

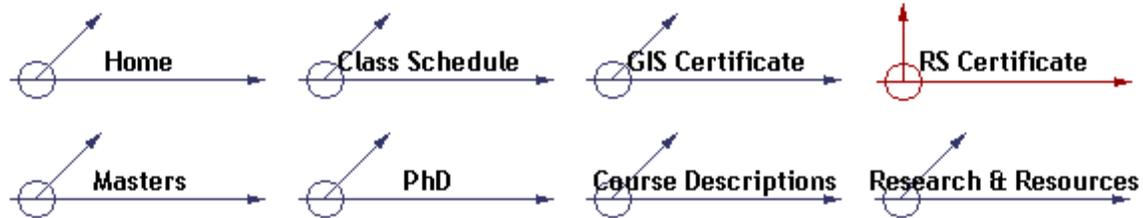


[University of Texas at Dallas](http://www.gis.utdallas.edu)

GEOSPATIAL INFORMATION SCIENCES



*Excellence in GIS education and research for over a decade.*



## Graduate Certificate in Remote Sensing

[Class Schedule](#)  
[GIS Certificate](#)  
[RS Certificate](#)  
[Masters](#)  
[PhD](#)  
[Course Descriptions](#)  
[Research & Resources](#)

[BA in Geography](#)

[On-line Application](#)

[GIS Study Awards](#)

[e-mail queries](#)

[current events](#)

[GIS Internet Links](#)

[UTD Data Resources](#)

University of Texas at Dallas  
 School of Economic, Political  
 and Policy Sciences  
 PO Box 830688  
 Richardson, Tx 75083-0688  
 972-883-2720  
 972-883-6297 (fax)

*Competence in remote sensing technologies, combined with 15 hours of credit applicable to a graduate degree.*

Remote sensing is 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 representation of energy patterns derived from non-contact sensor systems ([American Society for Photogrammetry and Remote Sensing](#)). It provides a reliable and cost-effective means of studying the environment for protection, natural resources management and urban planning. This certificate program provides training in this exciting technology, while also granting university credit which can be applied toward a graduate degree. Government and non-government organizations continuously seek qualified professionals to use remote sensing for a wide range of applications.

Classes are offered through the state of the art facilities housed within the [NASA Center for Excellence in Remote Sensing](#) in the Department of Geosciences and the [Bruton Center](#) in the School of Economic, Political and Policy Sciences. The certification requires 15 graduate hours (5 classes) detailed below. All courses taken as part of the RS Certificate also count toward the [Master of Geoscience](#) degree and the [Master of Science in Geospatial Information Sciences](#) degree, and can also be done in conjunction with the Graduate Certificate in Geographic Information Systems.

-  [Admissions and Program Requirements](#)
-  [Required Courses](#)
-  [Course Planning](#)
-  [Costs](#)
-  [Facilities](#)
-  [GIS Workshop Student Projects](#)

## Admissions Requirements:

Students seeking the RS certificate must have completed an undergraduate degree and should apply as "non-degree seeking" students. Admissions paperwork requires only:

-  an application to UTD Graduate School
-  an undergraduate transcript.

You may complete and submit an [application for admission online](#). You should apply as a "non-degree" student to the MGIS program. You do not need a GRE (graduate record examination) score or letters of reference for admission to the certification course sequence. Competence in microcomputer use and familiarity with MS Windows and file management (directories, copying, etc.) is expected. Admissions requirements are the same for students who would simply like to take one or more courses, without pursuing certification. Up to 15 hours of course work taken as a non-degree seeking student can be applied later to a graduate degree should you desire.

## Registration by Current UTD Students

Graduate students in any degree program may register for GIS courses using standard registration procedures. Undergraduate students eligible for the Fast Track program may also enroll. See your program adviser regarding degree-plan credit assignment. Courses are listed under Geosciences (GEOS) with additional offerings under Geospatial Information Sciences (GISC) in the UTD Class Schedule.

## Required Courses:

The Five courses required to earn the remote sensing certificate are:

I. GEOS 5325 [Introduction to Remote Sensing](#)

Understanding modern techniques of imaging the Earth's surface with passive and active remote sensing systems.

II. GISC 6381 [Geographic Information Systems Fundamentals](#)  
(formerly *Introduction to GIS*)

PC-based hands-on introduction to GIS concepts, technologies and their applications.

III. GEOS 5326 or GISC 7365 [Remote Sensing Digital Image Processing](#)

Techniques in remote sensing digital image processing such as

extractions of initial statistics extraction of thematic information, an change detection. Prerequisite: GEOS 5325

IV. **GEOS 7327 or GISC 7367 Remote Sensing Workshop**

Student-professor discussion on implementation o remote sensing techniques which focuses on on on completing a 3-credit hour project. Prerequisite: GEOS 5325 & 5326.

V. **One of the following:**

● **GEOS 5329 Applied Remote Sensing, or**

Application of remote sensing to studying the environment including vegetation, water, urban landscape and geology.

● **GEOS 5328 Radar Remote Sensing**

Principles and applications of radar remote sensing, including synthetic aperture radar, radargrammetry and single-path and repeat-path interferometry.

Courses for the Certificate must be completed within a 3-year period.

## Costs

The total cost per semester for Texas residents, including tuition and all fees, is approximately (Fall 2006):

● \$1,350 for one course

● \$2,250 for two courses

Text books would normally be an additional \$75-\$125 per course

Additional information on fees is available [here](#).

## Course Planning

The usual course sequencing is such that the Introductory course and the Management and Implementation course are offered in the Fall. The Applied GIS is offered in the Spring and the workshop in the Summer. Courses from the topics are offered on a rotating basis. Students can complete the certificate in one calendar year starting in the Fall. [Click here for current schedule](#) of classes.

Example One Year Program		
Semester	Course #	Course Title

Fall	GEOS 5325	Introduction to Remote Sensing
Fall	GISC 6381	GIS Fundamentals (formerly, Introduction to GIS)
Spring	GEOS 5326	Remote Sensing Digital Image Processing
Spring	GEOS 5329 or 5328	Applied Remote Sensing or Radar Remote Sensing
Summer	GEOS 7327	Remote Sensing Workshop

## Facilities

Classes are offered through state-of-the-art GIS facilities housed at the *Bruton Center* in the School of Economic, Political and Policy Sciences and at the *NASA Center for Excellence in Remote Sensing* in the Department of Geosciences. These include a 21-station and a 15-station PC lab running Windows XP for instruction; clusters of UNIX-based SUN servers and workstations and advanced PC and MAC systems for more specialized applications and large scale data storage; and input/ output devices for handling high resolution and large scale GIS materials. The University's extensive instructional computing facilities, which include a UNIX-based teaching lab, are also available. Facilities are open extended hours including evenings and weekends. Enrollment in hands-on courses is controlled to ensure access to computer resources.

## Information

For further information, contact:

Dr Mohammed Abdelsalam Director, Certificate in Remote Sensing  
 Department of Geosciences  
 University of Texas at Dallas  
 P.O. Box 830688  
 Richardson TX 75083-0688  
 972-883-2401  
 E-mail: [geosci@utdallas.edu](mailto:geosci@utdallas.edu)  
 Web: [www.utd.edu/dept/geoscience](http://www.utd.edu/dept/geoscience)

or Dr Ronald Briggs Director, Programs in GI Science  
 Graduate Studies  
 School of Social Science s  
 P.O. Box 830688  
 Richardson, TX 75083-0688

Phone: (972) 883-2720

E-mail: [gis-grad-info@utdallas.edu](mailto:gis-grad-info@utdallas.edu)

Web: <http://www.utdallas.edu.dept/socsci>

[\[top of page\]](#)



[GISci Home](#) | [EPPS](#) | | [Bruton Center](#) | | [Geosciences](#)