

# Geographic Information System Education at the University of New Haven

Department of Biology and Environmental Science  
University of New Haven, West Haven, CT 06516



## University of New Haven Education in Geographical Information Systems (GIS)

Since 1990, the University has been offering cutting edge education and training in Geographical Information Systems through several programs of study. Courses can be taken at the undergraduate, graduate, and professional levels. The professional Certificate Program in GIS can be completed in 4 trimesters and the Graduate Environmental Science Program GIS concentration includes additional related courses as well as general program requirements. The program is flexible in order to accommodate both students new to GIS and those who already have some experience with this technology.

All courses provide professional training in the technology and application of computerized cartography and spatially referenced databases. Concepts and techniques are reinforced with in-class lectures and instructor led exercises. Complimented with small assignments throughout each course and a student project/presentation due at the end each course, key concepts in GIS knowledge are tested. Student projects provide opportunities to integrate personal interest topics with concepts learned during each course. Courses are taught in a technologically advanced computer laboratory and class sizes are usually 12- 20 students. The small class size allows for more one-on-one interaction with the instructor and accelerates learning. Student projects provide opportunities to integrate topics learned throughout the courses and pursue personal interests in GIS.

Our instructors have years of experience working with GIS systems and applications in an array of professional areas including consulting companies, municipalities, utilities, environmental research and state and federal agencies.

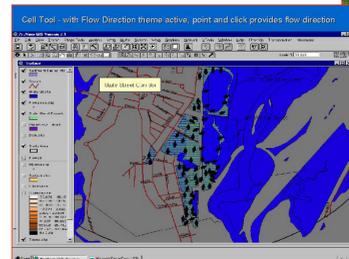
Mapping lobster populations in Long Island Sound



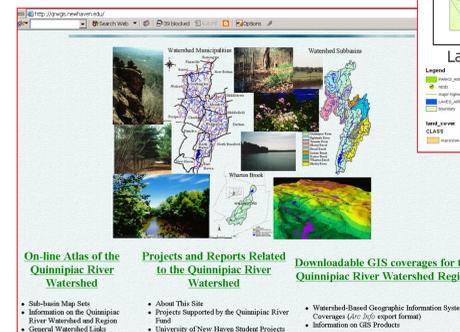
GIS Lab at UNH



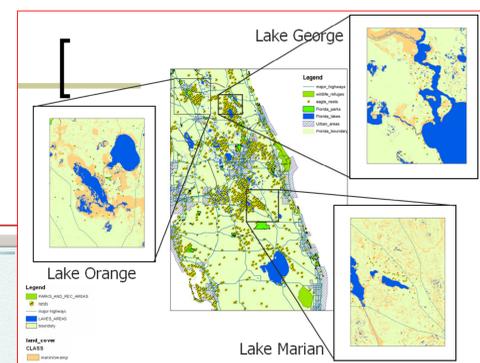
GPS mapping exercise



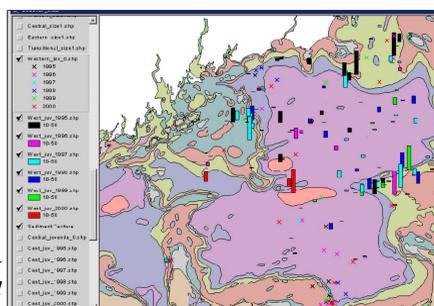
Assessing flow direction from brownfield site



GIS related website focusing on Quinnipiac River watershed developed by UNH GIS students



Suitability Model - Eagle nesting sites



## Courses in GIS at University of New Haven

### *EN 640 / 540 Introduction to Geographical Information Systems*

Survey of GIS technology, research and applications in urban planning, business, marketing and real estate, law enforcement, public administration, emergency preparedness, natural resource management, and environmental assessment. Concurrently, students are trained in the basics of GIS software ( ArcGIS 9.2), learning software structure, the core of GIS data, mapping techniques, and analysis.

### *EN 641 / 541 Geographical Information System Techniques and Applications I*

First of a two course sequence on advanced GIS technology and applications. Using ArcGIS and ArcInfo, this course focuses on geodatabases; data acquisition, data conversions input and manipulation; cartographic output, and report generation.

### *EN 642 / 542 Geographical Information System Techniques and Applications II*

Course includes: ArcGIS extensions (Spatial, Network an 3-D), introduction to programming in ArcGIS using Visual Basic for Applications (VBA); introduction to remote sensing; image analysis in GIS; using global positioning systems (GPS) to create data; and working with CAD files in GIS.

### *EN 643 /EN 543 Advanced Applications of GIS*

Using advanced GIS techniques, students collaborate to design and implement a complete GIS focusing on “real world” applications, generally in conjunction with local, state, and federal agencies or nonprofit organizations. Applications generally blend environmental, municipal, and utility management among other topics. Students also conduct individual projects on aspects of the project of interest to them using the project GIS. The course also covers using ArcObjects, geostatistical analyst and spatial statistics in GIS

#### **For more information contact:**

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Graduate Admissions Office: <http://admissions.newhaven.edu/grad/>

To learn more about some of our GIS activities visit us at: <http://qrwgis.newhaven.edu/>