SURVEYING AND GEOSPATIAL ENGINEERING TECHNOLOGY

Program Office: 403.320.3468 • engineeringtech@lethbridgecollege.ca

Do you like a mix of outdoor and computer work? Would you like to gain skills that could be applied in a range of industries, from construction and mining to urban planning and mapping social information? Then the Surveying and Geospatial Engineering program may be for you. This program will teach you the science of taking spatial data and presenting it in a visual format. This program is nationally and internationally accredited by Technology Accreditation Canada.

In the first year, you'll receive a comprehensive introduction to survey and engineering fundamentals with opportunities to do land surveying, mapping and other data collections. In second year, you'll hone your skills collecting, mapping and analyzing high-precision location data, using industry-standard software.

Your Investment

Program fees will vary. To view fee information for your program, go to lethbridgecollege.ca/programs (https://lethbridgecollege.ca/programs/) and select your program.

Mobile Learning Program

This is a Mobile Learning Program that requires students to purchase a mobile device from Lethbridge College complete with program-specific software. Go to www.lethbridgecollege.ca/mobilelearning (https://www.lethbridgecollege.ca/mobilelearning/) for additional information.

Graduation

Upon successful completion of all program requirements, students are awarded a Surveying and Geospatial Engineering Technology diploma.

National and International Accreditation

The Surveying and Geospatial Engineering Technology program is nationally accredited with Technology Accreditation Canada (TAC). *A TAC nationally accredited program represents excellence in education, providing students, parents, faculty and industry confidence the program has met the standards of the profession and graduates have the requisite knowledge and skill set to competently enter the workforce. - Technology Accreditation Canada.*

As a result of the accreditation with TAC, all graduates of the Surveying and Geospatial Engineering Technology program are also internationally accredited.

ADMISSIONS

New applicants are accepted into the Surveying Geospatial Engineering Technology program in the Fall (September) term only.

General Admissions Requirements

All applicants must meet the general admission requirements for Lethbridge College programs, as indicated in the Admission section of this calendar.

Academic Requirements

In addition to meeting the general admission requirements indicated in the Admission section of this calendar, applicants to this program must also satisfy the following specific course requirements (or equivalencies):

- a minimum grade of 50 percent in Grade 12 Math (equivalent to Alberta's Math 30-1) or 60 percent in Grade 12 Math (equivalent to Alberta's Math 30-2)
- Grade 11 Physics or Grade 12 Science

Please note that Grade 12 Biology and/or Grade 12 Chemistry will not be accepted in lieu of Grade 12 Science.

Basic understanding of computer technology such as word processing, copying files and familiarity working in a Windows-based environment is required.

CURRICULUM

Course	Title	Credits
Year 1		
Term I		
CAD-1160	Graphic Communications	3
CON-1162	Engineering Management I	3
EDD-1160	Technical Drawing	1.5
ENG-1159	Writing for the Workplace	3
MTH-1150	Engineering Math I	3
SUR-1150	Land Survey I and Data Systems	3
	Credits	**16.5**
Term II		
CPU-1160	Geomatics Programming I	3
GEO-1152	Geomatics Engineering Science	3
GEO-1181	Geospatial Analysis I	3
GEO-1185	Geodetic Fundamentals	3
MTH-1170	Engineering Math II	3
SUR-1180	Land Survey II	3
	Credits	**18**
Year 2		
Term I		
CPU-2275	Geomatics Programming II	3
GEO-2252	Geographic Information Systems I	6
SUR-2250	Survey Calculations and Analysis	3
SUR-2262	Specialized Positioning Applications	3
SUR-2267	Advanced Survey Applications I	3
STS-2260	Statistics and Applied Research I	3
	Credits	**21**
Term II		
GEO-2280	Geographic Information Systems II	3
GEO-2290	Geospatial Analysis II	3
RSR-2265	Applied Research II	1.5
SUR-2272	Cadastral Surveying	3
SUR-2280	Geomatics Engineering Surveys	3
SUR-2285	Advanced Survey Applications II	3
	Credits	**16.5**

Term III		
(Optional)		
GEO-2298	Work Experience	1.5
	Credits	**1.5**
	Total Credits	**73.5**

TRANSFERS

British Columbia Institute of Technology (BCIT)

Lethbridge College's Surveying and Geospatial Engineering Technology diploma graduates are eligible for block transfer into the third year of the Bachelor of Science in Geomatics program at BCIT.

Lethbridge College

Graduates of Lethbridge College's Surveying and Geospatial Engineering Technology diploma program may earn a second diploma in Civil Engineering Technology or Engineering Design Technology with an additional 1½ years of study (course schedule permitting).

Northern Alberta Institute of Technology (NAIT)

Graduates of Lethbridge College's Surveying and Geospatial Engineering Technology diploma program with a minimum GPA of 2.7, or a B- grade, on standard grading scales will be conditionally accepted into the BTech (Bachelor of Technology) degree program. Applicants for transfer of credit shall complete all of the requested application procedures of NAIT including, but not limited to, written statements outlining personal objectives, career goals, letters of reference, work experience and community involvement, and such other information as may be requested and used by NAIT to determine whether the applicant complies with the requirements as set out or intended.

Royal Roads University

Lethbridge College's Surveying and Geospatial Engineering Technology diploma graduates with a GPA of 3.0 or higher are eligible for full block transfer into the Bachelor of Commerce in Entrepreneurial Management at Royal Roads University. For more information, please visit https://www.royalroads.ca

Saskatchewan Polytechnic

Graduates of Lethbridge College's Surveying and Geospatial Engineering Technology diploma program, who have completed the appropriate bridging courses, may be eligible for acceptance into the Post-Diploma Bachelor of Construction Management at Saskatchewan Polytechnic. For more information visit https://saskpolytech.ca/programs-and-courses/programs/Bachelor-of-Construction-Management.aspx

University of Alberta

Lethbridge College's Surveying and Geospatial Engineering Technology diploma graduates with a GPA of 3.5 or higher are eligible to receive up to one year of transfer credit towards a Bachelor of Science (Engineering) at the University of Alberta. Admission is subject to the specific program, appropriate grades, and space availability. For the most current information on transferring to the Faculty of Engineering, please visit http://www.engineering.ualberta.ca/ProspectiveStudents/Admission/AdmissionRequirements/Technicalprograms.aspx

University of Lethbridge

Graduates of Lethbridge College's Surveying and Geospatial Engineering Technology diploma program with a minimum GPA of 2.50 are eligible for admission into the University of Lethbridge's Post-Diploma Bachelor of Science (Geography, with a Concentration in GIS). Admitted students will be third-year degree level students in the university's Faculty of Arts and Science in all respects. For more information, please see an academic advisor and visit www.uleth.ca (https://www.uleth.ca)

CAREERS

- Environmental Consulting
- Geographic Information Systems Analyst
- Geographic Information Systems Technologist
- Land Planning & Mapping
- Mapping Technologist
- Precision Agriculture Analyst
- Survey Assistant
- Survey Party Chief
- Survey Plan Checker