Resources Drilling and Blasting

Fleming College
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Program Locations:	Lindsay
Program Code:	RDB
Coordinator:	Steve Wilkinson
Credential:	Ontario College Diploma
Start Dates:	September 06, 2016 · January 09, 2017
Tuition and Ancillary Fees (Domestic):	$2,047.53 per semester*
Tuition and Ancillary Fees (International):	$7,194.56 per semester*

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This is the only Resources Drilling and Blasting program available in Canada.

Program Highlights

Our School offers the only college program in Canada providing training in Drilling and Blasting - and we are the only program in the world offering training in so many of the different types of drilling. Add to that the numerous sectors that rely on drilling and blasting skills, and this program opens doors to huge opportunities, many employers, and options to choose which field of drilling you will focus on. Our grads are in high demand. Every year, national and international employers recruit at our on-campus job fairs, and many of our students have employment offers before they graduate.

Currently, these fields offer employment opportunities for drilling and blasting careers:

- Construction Drilling and Blasting
- Geotechnical Drilling
- Environmental Drilling
- Water Well Drilling
- Resources Drilling, including minerals and oil and gas exploration
- Horizontal Directional Drilling

In our program, you'll learn the foundational theory, techniques and methods relating to each of these types of drilling, with an emphasis on safe working practices, while you learn to operate a full range of drilling equipment hands-on.

Advanced Standing - University or College Grads

With your university degree or Ontario College Diploma in a related field, you can get credit for semester one of the Resources Drilling and Blasting program, and enter directly into semester two. Degrees in the following areas of study will be considered:

- Environmental Science
- Environmental Studies
- Science - Chemistry or Biology
- Geography

Graduates with an Ontario College Diploma in one of the following fields of study will be considered:

- Environmental Science/Studies
- Natural Resources

Why are Drilling and Blasting Skills in Demand?

People may assume that resources drilling, such as for minerals and oil and gas exploration, is the sector where most graduates find work. In fact, there are numerous types of drilling required for a variety of industries and projects, with excellent job prospects:

- Geotechnical Drilling is required before any large construction project can begin. This involves subsurface investigations to evaluate property for infrastructure development, drilling for soil samples, determining soil type and depth, and ground conditions.
- Construction Drilling includes drilling foundations and anchoring piles for bridges, roadwork, or for any large building or development.
- Environmental Drilling involves obtaining samples of soil and groundwater, to control or remediate contaminants. Sites such as fuel service stations, landfills, mining operations, or abandoned infrastructures are examined, to either monitor or to reclaim the land for other purposes.
- Drilling skills are essential for water well design, installation and monitoring.
- Horizontal Directional Drilling is used to drill underneath structures such as roadways, foundations, or other properties, or beneath lakes, rivers or streams. The goal is to create a below-ground conduit, providing a transportation solution for waterlines, electrical lines, pipelines, or fibre-optic cables, for example.
- Geothermal Drilling, to install geothermal heating or cooling systems, is another growing field.

The Skills You Need to Succeed

Our well-rounded program provides the courses and hands-on experience you need to begin a career in this exciting and varied sector. A full 80% of the program consists of practical learning sessions - in our state-of-the-art, on-campus Parnham Training Centre, and off-campus in the field. You'll also be challenged to think on your feet and use your problem-solving skills.

- You'll work on a full range of drilling equipment in our five service bays.
- Four specially equipped classrooms/labs feature everything from a drilling simulator to hands-on drilling activities.
- Course work includes an introduction to emerging fields – such as the geothermal industry.
- You'll get industry recognition for your studies – our grads are exempt from taking the mandatory Ontario Ministry of the Environment 10-day Water Well Constructed Course. (Ontario Regulation 903 requires successful completion of this training for new well technicians.)

Why Choose Fleming

Our unique program offers a rare combination of technical training, theory and hands-on experience. Due to our strong connections with the industry, and our geographical location, the program is well positioned to place graduates throughout North America and globally. Employers know our grads have a good foundation of theory and practice, as well as excellent transferrable skills to draw upon for any challenge in the workplace.

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.

Thomas Luloff is the Coordinator for Common First Semester.

Work Experience

Following your first semester, you'll begin to explore specialized training in drilling and blasting. As mentioned, you'll spend most of your time in labs or field classes, putting your education to work and refining your skills. You'll also take part in field assignments in local quarries and job-related activities. Practical experience in semester four is subject to a criminal records check as required by field placement site management.

Is this You?

You've got to love working outside, enjoy hands-on work, be willing to operate equipment, and be independently minded. Opportunities exist for both men and women - more brains than brawn is required to be competent in the field. Some of the personality traits and skills essential to your success include:

- good motor skills and physical health
- flexibility (particularly regarding hours of work)
- interpersonal skills
- analytical and creative thinking skills
- mechanical aptitude
- ability to lift 40 kilograms
- able to stand for 12 hours
- able to read and understand safety labels

Career Opportunities

Faculty report that the requests for graduates by industry often exceed the number of students completing this program. Upon graduation you'll find yourself in positions such as driller or helper. You may work in an urban, a rural, or a more remote area, throughout Canada, North America, or around the world. At least ten global industries are open to you for potential employment, including: Construction Drilling, Geotechnical, Environmental, Blast-hole drilling, Blasting, Mineral Exploration and Mining (surface and underground), Horizontal Directional Drilling, Geothermal, Water Wells Construction Drilling, and Oil and Gas industries.

You can move up the ladder to own a business, or work in sales, tech support, or management with larger companies. Your potential employment is excellent as a graduate of our one-of-a-kind program. The average starting annual income is $52,000.00 but you could make much more than that within a few years after graduation. Even as a summer student employee, it is possible to earn $20,000.00 to $30,000.00.

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.

(If you are a university or college graduate of a related field of study, see Advanced Standing above for admission details.)

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.**

Pathway Programs

Graduates of the two-semester Blasting Techniques program are eligible for entry to semester two of Resources Drilling and Blasting. The General Arts and Science – Environmental and Natural Resource Studies Option is another program to consider if you do not meet the requirements for admission to Resources Drilling and Blasting. Graduates of this program also earn credit for first semester of Resources Drilling and Blasting.

International Students

If you are an international student, check the information on admission requirements and how to apply located here.

Additional Costs

Plan to spend about $1,300 in the first year and $100 in the second year for books, supplies, safety equipment and camps. Approximate costs for extra courses which are optional but recommended: WHIMIS $30 online; Fall Arrest $105; Transportation of Dangerous Goods $108; Arc Welding $130; First Aid $135 (Peterborough); H2S $200; DZ License $995.

Mandatory Equipment Students Need to Provide /Purchase

- CSA Approved Reflective Striping Vest or CSA Approved Reflective Striping Jacket
- Overalls or Coveralls (recommended orange with CSA Approved Reflective Striping)
- Work Gloves
- CSA Approved 8" (minimum) Work Boots
- Pocket Note Book
- Pencil (not pen)

- Watch or other Time Keeping Device

Mandatory Equipment Supplied by College (costs included in student's Tuition/Fees payments)

- CSA Approved Hard Hat Class E (supplied in Common First Semester)
- Folding Jack Knife (supplied in Common First Semester)
- Tape Measure (supplied in Common First Semester)
- Safety Glasses (supplied in second semester)
- Hearing Protection (supplied in second semester)

Curriculum for Resources Drilling and Blasting

Semester 1

Code	Course Name	Hours
COMM 201	Communications I	45
ECOS 13	Ecosystem Skills	60
GEOM 36	Geospatial Techniques	45
MATH 63	Applied Mathematics in Natural Resource Sciences	45
ENVR 20	Ecology and Environment	60
NATR 8	Skills for Stewardship and Sustainability	45

Semester 2

Code	Course Name	Hours
COMM 202	Communications II	45
GEOL 16	Geotechnical Drilling	45
GEOL 73	Air Rotary Drilling	45
MECH 50	Rig Maintenance and Repair	45
NATR 41	Soil Studies I	21
COMP 461	Data Management for Environmental and Natural Resource Sciences	45
NATR 85	Soil Studies II (Resources Drilling & Blasting)	21
GENED	General Education Elective	

Semester 3

Code	Course Name	Hours
APST 26	Field Operations	45
GEOL 8	Environmental Drilling	45
GEOL 18	Horizontal Directional Drilling	45
GEOL 74	Well Construction	60
MECH 9	Drilling Pump Systems	45
MECH 32	Hydraulics	45
APST 154	Career Preparation	21
GENED	General Education Elective	

Semester 4

Code	Course Name	Hours
GEOL 72	Construction Drilling	45
GEOL 6	Diamond Core Drilling	45
GEOL 46	Blasthole Drilling	30
GEOL 47	Blasting	15
MECH 3	Advanced Hydraulics and Rig Maintenance	45
GEOL 75	Rock Studies	45
APST 115	Quarry Camp - Drilling	40