Geographic Information Science
Master of Science

Geographic Information Science (GISc) is a fast-growing computer technology field involving mapping and analysis of spatial data. Geographic Information System (GIS) enable us to assess and manage conditions, and to predict future conditions, ranging from monitoring disease occurrences, to endangered species preservation, to managing water supplies, to tracking real estate values, to crime solving. The MS-GISc Program leads to a Master's of Science in GISc, and requires 40 credits of coursework. The program is intended to prepare students to meet the demands and challenges of theoretical and applied research, planning, and management careers in the field of geospatial sciences and the affiliated disciplines of public health, environmental analysis, conservation and natural resource management, epidemiology, ecology, urban planning, hazard and risk assessment, emergency response, demographics, criminal justice, homeland security, public policy and administration, transportation planning, engineering, international relief organizations, and geomatic technologies. The MS-GISc (PEAR Option) is recognized as a Professional Science Master's (PSM) Program by the National PSM Association.

ADMISSIONS REQUIREMENTS

- Official transcripts from **all** post-secondary institutions attended
  - ➢ A bachelor's degree or equivalent, from an accredited U.S. or foreign university
  - ➢ A minimum undergraduate graduate average of 3.0
- Two letters of recommendation
- Curriculum Vitae
- A 500-word essay outlining intellectual and academic interests, accomplishments, and career objectives

DEGREE REQUIREMENTS

- The curriculum of the MS-GISc program is comprised of three key elements for a total of 40 credits to complete the degree:
  - ➢ 4 core courses (14 credits)
  - ➢ 5-6 electives (18 credits)
  - ➢ 8-credit capstone research experience, with options for either a traditional Master's Thesis, or a combination of an applied research project and professional experience through an internship (PEAR option: Professional Experience and Applied Research

INTERNSHIP PROGRAM

Lehman College has developed an Internship Program in GISc, allowing qualified students to earn credits while working in GISc positions, in preparation for careers in governmental agencies, private sector consulting firms, not-for-profit organizations, and research institutes. Additionally, students have ample opportunities for field work experiences, both through structured coursework and research opportunities.

DEGREE REQUIREMENTS

Required Core Courses (14 credits)		Credits
GEP 505	Principles of Geographic Information Science	3
GEP 621	Principles and Applications of Remote Sensing	4
GEP 630	Geostatistics and Spatial Analytical Concepts	3
GEP 605	Special Topics in Geographic Information Systems: Environmental Modeling & Spatial Analysis	4

Electives to be selected amongst the following (18 credits)		Credits
GEP 504	Basic Mapping Science	3
GEP 602	Biogeography and GISc	4
GEP 606	Raster Analysis	3
GEP 610	Spatial Analysis of Urban Health	3
GEP 620	Demography and Population Geography with GISc	3
GEP 631	Advanced Remote Sensing	4
GEP 632	Environmental Health and Geographic Information Sciences (GISc)	3
GEP 635	Natural Hazards and Risk Analysis with GIS	4
GEP 640	Urban Geography and Geographic Information Science (GISc)	3
GEP 641	Digital Image Analysis	4
GEP 650	Topics in Regional Geography and Applied Analysis	3
GEP 660	Geovisualization and Analytical Cartography	4
GEP 662	Introduction to Programming for GISc	3
GEP 664	Spatial Database Management	3
GEP 675	Data Acquisition and Integration Methods for GIS Analysis	3
GEP 680	Emerging Issues and Methods in Geographic Information Science	3
GEP 689	Methods Seminar in Geographic Information Science (GISc)	3

Of the 18 elective credits required for the degree, up to 9 credits of courses may be taken in a cognate discipline, such as Public Health, Urban Planning, or Environmental Engineering, with permission of program advisor, and depending upon the student's career goals.

CAPSTONE EXPERIENCE COURSEWORK

An 8-credit capstone experience, either the Thesis Option or the Professional Experience and Applied Research (PEAR) Option (PSM).

Traditional Master's Thesis Option (8 credits):		Credits
GEP 695	Thesis Research in GISc	8
	OR	

PEAR Option (PSM) (8 credits):		Credits
GEP 690	Workshop in Geographic Information Science (GISc) Research	4
GEP 670	Seminar and Internship Program in Geography	4

Questions about the program?
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Questions about admissions?
The Office of Graduate Admissions
http://www.lehman.edu/admissions