

## **Humanities and Social Sciences Programs**

# **Master of Geographic Information Systems Applications**

- **2 Years - Blended Face-to-Face/Online Program**
- **2.5 Years - Fully Online Program**
- **Program Fees: Domestic Students, International Students**
- **Apply for Admission**

Program requirements prior to June 2015

## **The Program**

The Master of Geographic Information System Applications (MGISA) Program builds on the existing Advanced Diploma in GIS Applications (ADGISA) Program by providing opportunities for students to strengthen their GIS skills, enabling them to compete more effectively and for better positions in the job market.

The program consists of two stages; each stage has 30 credits. Stage 1 involves the same courses as the current Advanced Diploma, and is available both face-to-face and online; the Stage 2 courses will be delivered online, with face-to-face or online supervision and defence of the research project.

The program combines a strong academic foundation with professional skills by requiring both academic courses (including labs and seminars) and a research project, thus generating an intellectual environment in which students can enhance their theoretical knowledge and practical skills in the area of Geographic Information Science.

## **Program Length**

The MGIS program is a minimum of two full years in length. The first 30 credits may be taken face-to-face in one year or online in one-and-a-half years, as in the current Advanced Diploma. Thus, the program may be taken as a two and one-half year fully online program, with a start date of January and a completion date of August, or as a two-full-year blended face-to-face/online program, with a September start date a completion date of August.

## **Career Opportunities**

The GIS industry grew 10.3% in 2010 and approximately 8% in 2011, showing continued strong growth in this sector. A GISuser survey regarding the GIS workplace also indicated that 42% of respondents hold at least a master's degree, indicating that it may be necessary for new GIS professionals to complete such a degree in order to compete successfully in the job market. By 2015, the GIS industry is poised to become a \$10.6 billion industry, according to a 2012 Global Industry Analysts, Inc. report.

GIS is a technology that has been applied to many application areas and thus offers graduates a broad range of employment opportunities. In the Vancouver Island area and throughout British Columbia, GIS expertise is required by many employers, including the following:

- Federal Government, such as the Pacific Biological Station here in Nanaimo or Environment Canada in Vancouver;
- Provincial Government, such as regional offices of Ministry of Forests or Ministry of Environment here in Nanaimo, or the many ministry offices in Victoria;
- Local Government, such as the many Regional Districts and Municipalities found on Vancouver Island;
- First Nations, such as the Hul'qumi'num Treaty Group or the Tseshaht First Nation;
- Large private-sector organizations or utilities, such as Island Timberlands and Western Forest Products; and
- Smaller consulting firms, particularly those specializing in engineering, forestry and environmental sciences.

## **Admission Requirements**

Admission to the program is possible at either Stage 1 or Stage 2.

### **Stage 1 Admission Requirements**

- A Bachelor's degree in any discipline.
- Satisfaction of VIU's International Student English Language Requirements for Academic Programs
- Significant previous experience or training in GIS including completion of an introductory GIS course from an accredited post-secondary institution.
- A letter of intent that includes:
  - a summary of academic and professional experience; and
  - a statement of career goals; and
  - a description of the research topic which the applicant wishes to pursue.
- Two letters of reference.
- Participation (if requested) in an interview conducted by the Admissions Committee.

### **Stage 2 Admission Requirements**

Completion of Stage 1 does not guarantee acceptance into Stage 2. For all students, acceptance into Stage 2 will be based on:

- Meeting the program's 'Stage 1' admission requirements
- Completion of Stage 1, VIU's Advanced Diploma in GIS Applications (ADGISA), or an equivalent post-graduate GIS diploma program with a minimum grade of "B" in all GIS diploma courses.
- Satisfactory assessment of the intended research topic, to ensure its complexity is appropriate for a Master's level of study and that the scope of work is achievable within the duration of the program.

### ***Recommendations for Admission***

Incoming MGISA students must have a strong technical background in GIS to ensure they are capable of handling the advanced techniques and topics studied in the program coursework and required of the research project.

### ***Notes on Admission***

Admission into the program is competitive. Enrolment is limited. Students who meet or exceed the minimum admission requirements may not necessarily be admitted to the program. Students entering the program who have completed the VIU Advanced Diploma in GIS Applications (ADGISA) or an equivalent post-graduate GIS diploma will be eligible to apply directly to Stage 2 of the MGISA program. Students who are unsuccessful in securing acceptance to the MGISA program may be offered admission to the ADGISA program.

Students admitted to the MGISA program may be able to complete the program on a part-time basis. Students interested in studying part-time are advised to contact the department to discuss possible part-time options.

### ***Transfer from other Institutions***

An assessment of courses from other institutions will be required to determine transferability of credits. This will be performed by an Admissions Committee in consultation with the Registrar's Office.

## **Program Regulations**

To proceed into Stage 2 of the MGISA program, students will be interviewed by an Admissions Committee after completion or partial completion of Stage 1. Students will be enrolled in Stage 2 based on the results of these interviews. Acceptance into Stage 2 will be based on student performance in Stage 1 courses and an assessment of the intended research topic. To be eligible students must have a minimum grade of "B" in all GIS diploma courses. Completion of Stage 1 courses, which earns students the Advanced Diploma in GIS Applications, does not guarantee acceptance into Stage 2.

For the GEOG 599 Master's Research Project course, students may elect to continue beyond the 32-week minimum subject to a continuation fee (amount TBD). This fee must be paid until the completion and acceptance of the student's Master's Research Project, whether or not the student is actively working on the project. Temporary (one-semester) exemptions may be granted in cases of family or personal emergency.

## **Start Date and Application Deadline**

Applications are accepted on a continuous basis year round. Seats are allocated on merit and first priority for consideration will be given to applications received by the intake application deadline. Late applications may be considered if seats remain unfilled. For information regarding start dates and application deadlines check the Program Availability List.

## **Special Expenses**

In addition to tuition fees, books will cost approximately \$300 and general equipment in the form of personal computer and GPS receiver will cost about \$2000 CAD. Students are strongly encouraged to bring a laptop (PC) to all classes; GIS/Remote Sensing/GPS software required for the completion of assignments in the program will be provided to the student.

*All fees and other costs are subject to change without prior notice.*

## **Program Outline - Blended Option**

<b>Year 1</b>	<b>Credits</b>
GEOG 501 - (Foundations of Geographic Information Systems)	3
GEOG 511 - (Geodatabases)	3
GEOG 521 - (General Spatial Analysis)	3
GEOG 523 - (Advanced Applied Spatial Analysis)	3
GEOG 531 - (Visual Programming for GIS)	3
GEOG 581 - (Management Issues in GIS)	3
GEOG 591 - (GIS Applications Project: Practicum)	9
GEOG 593 - (Internet GIS)	3
<b>Credits</b>	<b>30</b>

<b>Year 2</b>	<b>Credits</b>
GEOG 582 - (GIS Infrastructure)	3
GEOG 583 - (Advanced Techniques in GIS)	3
GEOG 598 - (Research Project Development)	6
GEOG 599 - (Master's Research Project)	18
<b>Credits</b>	<b>30</b>

## Program Outline - Fully Online

<b>Year 1</b>	<b>Credits</b>
GEOG 501 - (Foundations of Geographic Information Systems)	3
GEOG 511 - (Geodatabases)	3
GEOG 524 - (Remote Sensing & Digital Image Processing)	3
<b>Credits</b>	<b>9</b>

<b>Year 2</b>	<b>Credits</b>
GEOG 521 - (General Spatial Analysis)	3
GEOG 523 - (Advanced Applied Spatial Analysis)	3
GEOG 525 - (Global Positioning Systems and Survey Analysis)	3
GEOG 530 - (Programming Foundations)	3
GEOG 531 - (Visual Programming for GIS)	3
GEOG 581 - (Management Issues in GIS)	3
GEOG 593 - (Internet GIS)	3
<b>Credits</b>	<b>21</b>

<b>Year 2.5</b>	<b>Credits</b>
GEOG 582 - (GIS Infrastructure)	3
GEOG 583 - (Advanced Techniques in GIS)	3
GEOG 598 - (Research Project Development)	6
GEOG 599 - (Master's Research Project)	18
<b>Credits</b>	<b>30</b>

## **Completion Requirements**

The Master of Geographic Information Systems Applications credential is granted to students who complete all the courses in the program.

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