



ALGONQUIN COLLEGE
GEOMATICS TECHNICIAN
Ontario College Diploma (1584X)

Introduction

Algonquin College's 2-Year Geomatics Technician Program is designed to enable graduates to gather and compile spatial data from various sources, analyse data using Geographic Information Systems (GIS), and construct functional maps and reports for use in analysis, problem-solving and forecasting. The curriculum includes courses on GIS, cartography, remote sensing, and geographic database design. GIS technologies are used to acquire, analyze and present spatial data in an ever-increasing number of disciplines, from archaeology to zoology, in both the private and the public sector. According to recent labour trend information provided by Service Canada, the demand for mapping and related GIS technical expertise has increased over the last few years. Job opportunities for graduates will come primarily from the retirement of personnel in GIS-related positions and from GIS-related jobs created in the public, private and military sectors.

Academic Credit Recognition of Canadian Forces Geomatics Technician Qualification Level 5A for Geomatics Technician Ontario College Diploma (1584X)

As a result of an innovative partnership between Algonquin College and the Canadian Forces (CF), qualified current and former CF Regular Force Geo Tech QL5A members are eligible for a credit transfer which accelerates the time it takes to complete Algonquin's Geomatics Technician Program.

Algonquin College, through its School of Advanced Technology, undertook an assessment of the CF Regular Force Geomatics Technician Qualification Level 5A (Geo Tech QL5A) training program. The purpose was to identify the components of the CF Regular Force Geo Tech QL5A training program that are equivalent to the required learning outcomes for the courses in Algonquin's Geomatics Technician program.

As a result, qualified current and former CF Regular Force Geo Tech QL5A members who previously met the standards of Geo Tech QL5A training delivered by the School of Military Mapping (SMM) and can provide evidence that they have been:

- a. **actively working as a Geomatics Technician or supervising a Geomatics Technician within the Forces for at least 2 of the last 7 years**

OR

- b. **actively working in the field of Geomatics/GIS/Remote Sensing for at least 2 of the last 7 years and can provide a written job description that indicates they have been actively using Geomatics/GIS/Remote Sensing skills or supervising work in Geomatics/GIS/Remote Sensing.**

will be considered to have covered the majority of the learning that is equivalent to that which is required by the 1584X diploma program (Table 1). **See complete Geomatics Technician Program of study on page 7.**

Table 1 - Eligible Course Equivalencies

| Course # | Course Name |
|----------|---|
| GIS2101 | GIS 1 |
| GIS2102 | Graphic Production Techniques |
| GIS2104 | Map Fundamentals |
| ENL1813T | English 1 |
| CON8430 | Gen Ed Elective I (Computers and You) |
| GIS2103 | Introduction to Remote Sensing and Image Interpretation |
| GIS2200 | Statistics for Geomatics |
| GIS2201 | GIS 2 |
| GIS2202 | Cartographic Design |
| GIS2204 | Digital Data Collection |
| GIS2303 | Remote Sensing 2 |
| GIS2304 | Photogrammetry |
| GIS2402 | Thematic Mapping |
| GIS2403 | 3D Visualization and Dynamic GIS |
| | General Elective II (Civic Life theme) |
| | General Elective III (Personal Understanding theme) |

The course learning requirements which were not covered will need to be satisfied through the successful completion of a Geomatics Technician Bridging Program comprised of **six (6)** Algonquin on-line courses listed in Table 2 below.

Table 2 – Geomatics Technician Bridging Program

| Course # | Course Name | Hours |
|----------|---------------------------------------|-------|
| MAT1584B | Basics of Mathematics | 10.0 |
| GEO2410B | Natural and Human Geography | 9.0 |
| GIS2301 | Geoprocessing | 45.0 |
| GIS2302 | Web Design and Publishing | 45.0 |
| GIS2411B | GIS Application Project Course Part 1 | 108.0 |
| GIS2412B | GIS Application Project Course Part 2 | 108.0 |

See brief descriptions of the six (6) courses listed below:

| Course # | Course Name and Overview | Hours |
|----------|--|-------|
| MAT1584B | Basic of Mathematics Students use the properties of Exponential and Logarithmic Functions. Students define and use complex numbers. | 10.0 |
| GEO2410B | Natural and Human Geography Students examine Flora and Fauna and its influences on landscape, as well as human activity influences on landscape. | 9.0 |
| GIS2301 | Geoprocessing Students examine various approaches to workflow automation using geospatial data. They are introduced to basic scripting concepts. Students work with scripts and graphic models to streamline and document processes, such as geographic data preparation, GIS analysis and batch graphic/geospatial file management. | 45.0 |
| GIS2302 | Web Design and Publishing Students explore various approaches to serving geospatial data on the web in conjunction with standard website creation languages, which may include HTML, XML, and/or JavaScript. Topics include static and dynamic web page design. Students are introduced to web map server software and services. Issues explored include web architecture and web application design for the communication of geographic data. | 45.0 |
| GIS2411B | GIS Application Project Course (modified) Part 1 Students carry out a complete GIS project. Evaluation is based on project organization and scheduling throughout the course, as well as the final product. | 108.0 |
| GIS2412B | GIS Application Project Course (modified) Part 2 Students carry out a complete GIS project. Evaluation is based on project organization and scheduling throughout the course, as well as the final product. | 108.0 |

To satisfy the requirements of Algonquin’s Geomatics Technician program the remaining **six (6) listed courses** in the Geomatics Technician Bridging program must be completed within **four (4) years** from the date you commence (register in) the first of the remaining courses.



The courses are available online through Algonquin College Corporate Training in conjunction with Algonquin's Information and Communications Technology Department. Eligible CF Regular Force Geo Tech QL5A members who previously met the standards of Geo Tech QL5A training delivered by the School of Military Mapping (SMM) and meet the work requirements stipulated on page 2 above, are to follow the **four (4) steps** outlined on pages 4-5.

Please Note: Current and former CF Regular Force Geo Tech QL5A members not meeting the requirements specified who feel they have similar qualifications will be reviewed on a case by case basis through Algonquin's Department of Information and Communications Technology (see contact details on page 7).



Process for Eligible Current and Former CF Members to Move Forward with Geomatics Technician Bridging Program

STEP 1 – Apply for Credit Recognition. Members (applicants) must submit via email (a PDF) or fax a completed Academic Credit Recognition Application Form (available on this website) which includes signature of a Superior Officer verifying the applicant's military qualifications and years of service (as applicable) are correct to:

Norma Albert, Algonquin College Corporate Training
Algonquin College, 1385 Woodroffe Ave., Room C214, Ottawa K2G 1V8
(613) 727-4723 ext. 5203
Fax: (613) 727-4475
albertn@algonquincollege.com

Applicants must include with this correspondence evidence that they have been:

a. actively working as a Geomatics Technician or supervising a Geomatics Technician within the Forces for at least 2 of the last 7 years

OR

b. actively working in the field of Geomatics/GIS/Remote Sensing for at least 2 of the last 7 years (this must include a written job description of the work the applicant performs/performed indicating that they have been actively using Geomatics/GIS/Remote Sensing skills or supervising work in Geomatics/GIS/Remote Sensing).

Contact Norma Albert to submit an application processing fee of \$160.00 (\$10.00 processing fee per course @ 16 courses. See the 16 courses listed in Table 1). Payment can be made by certified cheque, VISA, MasterCard, or American Express.

Once the required documentation and application processing fee has been received, an acknowledgment of receipt will be sent to applicant.

Once the documents have been reviewed and deemed acceptable, eligible course exemptions will be awarded. A record of the exemptions awarded will be mailed to the applicant.



STEP 2 – To register for course(s). An up-to-date schedule of when online offerings of the remaining seven courses are available, along with course fee details, will be posted on Algonquin’s Canadian Forces Training website at: http://www.algonquincollege.com/military/credit_for_training.htm (Geomatics section). Visit the site regularly for schedule updates. Up-to-date schedules of these online course offerings will also be distributed periodically via email to course participants through our CF network.

Register for courses (or for an up-to-date schedule) contact:

Norma Albert, Algonquin College Corporate Training
Algonquin College, 1385 Woodroffe Ave., Room C214, Ottawa
(613) 727-4723 ext. 5203
albertn@algonquincollege.com

Payment can be made by certified cheque, VISA, MasterCard, or American Express.

Please Note: Students are encouraged to complete courses in the sequence outlined in Table 2. Although courses MAT1584B Basics of Mathematics, GEO2410B Natural and Human Geography - modified, GIS2301 Geoprocessing, GIS2302 Web Design and Publishing can be completed out of sequence, **the GIS2411B GIS Application Project Course Part 1, and GIS2412B GIS Application Project Course Part 2 must be completed last in the order identified.**

Table 2 – Geomatics Technician Bridging Program

| Course # | Course Name | Hours |
|----------|---------------------------------------|-------|
| MAT1584B | Basics of Mathematics | 10.0 |
| GEO2410B | Natural and Human Geography | 9.0 |
| GIS2301 | Geoprocessing | 45.0 |
| GIS2302 | Web Design and Publishing | 45.0 |
| GIS2411B | GIS Application Project Course Part 1 | 108.0 |
| GIS2412B | GIS Application Project Course Part 2 | 108.0 |

Upon successful registration, students will receive an email confirmation from Algonquin College which includes their online user name, password, and other relevant student information regarding accessing their online course.



FURTHER INFORMATION

For further information about the credit recognition application process outlined, and for general inquiries about the Geomatics Technician Bridging program course registration and schedule, please contact:

Norma Albert, Algonquin College Corporate Training
Algonquin College, 1385 Woodroffe Ave., Room C214, Ottawa
(613) 727-4723 ext. 5203
albertn@algonquincollege.com

For information about the Geomatics Technician Bridging program and program courses, please contact:

Mike Ballard, M.A., Professor
GIS Graduate Certificate and
Geomatics Technician Program (SMM)
Information and Communications Technology Department
Algonquin College, 1385 Woodroffe Ave., Room T336B, Ottawa
(613) 727-4723 ext 3458
Mike.Ballard@AlgonquinCollege.com

ALGONQUIN COLLEGE GEOMATICS TECHNICIAN PROGRAM DETAILS

Ontario College Diploma (1584X)

| Course # | Course Name | Hours |
|------------------|---|-------|
| Level 01 | | |
| MAT8100 | Essential Mathematics | 45.0 |
| GIS2101 | GIS I | 90.0 |
| GIS2102 | Graphic Production Techniques | 45.0 |
| ENL1813T | Communications | 45.0 |
| GIS2104 | Map Fundamentals | 45.0 |
| CON8430 | General Elective I Computers and You | 45.0 |
| Level: 02 | | |
| GIS2103 | Introduction to Remote Sensing and Image Interpretation | 60.0 |
| GIS2200 | Statistics for Geomatics | 30.0 |
| GIS2201 | GIS II | 75.0 |
| GIS2202 | Cartographic Design | 45.0 |
| GIS2205 | Natural and Human Geography | 45.0 |
| GIS204 | Digital Data Collection | 75.0 |
| Level: 03 | | |
| GIS2301 | Geoprocessing | 45.0 |
| GIS302 | Web Design and Publishing | 45.0 |
| GIS2303 | Remote Sensing 2 | 90.0 |
| GIS2304 | Photogrammetry | 90.0 |
| | General Elective II (Civic Life theme) | 45.0 |
| Level: 04 | | |
| GIS2401 | GIS Project | 105.0 |
| GIS2402 | Thematic Mapping | 60.0 |
| GIS2403 | 3D Visualization and Dynamic GIS | 60.0 |
| ENL1819T | Reporting Technical Information | 60.0 |
| | General Elective III (Personal Understanding theme) | 45.0 |

Please note: Graduation from Algonquin College's academic programs is dependent upon successful completion of all course requirements of the Program of Study, fulfillment of the twenty-five percent (25%) residency requirement, and good standing in the College. The residency requirement is the percentage of courses within a program of study which must be completed in Algonquin College under the instruction of the College faculty. The current residency requirement is 25% of hours of instruction as established by the Ministry of Training, Colleges & Universities.