

Lehman College, City University of New York  
**DEPARTMENT OF EARTH, ENVIRONMENTAL, AND GEOSPATIAL SCIENCES**

**LEARNING GOALS AND OBJECTIVES**

**GEOGRAPHY**

Upon completion of the Bachelor of Arts degree in Geography, graduates will be able to:

**Goal I** – Understand the theoretical foundations of geography and cartography

Learning Objectives:

To achieve this goal, students will have demonstrated the ability to:

- A. Identify milestones in geographic thought and theory
- B. Explain the history and social significance of cartography and mapping
- C. View geography as an interdisciplinary science – integration of geography with other fields, such as public health, botany, political science, sociology, geology, computer science, urban planning, etc
- D. Perform quantitative reasoning / spatial analysis of geographic and cartographic data
- E. Compare and contrast geography as a regional science vs. a topical approach
- F. Explain spatial dynamics, spatial interaction, and other “laws” of Geography
- G. Create, use and analyze maps, cartographic products, and other graphic data
- H. Create major geographic models of Earth and human spatial analysis
- I. Evaluate different types of landscape morphology and explain how they relate to culture, region, and chronology
- J. Apply the concepts of scale, resolution, coordinate systems and projections, latitude and longitude, and other technical aspects of modeling geographic locations and Earth processes to the interpretation and creation of maps and other data.

**Goal II** – Understand the important concepts in the major sub-disciplines of Geography, and be able to apply them to problem solving

Learning Objectives:

To achieve this goal, students will have demonstrated the ability to describe the major tenets of each sub-discipline and their significance and relationship to global and local issues and daily life:

- K. Describe Physical Geography – landforms and major earth processes
- L. Describe Climate and Weather
- M. Explain Atmosphere, Biosphere, Hydrosphere, and Lithosphere
- N. Explain Biogeography – biomes, biochemical cycles
- O. Describe Cultural Geography
- P. Explain Geography of Language and Religion
- Q. Explain Environmental Geography – Environment-Human interaction, human impacts, environmental impacts
- R. Describe Natural Resources and Energy

- S. Explain Population Geography and Demography – Population Pressures and Migration
- T. Explain Urban Geography – Cities and Urbanization, models of urban form
- U. Describe Medical/Health Geography
- V. Describe Economic Geography
- W. Describe Political Geography
- X. Describe Globalization

**Goal III** – Develop proficiency in Cartography and Spatial Reasoning

Learning Objectives:

To achieve this goal, students will have demonstrated the ability to:

- Y. Assemble the elements, data and mathematical processes necessary for mapping
- Z. Differentiate between the major types of reference and thematic maps, and identify the particular uses of each type.
- AA. Interpret maps and cartographic products produced in different eras, for different purposes, and by different cultures
- BB. Use spatial and non-spatial attribute data to perform exploratory spatial data analysis, data visualization, and data presentation

**Goal IV** – Develop the skills required for careers in geography or graduate study in Geography or allied field

Learning Objectives:

To achieve this goal, students will have demonstrated the ability to:

- CC. Synthesize disparate information (including texts, spatial data, qualitative and quantitative data) in written form.
- DD. Demonstrate proficient use of mapping software, spatial analytical techniques, database management skills, and basic fundamentals of cartographic design
- EE. Map literacy – how to read maps, interpret data on maps, create maps
- FF. Write succinct reports and summaries and prepare a comprehensive literature review on a research topic.
- GG. Design and implement a substantive research project, including formulating the research question, developing methodology, conducting the analyses, and interpreting results, formulating conclusions and recommendations