

Archived: August 8, 2022

Arts, Humanities and Social Sciences Programs

Advanced Diploma in Geographical Information Systems (GIS) Applications

Location Offered:

Nanaimo, Online

Credential:

Advanced Diploma

Program Length:

8 Months

The Program

- **8-Month Diploma Program - In Class**
- **16-Month Diploma Program - Online**

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 in-class 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.

Program Outline

Program Outline - In Class

Advanced Diploma in GIS Applications - In Class	Credits
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
Total Credits	30

Program Outline - Online

Advanced Diploma in GIS Applications - Online	Credits
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 524 - (Remote Sensing & Digital Image Processing)	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
Total Credits	30

Completion 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.

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).
 - Computer literacy, preferably at least one course in Computer Science.
- Applicants whose previous degree was obtained in a country where English is not the primary/official language and from a university where English was not the language of instruction must meet one of VIU's English Language requirements for Academic Programs.

Recommendations for Admission

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

advantageous.

Notes on Admission

Enrolment in this program is limited. Students who meet or exceed the minimum admission requirements may not necessarily be admitted to the program. Students are encouraged to apply as early as possible.

Required Equipment and Supplies

Students will be required to have their own laptop computer capable of running ArcGIS 10.0 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.

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.

Contact

For more information please contact Dave Cake at 1-888-920-2221, Ext. 6153 or 250-740-6153 for local callers.

Start Date and Application Deadline

Applications are accepted on an ongoing basis. The in-class program starts in September and the online program in January.

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