



## GIS Certificate Program

A Program of the Joint Center for GIS and Spatial Analysis (GISSA)

### Program Description

The GIS Certificate Program is designed to meet the needs of both the novice, and experienced GIS professionals. Students who graduate from this program will have a solid understanding of the theoretical basis of GIS and rich hands-on experience with GIS software packages.

### Learning Outcomes

Apply and demonstrate the principles of geographic information science  
Formulate requirements and constraints in spatial analysis  
Complete spatial analysis with selected GIS software packages  
Develop skills for designing and implementing real-world GIS applications  
Gain hands-on experience with popular GIS software such as ArcGIS  
Learn how to communicate effectively via mapping and graphic presentation

### Application

The GIS Certificate Program is open to both matriculated and non-matriculated students at the University of Cincinnati. Students can start the program in any semester. The deadline for application is two years after completion of all required courses. However, students are strongly encouraged to contact an advisor and apply early in the process.

### Requirements

To obtain a GIS certificate, a student must complete 4 required courses specified below, with a minimum grade of C (B for graduate students) in each course. The certificate will be awarded upon application and satisfactory completion of the required courses.

- (1) Remote Sensing and Cartography group (Select 1, Pre-requisite: None)
  - GEOG 6072 Principles and Applications of GPS
  - GEOG 6074 Computer Analytical Cartography
  - GEOG 6076 Principles of Remote Sensing
- (2) Introduction to GIS group (Select 1, Pre-requisite: None)
  - PLAN 2054 Introduction to Geographic Information Systems
  - PLAN 6071 Introduction to Geographic Information Systems
  - GEOG 6071 Introduction to Geographic Information Sciences
- (3) GIS Applications Group (Select 2)
  - Pre-requisite: GEOG6076
    - GEOG 6087 Hyperspectral/Thermal Remote Sensing,
  - Pre-requisite: any course under (1)
    - GEOG 6096 Advanced Remote Sensing and Image Analysis,
  - Pre-requisite: any course under Group (2)
    - PLAN 6091 GIS Project Formulation and Management
    - GEOG 6021 Crime Mapping and Analysis
    - GEOG 6031 GIS and Public Health
    - GEOG 6081 Intermediate GIS
    - GEOG 6091 Advanced GIS & Web GIS
    - GEOG 6089 Digital Terrain and Watershed Analysis
    - GEOG 6099 Exploratory Visual Analytics
    - GEOG 7091 Seminar: GIS

Lower level courses may be replaced by upper level courses upon approval of the advisor. One of the required courses may be substituted by a similar course taken outside the program. A written petition must be submitted to Dr. Liu or Dr. Wang for such substitution, and it must include well-reasoned justifications, including a thorough comparison of content coverage between the two courses, with the syllabi attached. The petition will be considered on a case-by-case basis.

**Advisors**

Lin Liu	Geography, Braunstein Hall 400E	556-3429	<a href="mailto:lin.liu@uc.edu">lin.liu@uc.edu</a>
Xinhao Wang	Planning, DAAP Building 6217	556-0479	<a href="mailto:xinhao.wang@uc.edu">xinhao.wang@uc.edu</a>

**Costs**

The cost of courses in this program is in accordance with the university's general tuition rate. Please visit <http://www.uc.edu> for the current tuition rate.



## GIS Certificate Program Application Form

A Program of the Joint Center for GIS and Spatial Analysis (GISSA)

STUDENT NAME	UC-ID (M#)	DATE
Department/College		Program (G / UG)

Mailing address:

Telephone: \_\_\_\_\_ Email: \_\_\_\_\_

Course name	Grade	Quarter/Year
<b>(1) Remote Sensing &amp; Cartography Group (Semester)</b>		
<input type="checkbox"/> Geography 6072 Principles and Applications of GPS		
<input type="checkbox"/> Geography 6074 Computer Analytical Cartography		
<input type="checkbox"/> Geography 6076 Principles of Remote Sensing		
<b>(2) Introduction to GIS group (Semester)</b>		
<input type="checkbox"/> Geography 6071: Introduction to Geographic Information Sciences		
<input type="checkbox"/> Planning 6071 Introduction to Geographic Information Systems		
<input type="checkbox"/> Planning 2054 Introduction to Geographic Information Systems		
<b>(3) GIS Applications Group (Semester)</b>		
<input type="checkbox"/> Planning 6091 GIS Project Formulation and Management		
<input type="checkbox"/> Geography 6021 Crime Mapping and Analysis		
<input type="checkbox"/> Geography 6031 GIS and Public Health		
<input type="checkbox"/> Geography 6081 Intermediate GIS		
<input type="checkbox"/> Geography 6087 Hyperspectral/Thermal RS		
<input type="checkbox"/> Geography 6089 Digital Terrain and Watershed Analysis		
<input type="checkbox"/> Geography 6091 Advanced GIS & Web GIS		
<input type="checkbox"/> Geography 6096 Advanced RS & Image Analysis		
<input type="checkbox"/> Geography 6099 Exploratory Visual Analytics		
<input type="checkbox"/> Geography 7091 Seminar: GIS		

**Transcripts attached.**

Submit the application form and transcript to:

Dr. Xinhao Wang  
 School of Planning  
 6210 DAAP Building  
 PO Box 210016  
 Cincinnati, OH 45221-0016  
[wangxo@ucmail.uc.edu](mailto:wangxo@ucmail.uc.edu)  
 phone: 513-556-0497  
 fax: 513-556-1274

<b>Official use only</b>	
Application received on:	
Transcripts received on:	
Approved by:	Date:
Certificate issued on:	