

**LEHMAN COLLEGE  
OF THE  
CITY UNIVERSITY OF NEW YORK**

**DEPARTMENT OF EARTH, ENVIRONMENTAL, AND GEOSPATIAL  
SCIENCES**

**CURRICULUM CHANGE**

1. **Type of Change:** *Title, description, prerequisites*

2. **From:**

|   |  |
|---|--|
| Department(s)                                       | Earth, Environmental, and Geospatial Sciences  |
| Career  | <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate  |
| Academic Level                                      | <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial   |
| Subject Area  | Geography  |
| Course Prefix & Number                              | GEP 662  |
| Course Title  | <del>Introduction to Programming for GISc</del>  |
| Description   | Programming and scripting for Geographic Information Science (GISc) with a focus on <del>applying</del> programming methods to answer geographic questions. Students will learn how to use programming to automate geoprocessing tasks and develop new analytical tools. PREREQ: GEP 505 or instructor's permission.   |
| Pre/ Co Requisites                                  |  |
| Credits   | 3  |
| Hours   | 4  |
| Liberal Arts  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| Course Attribute (e.g. Writing Intensive, WAC, etc) |  |
| General Education Component                         | <input checked="" type="checkbox"/> Not Applicable<br><input type="checkbox"/> Required<br><input type="checkbox"/> English Composition<br><input type="checkbox"/> Mathematics<br><input type="checkbox"/> Science<br><br><input type="checkbox"/> Flexible<br><input type="checkbox"/> World Cultures<br><input type="checkbox"/> US Experience in its Diversity<br><input type="checkbox"/> Creative Expression<br><input type="checkbox"/> Individual and Society<br><input type="checkbox"/> Scientific World |

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**3. To:**

|   |  |
|---|--|
| Department(s)                                       | Earth, Environmental, and Geospatial Sciences  |
| Career  | <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate  |
| Academic Level                                      | <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial   |
| Subject Area  | GEP  |
| Course Prefix & Number                              | GEP 662  |
| Course Title  | Fundamentals of Programming for <u>Geographic Information Science (GISc)</u>   |
| Description   | <u>Fundamentals of programming and scripting for Geographic Information Science (GISc) with a focus on introductory and intermediate programming methods to answer geographic questions. Students will learn how to use programming to automate geoprocessing tasks, develop new analytical tools, and complete a research or applied spatial data project.</u>  |
| Pre/ Co Requisites                                  | <u>GEP 504 or GEP 505 or instructor's permission.</u>  |
| Credits   | 3  |
| Hours   | 4 <u>(2 hours lecture, 2 hours lab)</u>  |
| Liberal Arts  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| Course Attribute (e.g. Writing Intensive, WAC, etc) |  |
| General Education Component                         | <input checked="" type="checkbox"/> Not Applicable<br><input type="checkbox"/> Required<br><input type="checkbox"/> English Composition<br><input type="checkbox"/> Mathematics<br><input type="checkbox"/> Science<br><br><input type="checkbox"/> Flexible<br><input type="checkbox"/> World Cultures<br><input type="checkbox"/> US Experience in its Diversity<br><input type="checkbox"/> Creative Expression<br><input type="checkbox"/> Individual and Society<br><input type="checkbox"/> Scientific World |

**4. Rationale:**

Changes are being made so that GEP 662 has the same components as its undergraduate version (GEP 362), and both can be listed as a combined section in Coursedog.

The description has been updated to move the prerequisites to the prerequisites section. In addition, the title and description have been changed to differentiate the graduate and undergraduate versions of the course, and a new prerequisite (GEP 504) has been added since it is also applicable. The new title also includes the complete spelling of GISc.

5. **Date of departmental approval:** September 9, 2024.

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**CURRICULUM CHANGE**

1. **Type of Change:** *hours, description*

2. **From:**

|   |  |
|---|--|
| Department(s)                                       | Earth, Environmental, and Geospatial Sciences  |
| Career  | <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate  |
| Academic Level                                      | <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial   |
| Subject Area  | Geography  |
| Course Prefix & Number                              | GEP 640  |
| Course Title  | Urban Geography and Geographic Information Science (GISc)  |
| Description   | This course covers the contribution of geographical concepts and methods to an understanding of contemporary and future urban issues. It applies the use of GISc to the study of the internal structure of cities and urban systems, including city dynamics, classic and postmodern models, central place theory, urban migration and mobility, race, ethnicity, and gender, urban migration, poverty, industrial and post-industrial urban societies, residential segregation, land use change, gentrification, urban and suburban sprawl, housing, urban environmental issues, and regional planning. <del>Lab work involves using GISc to explore the form and function of urban areas, and to solve critical urban problems using spatial analysis.</del> |
| Pre/ Co Requisites                                  |  |
| Credits   | 3  |
| Hours   | <del>4</del>   |
| Liberal Arts  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| Course Attribute (e.g. Writing Intensive, WAC, etc) |  |
| General Education Component                         | <input checked="" type="checkbox"/> Not Applicable<br><input type="checkbox"/> Required<br><input type="checkbox"/> English Composition<br><input type="checkbox"/> Mathematics<br><input type="checkbox"/> Science  |

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|  | <input type="checkbox"/> Flexible<br><input type="checkbox"/> World Cultures<br><input type="checkbox"/> US Experience in its Diversity<br><input type="checkbox"/> Creative Expression<br><input type="checkbox"/> Individual and Society<br><input type="checkbox"/> Scientific World |
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**3. To:**

|   |  |
|---|--|
| Department(s)                                       | Earth, Environmental, and Geospatial Sciences  |
| Career  | <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate  |
| Academic Level                                      | <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial   |
| Subject Area  | GEP  |
| Course Prefix & Number                              | GEP 640  |
| Course Title  | Urban Geography and Geographic Information Science (GISc)  |
| Description   | This course covers the contribution of geographical concepts and methods to an understanding of contemporary and future urban issues. It applies the use of GISc to the study of the internal structure of cities and urban systems, including city dynamics, classic and postmodern models, central place theory, urban migration and mobility, race, ethnicity, and gender, urban migration, poverty, industrial and post-industrial urban societies, residential segregation, land use change, gentrification, urban and suburban sprawl, housing, urban environmental issues, and regional planning. |
| Pre/ Co Requisites                                  |  |
| Credits   | 3  |
| Hours   | <u>3</u>   |
| Liberal Arts  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| Course Attribute (e.g. Writing Intensive, WAC, etc) |  |
| General Education Component                         | <input checked="" type="checkbox"/> Not Applicable<br><input type="checkbox"/> Required<br><input type="checkbox"/> English Composition<br><input type="checkbox"/> Mathematics<br><input type="checkbox"/> Science<br><br><input type="checkbox"/> Flexible<br><input type="checkbox"/> World Cultures<br><input type="checkbox"/> US Experience in its Diversity   |

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|  | <p>_____ Creative Expression<br/>_____ Individual and Society<br/>_____ Scientific World</p> |
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4. **Rationale:**

Changes are made so that GEP 640 has the same number of hours as its undergraduate version (GEH 340) and both can be listed as a combined section in Coursedog.

The description has been updated to better reflect what is covered in the course.

5. **Date of departmental approval:** September 9, 2024

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2. **From**:

|   |  |
|---|--|
| Department(s)                                       | Earth, Environmental and Geospatial Sciences   |
| Career  | <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate  |
| Academic Level                                      | <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial   |
| Subject Area  | Geography  |
| Course Prefix & Number                              | GEP 675  |
| Course Title  | Data Acquisition and Integration Methods for GIS Analysis  |
| Description   | <del>The techniques and science behind field methods commonly used for the acquisition and creation of geo-spatial data. Various techniques for data capture as well as processing and analyzing the data within a geographic information system (GIS). Labs will focus on the hardware and software needed for data creation, the integration of this information into a coherent GIS, and basic concepts of analysis including point pattern analysis. Students will use GPS devices, mobile GIS, workstation GIS, as well as data from other sources including satellite and airborne remotely sensed data.</del> |
| Pre/ Co Requisites                                  |  |
| Credits   | 3  |
| Hours   | 4 ( 2 hrs lab, 2 hrs lecture)  |
| Liberal Arts  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| Course Attribute (e.g. Writing Intensive, WAC, etc) |  |
| General Education Component                         | <input checked="" type="checkbox"/> Not Applicable<br><input type="checkbox"/> Required<br><input type="checkbox"/> English Composition<br><input type="checkbox"/> Mathematics<br><input type="checkbox"/> Science<br><input type="checkbox"/> Flexible   |

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|--|--|
|  | <input type="checkbox"/> World Cultures<br><input type="checkbox"/> US Experience in its Diversity<br><input type="checkbox"/> Creative Expression<br><input type="checkbox"/> Individual and Society<br><input type="checkbox"/> Scientific World |
|--|--|

**3. To:**

|   |  |
|---|--|
| Department(s)                                       | Earth, Environmental and Geospatial Sciences   |
| Career  | <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate  |
| Academic Level                                      | <input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial   |
| Subject Area  | Geography  |
| Course Prefix & Number                              | GEP 675  |
| Course Title  | Data Acquisition and Integration Methods for GIS Analysis  |
| Description   | <u>Acquisition of spatial data and data integration issues for geological and geographic analysis. Use of Geographic Information Systems (GIS) and programming for mapping and data analysis, and integration of different data sources. Labs focus on data processing from different agencies and sources for data integration and spatial analysis.</u>  |
| Pre/ Co Requisites                                  | <u>Prereq GEP 504 or GEP 505 or Instructor's Permission</u>  |
| Credits   | 3  |
| Hours   | 4 ( 2 hrs lab, 2 hrs lecture)  |
| Liberal Arts  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No  |
| Course Attribute (e.g. Writing Intensive, WAC, etc) |  |
| General Education Component                         | <input checked="" type="checkbox"/> Not Applicable<br><input type="checkbox"/> Required<br><input type="checkbox"/> English Composition<br><input type="checkbox"/> Mathematics<br><input type="checkbox"/> Science<br><br><input type="checkbox"/> Flexible<br><input type="checkbox"/> World Cultures<br><input type="checkbox"/> US Experience in its Diversity<br><input type="checkbox"/> Creative Expression<br><input type="checkbox"/> Individual and Society<br><input type="checkbox"/> Scientific World |



**4. Rationale:**

The course description has been revised to be more succinct and avoid over specification of topics, as recommended in Lehman's curriculum handbook. The revised course description also emphasizes the course data acquisition and integration components and clarifies the context of the application (geological and geographical analysis). Programming has become an essential skill in the GIS field and has been added to the description since it needs to be incorporated into the course to better prepare students for the job market and increase their technical skills.

The prerequisite is needed to ensure that students are prepared to succeed in the course and to cover more complex topics since this is an advanced course. The instructor spends a substantial amount of time teaching students the basics of the software and GIS in GEP 504 and GEP 505, allowing progression to more complex topics in GEP 675.

**5. Date of departmental approval: September 9, 2024**