

Geomatics Technician

Program Location:	Lindsay
Program Code:	GMT
Co-ordinator:	Bruce Pettit
Credential:	Ontario College Diploma
Start Date:	September 04, 2012
Tuition Fees:	\$1,830.95 per semester. Tuition and fees subject to change.



GIS and GPS are revolutionizing the way we see the world. Start your career as a Geomatics Technician, and chart a course for success in this expanding field.

Program Highlights

Recent studies reveal that there is a strong need for graduates trained in Geomatics principles and technologies. Fleming College's Geomatics Technician program is designed to address the market's growing requirements. The study of geomatics encompasses three main areas:

- data collection (GPS, surveying, remote sensing)
- data analysis (GIS)
- presentation and distribution (cartography, web interfaces)

As a graduate of the Geomatics Technician program, you will be capable of collecting, organizing, and managing geographic data using GPS, remote sensing, and surveying tools. Your new GIS skills will allow you to analyse data, and you'll use cartography and web interface techniques to present the geographic information you've collected. Working with spatial data, you will develop expertise in all areas of geomatics, and in the use of a broad range of computer software. You'll possess the sophisticated skills of the cartographic designer and the ability to apply GIS principles, and as a Geomatics Technician you will be well-prepared to participate in the ongoing development of emerging Geomatics technologies and practices.

This two-year diploma program, the first of its kind in Ontario, will train you to use state-of-the-art technology tools to collect, mine, store, manipulate, analyze, interpret and communicate geographic information - skills that can be applied to virtually any discipline such as urban planning, engineering, or crime investigation. With a one-to-one student to computer ratio, you'll have ample opportunity to practice your skills in our new geomatics labs. Your training will include proficiency in a variety of operating systems used in the industry today. You will also acquire expertise using GIS software from ESRI, Autodesk, PCI Geomatics, and CARIS - providing you with flexibility in the workforce.

Why Choose Fleming

Fleming's leadership in post-secondary Geomatics education has been recognized by industry, government and business through their support in establishing the Geomatics Institute at Fleming. Our strong partnerships offer students access to the latest software packages and data resources as well as unprecedented learning and employment opportunities. Many of the first GIS applications were developed in the field of natural resource management for which Fleming is renowned, and the Geomatics Technician program benefits from the knowledge and expertise that Fleming has acquired in more than 20 years of teaching GIS, cartography and other areas of geomatics. We offer students expert faculty, state-of-the-art learning facilities, and have a long history of turning

out award-winning graduates who excel in their fields.

Common First Semester

Students in our School's diploma programs take the same courses for first semester after choosing and being accepted into one of our programs. This common focus exposes you to a variety of career options and other programs. You will have the freedom to explore and obtain a multidisciplinary perspective, while you acquire a base of knowledge and fundamental skills.

Although students are accepted into a specific program for their first semester, the common first semester allows you to change direction if you find another program or career area is more appealing. Once you have successfully completed the common first semester, you can enter the program of your choice in second semester, subject to enrolment capacity.

Work Experience

You'll spend a significant portion of the program doing experiential work - putting theory into practice. The latest GPS data collectors are used in field data collection exercises. Project work in various applications makes use of data from the Land Information Ontario (LIO) warehouse and datasets from other data providers. You will learn to use various software packages used by industry, government agencies and business. Geomatics Technician graduates can also participate in an optional, post-graduation internship, allowing them to work for host companies, while earning an additional credit. You can either apply for a posted position or obtain your own internship.

Is this You?

To be successful in this program, you should possess the following:

- affinity for computer applications
- affinity for maps and geography
- visual creativity
- interest in spatial representation and data analysis
- willingness to work hard (45 - 65 hours/week)
- sound oral and written communication skills
- analytical and creative thinking

Career Opportunities

You'll be in demand! Graduates can expect a very high placement rate. With your Geomatics Technician diploma, you'll be well-equipped to pursue a variety of exciting positions at the government or industry level, with job titles such as:

- GIS Technician/Technologist
- Survey Technician (Land & Topographic Surveys)
- Geomatics Technician
- GIS Analyst
- GIS Technical Assistant
- Cartographic Technician

- Cartographer
- Applied Geomatics Technician
- Geomatics Support Technician
- Map Librarian
- CAD Operator

You may find yourself working for:

- city/municipal engineering and planning departments
- conservation authorities
- private sector planning
- consulting
- mapping
- surveying
- utility and natural resources firms
- provincial and federal government mapping agencies
- NGOs

Minimum Admission Requirements

OSSD with the majority of credits at the College (C) and Open (O) level, including:

- 2 College (C) English courses (Grade 11 or Grade 12)
- 2 College (C) Math courses (Grade 11 or Grade 12)

When (C) is the minimum course level for admission, (U) or (U/C) courses are also accepted.

Mature Students

If you are 19 years of age or older before classes start, and you do not possess an OSSD, you can write the Canadian Adult Achievement Test to assess your eligibility for admission. Additional testing or academic upgrading may be necessary to meet specific course requirements for this program.

*** Students starting in January are required to attend classes over the summer semester.**

Related Programs

As a successful graduate of the Geomatics Technician diploma program, you may wish to pursue a Fleming College post-graduate specialist certificate in the GIS-Applications Specialist or GIS-Cartographic Specialist program. You may take advantage of a learning pathway that will allow you to enter into 2nd semester of either one of these programs. You will require the following to be eligible:

- Minimum grade of 70% in Problem Solving and Programming, Course GEOM40 in the Geomatics Technician program
- Additional training through 2 Ontario Learn (online) courses: HTML Introduction and SQL Introduction. The Ontario Learn courses are offered frequently during the year. These courses can be taken whenever they are available, but must be completed by December, prior to January entry to GIS. Students are responsible for course fees and for ensuring that the GIS program coordinator and Fleming Admissions office receive a transcript indicating successful completion of these courses.

By adding an **Ontario College Graduate Certificate** to your diploma you can expand your career options.

Geomatics Technicians who have completed the GIS Specialist programs have done very well in the workforce.

Additional Costs

Plan to spend \$1,175 for books and supplies during the first year and \$1,000 during the second year.

Transfer Agreements

We are committed to providing students and graduates with flexible options to get maximum recognition of their college studies. Through joint programs and transfer agreements with the following universities, you can apply the learning you acquire at Fleming College to earn a related degree in less time, and at less cost.

- Griffith University, Queensland, Australia
- University of New Brunswick
- University of Ontario Institute of Technology

Curriculum for Geomatics Technician

Semester 1

Code	Course Name	Hours
MATH 63	Applied Mathematics in Natural Resource Sciences	45
COMM 44	College Communications for Environmental Science	37
ENVR 20	Ecology and Environment	60
ECOS 13	Ecosystem Skills	60
GEOM 36	Geospatial Techniques	45
NATR 8	Environmental Leadership	45

Program intake suspended for 2012/13

Semester 2

Code	Course Name	Hours
GEOM 8	Cartographic Principles	45
GEOM 14	Digital Map Production	45
GEOM 43	GIS Database Fundamentals	45
GEOM 21	GIS Principles	45
NATR 12	Image Data Interpretation	45
COMM 34	Technical Reporting	45
GEOM 38	Natural and Human Geography	45

Program intake suspended for 2012/13

Semester 3

Code	Course Name	Hours
GEOM 27	Cartographic Structures	45
GEOM 19	GIS Analysis	45
APST 64	Geomatics Field Camp	40
SURV 18	Geomatics in Surveying	45
GEOM 32	Graphic and Information Design	45
ORGB 10	Human Relations	45
GEOM 46	Thematic Mapping	45
GENED	General Education Elective	

Program intake suspended for 2012/13

Semester 4

Code	Course Name	Hours
APST 44	Applied Geomatics Project	45
GEOM 20	GIS Applications	45
GEOM 35	Land Information and Parcel Based Mapping	45
GEOM 40	Problem Solving and Programming	45
GEOM 41	Remote Sensing	45
GEOM 48	Web Design and Publishing	45

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