

# School of Economic, Political and Policy Sciences

## Certificate Programs

The School of Economic, Political and Policy Sciences offers seven graduate certificate programs for both degree and non-degree seeking students. Certificate programs are a valuable component of the school's educational mission and can be an important resource for both mid-career professionals and others seeking to advance their knowledge and expertise. The certificates are offered in: Economic and Demographic Data Analysis, Geographic Information Systems (GIS), Geospatial Intelligence (GeoInt), Local Government Management, Nonprofit Management, Program Evaluation, and Remote Sensing.

### Graduate Certificate in Economic and Demographic Data Analysis: 15 semester credit hours

The Certificate in Economic and Demographic Data Analysis may be acquired by graduate degree-seeking and non-degree seeking students. For the certificate, students must complete 15 graduate semester credit hours (5 courses).

**Students are required to take:**

[EPPS 7313](#) Descriptive and Inferential Statistics

[EPPS 7316](#) Regression and Multivariate Analysis

**Students must choose at least one of the following courses:**

[ECON 6306](#) Applied Econometrics

or [EPPS 7318](#) Structural Equation and Multilevel (Hierarchical) Modeling

or [EPPS 7344](#) Categorical and Limited Dependent Variables

In addition, two other empirically oriented courses must be completed. Students should check with the Director of the Certificate Program or the program office for details as to the list of acceptable courses.

Students seeking the certificate who do not plan to seek a degree should (1) submit an application and (2) an undergraduate transcript. No GRE score is required. Note: (a) up to 15 hours of coursework taken as a non-degree seeking student can be applied later to a graduate degree; (b) currently enrolled students may use up to 9 hours of courses required for their degree for the certificate. Non-degree seeking students interested in continuing their graduate education must

formally apply to the university and their program of interest to be considered for admission.

Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

## **Graduate Certificate in Geographic Information Systems (GIS): 15 semester credit hours**

The School of Economic, Political and Policy Sciences offers a certificate in Geographic Information Systems for both novice and experienced GIScience professionals. Classes are offered through the state-of-the-art facilities housed within the Geospatial Information Sciences program in the School of Economic, Political and Policy Sciences. The certificate is available to both graduate degree-seeking and non-degree seeking students. The certificate requires 15 graduate semester credit hours (5 classes). All courses taken as part of this certificate also count toward the Master of Science in Geospatial Information Sciences degree, and can be taken in conjunction with the Graduate Certificate in Geospatial Intelligence and the Graduate Certificate in Remote Sensing.

### **Admission Requirements**

Students seeking the GIS Certificate must have completed an undergraduate degree. Students may complete and submit an application for admission online. Primary admissions requirements are: (1) an application to UT Dallas and (2) an undergraduate transcript. Applicants for the certificate program do not need a GRE (Graduate Record Examination) score or letters of reference for admission to the certificate program. They should apply as "non-degree seeking" students to the Geospatial Information Sciences program. Admissions requirements are the same for students who would simply like to take one or more of the related courses without pursuing certification. Up to 15 semester credit hours of coursework taken in the certificate program can be applied later in a graduate degree, if desired.

### **Registration by Current UT Dallas Students**

Graduate students in any degree program within UT Dallas may register for GISC courses using standard registration procedures. Students should see their program advisor regarding degree plan credit assignment. Courses are listed under geospatial information sciences (GISC) in the UT Dallas class schedule with additional offerings under Geosciences (GEOS).

The Graduate Certificate in Geographic Information Science requires 15 semester credit hours earned through the following courses:

#### **Two Required Courses (6 semester credit hours)**

[GISC 6381 \(GEOS 6381\)](#) Geographic Information Systems Fundamentals<sup>1</sup>

[GISC 6384 \(GEOS 6384\)](#) Advanced Geographic Information Systems

**Two elective courses chosen from the following or as approved by the Director of the Certificate Program (6 semester credit hours)**

[GISC 5322 \(GEOS 5322\)](#) GPS (Global Positioning System) Satellite Surveying Techniques

[GISC 5324 \(GEOS 5324\)](#) 3D Data Capture and Ground Lidar

[GISC 6301](#) GIS Data Analysis Fundamentals

[GISC 6317](#) GIS Programming Fundamentals

[GISC 6325 \(GEOS 5325\)](#) Remote Sensing Fundamentals

[GISC 6385 \(GEOS 6385\)](#) GIS Theories, Models and Issues

[GISC 6388](#) Advanced GIS Programming

[GISC 7310](#) Advanced GIS Data Analysis

[GISC 7360](#) GIS Pattern Analysis

[GISC 7361](#) Spatial Statistics

[GISC 7363](#) Internet Mapping and Information Processing

[GISC 7365 \(GEOS 5326\)](#) Advanced Remote Sensing

**One Required Research Project Course (3 semester credit hours)**

[GISC 6387 \(GEOS 6387\)](#) Geospatial Sciences Workshop

Students should take this course with varied research topics if different certificate programs are pursued.

No more than two courses can be transferred from another institution. Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

## **Graduate Certificate in Geospatial Intelligence (GeoInt): 15 semester credit hours**

Geospatial Intelligence (GeoInt) is a rapidly evolving field that demands certain technical skill sets, the ability for individual rapid critical thinking, and a global awareness of supporting information for national security and other intelligence activities. This certificate program produces graduates that have met the requirements for such professionals set forth by the [United States Geospatial](#)

## [Intelligence Foundation \(USGIF\).](#)

Classes are offered through the state of the art facilities housed within the Geospatial Information Sciences program in the School of Economic, Political and Policy Sciences. The certification requires 15 graduate semester credit hours (5 classes) detailed below. All courses taken as part of this certificate also count toward the [Master of Science in Geospatial Information Sciences](#) degree, and can be taken in conjunction with the Graduate Certificate in Geographic Information Systems and the Graduate Certificate in Remote Sensing.

## **Mission**

The mission of the Graduate Certificate in Geospatial Intelligence is to provide students with a broad set of skills in the areas of geographic information systems, remote sensing, geospatial statistical analysis, intelligence gathering, and global positioning systems. Courses will emphasize these skills along with the ability to find and interpret data, conduct accurate analysis, work in a professional and collaborative environment, and communicate effectively. UT Dallas geospatial intelligence certificate graduates will have demonstrated to the intelligence community that they have acquired the basic skills needed for employment in this high growth industry.

Graduate students in any degree program within UT Dallas may register for GISC courses using standard registration procedures. Students should see their program advisor regarding degree-plan credit assignment. Courses are listed under geospatial information sciences (GISC) in the UT Dallas class schedule with additional offerings under Geosciences (GEOS) and Management Information Systems (MIS).

Required Coursework (15 semester credit hours)

### **Three required courses:**

[GISC 6301](#) GIS Data Analysis Fundamentals

[GISC 6325](#) ([GEOS 5325](#)) Remote Sensing Fundamentals

[GISC 6381](#) ([GEOS 6381](#)) Geographic Information Systems Fundamentals<sup>1</sup>

**One elective course chosen from the following, or as approved by the Director of the certificate program:**

[GISC 5322](#) ([GEOS 5322](#)) GPS (Global Positioning System) Satellite Surveying Techniques

[GISC 5324](#) ([GEOS 5324](#)) 3D Data Capture and Ground Lidar

[GISC 6317](#) GIS Programming Fundamentals

[GISC 6379](#) Special Topics in Geographic Information Sciences

[GISC 6384 \(GEOS 6384\)](#) Advanced Geographic Information Systems

[GISC 6385 \(GEOS 6385\)](#) GIS Theories, Models and Issues

[GISC 6388](#) Advanced GIS Programming

[GISC 7310](#) Advanced GIS Data Analysis

[GISC 7360](#) GIS Pattern Analysis

[GISC 7361](#) Spatial Statistics

[GISC 7363](#) Internet Mapping and Information Processing

[GISC 7365 \(GEOS 5326\)](#) Advanced Remote Sensing

[GISC 7366 \(GEOS 5329\)](#) Applied Remote Sensing

[GISC 7387](#) GIS Research Design

[MIS 6320](#) Database Foundations

[MIS 6324](#) Business Intelligence Software and Techniques

[MIS 6360](#) Agile Software Project Management

**One required research project course:**

[GISC 6387 \(GEOS 6387\)](#) Geospatial Sciences Workshop

Students should take this course with varied research topics if different certificate programs are pursued.

No more than two courses can be transferred from another institution. Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

## **Graduate Certificate in Local Government Management: 15 semester credit hours**

The School of Economic, Political and Policy Sciences offers a Graduate Certificate in Local Government Management for local government professionals and for MPA students who desire to broaden their knowledge of important issues and approaches employed by professional local public administrators. Local governments in the United States play an important role in our democratic system. They are the place in our democratic system where citizens have the most direct contact with elected and appointed officials on numerous issues.

Local government managers operate in a complex legal and political environment. They are responsible for the provision of varied services directly to citizens, such as land use planning, law enforcement, water and sewer services, and recreation. Both the method and quality of service delivery are greatly influenced by managers who are hired by elected officials. The management of cities and counties has become increasingly professional over the past several decades. How the professional staff delivers services to the public within the political environment in which it works is the topic of many of the courses in this program.

Requirements for admission to the certificate program are the same as for a non-degree seeking graduate student. Completion of fifteen (15) semester credit hours is required to attain the Graduate Certificate in Local Government Management and those semester credit hours may count toward a degree if the student completes all requirements for full admission as a graduate student.

Required courses are:

[PA 6321](#) Government Financial Management and Budgeting

[PA 6342](#) Local Economic Development

[PA 6344](#) Local Government Management

[PA 6345](#) Human Resources Management

Related elective - Permission from the Public Affairs Program Head or MPA Director is required

The related elective may be selected from among courses that pertain to local government offered in the graduate programs of the School of Economic, Political and Policy Sciences. Permission of the certificate coordinator/Public Affairs Program Head/MPA Director must be obtained for the related elective course.

Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

## **Graduate Certificate in Nonprofit Management: 15 semester credit hours**

Nonprofit organizations constitute an increasingly significant sector of the American economy as well as an essential element in American civic life. Nonprofits are found in such diverse fields as health care, education, human services, and criminal justice, as well as in cultural and civic activities. Faced with resource constraints and rising demands for accountability, nonprofit organizations require professional managers with an understanding of both administrative principles and techniques and of the distinctive legal, economic, and social environment within which nonprofits operate.

The Certificate in Nonprofit Management is designed to provide an overview of the nature and context of nonprofit organizations combined with skill-based courses to develop the competencies needed by nonprofit managers. The certificate is intended for professionals already working in the nonprofit sector, those working in private for-profit or governmental settings who would like to work or volunteer in the nonprofit sector, and students without professional experience who seek to prepare themselves for nonprofit careers.

Completion of fifteen (15) semester credit hours are required to attain the Certificate in Nonprofit Management and those hours may be counted toward a degree if the student completes all requirements for full admission as a graduate student.

**Required courses are:**

[PA 6374](#) Financial Management for Nonprofit Organizations

[PA 6380](#) Nonprofit Organizations

[PA 6382](#) Nonprofit Management

[PA 6315](#) Program Evaluation

Related elective - Permission from the Public Affairs Program Head or MPA Director is required

Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

## **Graduate Certificate in Program Evaluation: 15 semester credit hours**

A graduate-level certificate program in Program Evaluation is offered by the School of Economic, Political and Policy Sciences.. Students who complete this program have an opportunity to gain competencies in the design and implementation of program evaluations in fields such as education, health care, human services, criminal justice, and economic development. The Certificate in Program Evaluation may be incorporated into graduate degree programs in the School of Economic, Political and Policy Sciences, or may be taken independently by non-degree seeking students. Students pursuing the certificate program are normally expected to have completed undergraduate courses in statistics and in research methods. Students lacking appropriate preparation may be asked to take needed courses prior to admission to the program.

In order to receive the certificate, students must successfully complete a total of 15 semester credit hours of focused study, comprising of three required courses in the School of Economic, Political and Policy Sciences (9 semester credit hours) and 6 semester credit hours of field practice.

Required courses (9 semester credit hours)

**One of the following:**

[EPPS 6313](#) Introduction to Quantitative Methods

[EPPS 7313](#) Descriptive and Inferential Statistics

**And all of the following:**

[PPPE 6310](#) Research Design I

[EPPS 6352](#) Evaluation Research Methods in the Economic, Political and Policy Sciences

[PPPE 6V91](#) Evaluation Research (Field Practice) (6 semester credit hours)<sup>2</sup>

With permission of the Coordinator of the certificate program, students may substitute appropriate courses from other offerings in the School of Economic, Political and Policy Sciences or prior coursework taken at other institutions.

Students interested in applying for admission to the Certificate in Program Evaluation program should consult the graduate advising office in the School of Economic, Political and Policy Sciences.

Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

## Graduate Certificate in Remote Sensing: 15 semester credit hours

The Remote Sensing Certificate is administered jointly by the School of Economic, Political and Policy Sciences and the Department of Geosciences in the School of Natural Sciences and Mathematics. The American Society for Photogrammetry and Remote Sensing (1997) defines remote sensing as the art, science, and technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring and interpreting imagery and digital representations of energy patterns derived from non-contact sensor systems. Remote sensing involves a powerful set of computerized software and hardware, and sophisticated mathematical, statistical and logical techniques for extraction and presentation of information acquired via non-contact sensors. It provides reliable and cost-effective means of studying the Earth's surface for urban planning, natural resources management and protection, and a wide variety of other fields. Government and non-government organizations continuously seek qualified professionals to use remote sensing for a wide range of applications.

### Admission Requirements

Students seeking the Remote Sensing certificate must have completed an undergraduate degree. Students may complete and submit an application for admission online. Primary admission requirements are: (1) an application to UT Dallas, and (2) an undergraduate transcript. Applicants for the certificate program do not need a GRE (Graduate Record Examination) score or letters of reference for admission.



Students should apply as "non-degree seeking" students to the Geospatial Information Sciences program. Admission requirements for these students are similar to admission requirements for those students who would simply like to take one or more of the related courses without pursuing a certificate.

Up to 15 semester credit hours of course work taken in the certificate program can be applied later to a graduate degree, if desired.

Graduate students in any degree program within UT Dallas may register for GISC courses using standard registration procedures. Students should see their program advisor regarding degree-plan credit assignment. Courses are listed under geospatial information sciences (GISC) in the UT Dallas class schedule with additional offerings under Geosciences (GEOS) and Management Information Systems (MIS).

Required Coursework (15 semester credit hours)

**Two required courses:**

[GISC 6325](#) ([GEOS 5325](#)) Remote Sensing Fundamentals

[GISC 7365](#) ([GEOS 5326](#)) Advanced Remote Sensing

**Two elective course chosen from the following, or as approved by the Director of the certificate program:**

[GISC 5322](#) ([GEOS 5322](#)) GPS (Global Positioning System) Satellite Surveying Techniques

[GISC 5324](#) ([GEOS 5324](#)) 3D Data Capture and Ground Lidar

[GISC 6301](#) GISC Data Analysis Fundamentals

[GISC 6317](#) GISC Programming Fundamentals

[GISC 6379](#) Special Topics in Geographic Information Sciences

[GISC 6381](#) ([GEOS 6381](#)) Geographic Information Systems Fundamentals<sup>1</sup>

[GISC 6384](#) ([GEOS 6384](#)) Advanced Geographic Information Systems

[GISC 6385](#) ([GEOS 6385](#)) GIS Theories, Models and Issues

[GISC 6388](#) Advanced GIS Programming

[GISC 7310](#) Advanced GIS Data Analysis

[GISC 7360](#) GIS Pattern Analysis

[GISC 7361](#) Spatial Statistics

[GISC 7363](#) Internet Mapping and Information Processing

[GISC 7387](#) GIS Research Design

**One required research project course:**

[GISC 6387](#) ([GEOS 6387](#)) Geospatial Sciences Workshop

Students should take this course with varied research topics if different certificate programs are pursued.

No more than two courses can be transferred from another institution. Courses for the certificate must be completed within a 3-year period with a minimum cumulative GPA of 3.0.

1. Individuals experienced with GIS may have the introductory course (GISC 6381) waived at the discretion of the program head, but must take an additional course from the elective courses listed in this certificate program.

2. This is a two-semester long program evaluation project that culminates in a final report.

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