

## **Science & Technology Programs**

# **Advanced Diploma in GIS Applications**

**8-month Program - In Class**

**12-month Program - online**

### **Fees**

## **The Program**

The Advanced Diploma in GIS Applications provides skills training in geographic information systems (GIS) to university and college graduates who wish to strengthen their employment opportunities in GIS applications - an area that is in high demand around the world.

During this intensive program delivered over two terms, students will learn to use GIS as a spatial informational and problem-solving tool. Content is equally divided between developing hands-on competency in GIS technology and using GIS as a tool in resolving geographic problems through assignments and project work. Students in the program will be well positioned to secure employment upon graduation.

ESRI's ArcGIS is the main software package used in the delivery of this program. Published materials and instructional courseware packages will provide support for each course. A select number of course modules, available through ESRI's Virtual Campus, will be incorporated into the delivery of specific courses. Use of these modules enables students and instructors to keep pace with changes in the world's most popular GIS package - ArcGIS.

All students are required to complete a nine-week GIS project in the second term of the program. The project is intended to provide students with an opportunity to apply GIS knowledge and skills learned in the first term. Each student will be required to select a potential sponsor and develop a project proposal in consultation with the sponsor.

## **Career Opportunities**

With its focus on GIS applications, the program will graduate students who are well qualified to assume employment as GIS applications professionals in any of the following fields:

- Business - marketing, real estate, property development.
- Education - primary, middle, secondary, colleges, universities, research institutes, libraries.
- Engineering - surveying, civil.
- Government - urban and regional planning, public administration, health, education, heritage.
- Media - news papers, magazines, television, internet.
- Natural resource management/environmental management - air, land, and water including forestry, agriculture, fisheries, mining.
- Research - physical and biological, social sciences, humanities.
- Security - public safety, law enforcement, immigration, national security, defense.
- Transportation - planning, systems management.
- Utilities - oil and gas pipelines, electrical transmission, telephony.

# Admission Requirements

- University degree or technical diploma from an accredited college or institute.
- Applicants must provide evidence of having completed the following introductory-level courses from an accredited post-secondary institution, preferably within the last three years:
  - Geographic Information Systems (equivalent to VIU's GEOG 328).
  - Statistics (equivalent to VIU's GEOG 221, MATH 161 or MATH 211).
  - Computer literacy, preferably at least one course in Computer Science.
- The program is taught and assessed in English. Students whose first language is not English may be required to show evidence of proficiency in English (i.e., min. TOEFL 550, IELTS 6.0).

## ***Recommendations for Admission***

- Academic or applied experience in remote sensing and databases would be advantageous.

# Required Equipment and Supplies

Students will be required to have their own laptop computer capable of running ArcGIS 9.0 and storing large geo-referenced databases. Under an agreement with ESRI Canada, Vancouver Island University's IT department will make the software available to students and will have the software available on an appropriate server. Students, however, will be responsible for maintaining their own laptop computers.

# Start Date and Application Deadline

The in-class program starts in September and the online program in January. Applications are accepted on an on going basis and will be processed as space permits.

# Fees

Tuition is \$8,500. Students will also be required to pay student fees. Upon acceptance into the program, tuition fees are payable according to the fee payment schedule.

Students applying to VIU for the first time will be charged a \$30 non-refundable application fee.

*All fees are subject to change without prior notice.*

# Program Outline - In Class

GEOG 501 Foundations of Geographic Information Systems

GEOG 511 Geodatabases

GEOG 521 General Spatial Analysis

GEOG 523 Advanced Applied Spatial Analysis

GEOG 531 Visual Programming for GIS

GEOG 581 Management Issues in GIS

GEOG 591 GIS Applications Project: Practicum

GEOG 593 Internet GIS

# Program Outline - Online

GEOG 501 Foundations of Geographic Information Systems

GEOG 511 Geodatabases  
GEOG 521 General Spatial Analysis  
GEOG 523 Advanced Applied Spatial Analysis  
GEOG 524 Remote Sensing & Digital Image Processing  
GEOG 525 Global Positioning Systems and Survey Analysis  
GEOG 530 Programming Foundations  
GEOG 531 Visual Programming for GIS  
GEOG 581 Management Issues in GIS  
GEOG 593 Internet GIS

## **Graduation Requirements**

Students must obtain a passing grade for all courses in the program.

Student assessments will be based on a combination of quizzes, exams, lab assignments, and projects. Although students will be required to complete a set of modules available on ESRI's Virtual Campus, no marks will be allocated for this work. Each student will be required to complete a GIS applications project under the supervision of a faculty member or a GIS professional in the work place.

## **For Further Information**

For more information please contact VIU's Centre for Continuing Studies 250-740-6160.

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