# CREDIT-BEARING CERTIFICATE PROGRAM

## **Certificate in Geographic Information Science (GISc)**

Geographic Information Science (GISc) is a fast-growing computer technology field involving mapping and analysis of spatial data. Geographic Information Systems (GIS) enable us to assess and manage existing conditions and also help predict future conditions, ranging from monitoring disease occurrences, to endangered species preservation, to managing water supplies, to tracking real estate values, to crime solving.

GIS is used today in fields as diverse as law enforcement, marketing, economic development, public health administration, ecology, urban planning, real estate, government and education. GIS is an expanding field with good career opportunities. People with GIS skills can also be more marketable as managers and analysts in their own fields. A Certificate in GISc can be advantageous by itself or in augmenting a Master's, Bachelor's or Associate's Degree.

The Certificate in GISc consists of a sequence of 4 courses, equaling 14 credits, plus one 3-credit Geography elective course, for a total of 17 credits. Courses are offered in the evenings and some via e-mail. The courses can be taken for credit at either the undergraduate or graduate level, leading to the Certificate.

Note: These are credit-bearing courses, NOT Continuing Education courses, and you must file an application and be admitted to Lehman College as a non-matriculated student before you can register for these courses. To enter the Certificate Program, students must have completed 30 college credits with at least a 2.0 GPA (C average). To take graduate-level courses, students must have a Bachelor's degree with at least a 3.0 GPA (B average).

#### **Required Coursework (17 credits)**

**GEP 204 / GEP 504:** Basic Mapping: Applications and Analysis (3 credits)

**GEP 205 / GEP 505:** Principles of Geographic Information Science (GISc) (3 credits)

GEP 350 / GEP 605: Special Projects in GISc\* (4 credits)

**GEH 490 / GEP 690:** Workshop in GISc (4 credits)

and a Geography elective (3 credits)

\*Note: Recent topics in *Special Projects in GISc* included "Environmental Planning with GIS" and "Spatial Analytical Methods in GIS." Topics planned for the future are "GIS for Public Health" and "Using GIS in Ecology."

#### **FALL 2003**

**GEP 204/GEP 504:** Basic Mapping: Applications and Analysis (4 hours, 3 credits) Tuesdays, 6-9:20 p.m.

This course serves as an introduction to the world of maps—how to use maps to obtain information about a wide variety of topics and how to create maps to display and analyze quantitative and qualitative data. Laboratory work includes digital map applications and GIS mapping exercises. No prerequisite.

**GEP 350/GEP 605:** Special Projects in GISc: Earth and Environmental Science (6 hours, 4 credits) Thursdays, 4:30-9:30 p.m.

This course has been developed for intermediate GISc students who wish to apply more advanced GIS techniques to their analyses, expand their knowledge of current methodologies and conduct more complex analyses involving modeling and simulation. Through a series of lectures, GIS laboratory work, and the design of a GIS project, students will learn more advanced GIS spatial techniques and their applications to ecology research, environmental management, urban planning, economic development, risk and hazard assessment, and other areas of public policy and decision-making. Prerequisite: GEP 205/GEP 505 or departmental permission.

**GEH 490/GEP 690:** Workshop in Geographic Information Science (4 credits) Schedule: TBA

### For Additional Information

Visit our website at <a href="www.lehman.cuny.edu/geography">www.lehman.cuny.edu/geography</a> for GISc Certificate Program information and "Frequently Asked Questions," including how to apply to the program. For further information about the GISc Program or any of the individual courses, contact Dr. Juliana Maantay at (718) 960-8574 or by e-mail at <a href="mailto:maantay@aol.com">maantay@aol.com</a>. For non-matriculated student applications, call (718) 960-8702 (Graduate Admissions) or (718) 960-8706 (Undergraduate Admissions) <a href="mailto:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after:after: