

## **Geographic Information System (GIS) Certificate**

GIS is rapidly becoming ubiquitous and at the same time increasingly complex. The proliferation in GIS throughout government, industry, and academia has resulted in an increase in the number of employment opportunities for those who are able to use GIS. The **GIS Certificate** at UFV provides both students and people in the workforce with the opportunity to enhance their ability and credentials for working with geospatial data and technologies.

### **Background**

A Geographic Information System (GIS) is a tool for using geography, or the location of information, to help make better, more informed decisions. Linking location to information is a process that applies to many aspects of decision making in business and in the community. Choosing a site for a new building, zoning a neighborhood, finding out why crime happens at a particular location, or mapping the risk to water resources are all problems involving questions of geography. GIS is a powerful tool for managing geographic information and incorporating location into decision making in a wide variety of disciplines.

### **Employment Opportunities**

There are a number of GIS job sites on the Internet which demonstrate the range of GIS-related jobs in many fields. There are also a number of discipline-specific job sites (e.g. in environmental applications or in municipal planning departments) that advertise positions in which GIS skills are part of the job qualifications. These positions can range from GIS users in Information Technology who are required to be skilled in computer programming and/or capable of constructing and managing databases, to GIS application users with varied backgrounds (such as forestry, environmental science, or planning) who use GIS as a problem solving tool within their own discipline. The following are a few of the web sites dedicated to GIS employment:

The GIS Jobs Clearinghouse: <http://www.gjc.org/gjc-cgi/listjobs.pl>

Geojob.org: [http://www.geojob.org/jobs\\_GIS\\_Canada.php](http://www.geojob.org/jobs_GIS_Canada.php)

GIS Job Boards: [http://gisjobs.ca/job\\_boards-php.php](http://gisjobs.ca/job_boards-php.php)

Canadian GIS: <http://canadiangis.com/employment.php>

### **The Program**

The GIS Certificate credential can be obtained by successfully completing five required GIS-themed courses as well as a choice of a course in computing or programming, a choice of a statistics course and a choice of a quantitative analysis course (see Certificate Requirements Section). Generally, a UFV student will work towards the GIS Certificate credential while also working towards another UFV degree. A person with an existing degree can enter the GIS Certificate Program at any time and work towards obtaining the credential by taking the appropriate courses. Anyone interested in the GIS Certificate should map out their course planning with an advisor in order to avoid scheduling conflicts.

## Certificate Requirements

<b>Requirements for GIS Certificate</b>	
<b>Required Courses</b>	<b>Units</b>
GEOG 253 Introduction to GIS	4
GEOG 353 Applications in GIS	4
GEOG 453 Remote Sensing of the Environment (Winter 2011/Winter 2013)	4
GEOG 454 Geospatial Data Analysis and modeling (Winter 2012/Winter 2014)	4
GEOG 458 GIS Project	4
<b>One of the following</b>	
COMP 125 Principles of Computing	3
COMP 150 Introduction to Programming	4
COMP 155 Object-Oriented Programming	4
<b>One of the following</b>	
MATH 104 Introductory Statistics	4
MATH 106 Statistics I	4
MATH 270 Introduction to Probability and Statistics	4
<b>One of the following</b>	
GEOG 352 Explanation in Geography: Quantitative Methods	4
SOC/ANTH/MACS 355 Quantitative Research Methods	4

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