise in small business application documents and is ideal for a student interested in starting a small business. The GIS Office Specialist may be completed in a year, however, a student may begin and end the series at his/her own pace. Credits earned can be applied to the Computing for Small Business Option of our Office Systems Technology, A.A.S. degree.

### Oracle Database and GIS Specialist

The Oracle Database Design and Programming and GIS Specialist Professional Series provides students with the knowledge needed for one of the fastest-growing industries of our time. Students will learn to design and program using a live Oracle server. Also, there will be an in-depth study of the current GIS systems and their uses. The specialist series provides students with the opportunity to develop skills in the common areas of database design, programming and GIS techniques and to update their technological skills and improve employability.

### Oracle SQL Programming and Database Design Specialist

The Oracle SQL Programming and Database Design Specialist Series provides students with the knowledge needed for entry-level positions as database developer/programmer. The students will learn to design and program using a live Oracle server. Upon completion, students are eligible to take the Level I Developer certification examination.

## Continuing Education Courses

### Introduction to Geographic Information Systems

This 16-hour survey course is designed for users who are new to GIS. It provides an overview of GIS concepts and introduces students to ArcView 9.3.1.

### Spatial Technology and Remote Sensing (STARS) Certification

This 300-hour certification sequence comprises four sequential courses to be taken over four semesters, followed by a certification exam. The certification sequence is designed to provide the knowledge and skills in GIS, remote sensing and Global Positioning Systems (GPS) that skilled workers in a range of fields need to become geographic information systems technicians or other types of advanced GIS users.

The following courses are included as part of the STARS certification:

- Introduction to GIS and Remote Sensing
- Introduction to GIS Tools and Processes
- Advanced Tools in GIS and Remote Sensing
- Capstone Project