

# Certificate in Geographic Information Systems

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Certificates may be earned by regularly matriculated or extended learning students and denote successful completion of a prescribed program of study designed to:

1. impart specified professional/vocational/career competencies; or
2. produce mastery of the content of a sub-field of an academic major (discipline); or
3. provide exposure to the range of materials in a traditional or emerging interdisciplinary field.

Certain certificate programs contain 6000-level courses as requirements and/or electives. These 6000-level courses may not be taken by undergraduate students. Candidates must receive two-thirds of their certificate-applicable credit from the university. The transferring of credit or the substitution of courses may occur only after application to the appropriate campus authority.

Geographic information systems (GIS) has been developing rapidly and increasingly become a vital part in government policy-making, and industrial applications. The Certificate in Geographic Information Systems is designed to provide students with the fundamental principles and cutting-edge techniques in GIS and related technology. Upon completion of the certificate, students are well equipped with necessary knowledge and skills for their GIS or GIS-related career. Requirements (22 - 23 units).

## Certificate Requirements (22-23 units)

### Required courses (15)

GEOG 2250	Introduction to Geographic Information Systems and Cartography	4
GEOG 3710	Advanced Geographic Information Systems	4
GEOG 3730	Geo-Spatial Analysis	3
GEOG 4880	Remote Sensing of the Environment	4

### Elective courses (7-8)

Choose any two courses from the following:		7-8
GEOG 4850	Web GIS	
GEOG 4860	GIS and Socio-Economic Applications	
GEOG 4870	Environmental GIS	
GEOG 5753	Internship in Geography	

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**Total Units** **22-23**