

# MECHANICAL TECHNIQUES - SMALL ENGINE MECHANIC

**Program:** MTSE

**Credential:** Ontario College Certificate

**Delivery:** Full-time

**Work Integrated Learning:** 1 Field Placement

**Length:** 2 Semesters

**Duration:** 1 Year

**Effective:** Fall 2018

**Location:** Midland

## Description

Students prepare for a career as a Small Engine Mechanic, or further education in a related field. They develop a concentrated understanding of small to medium sized engines and related systems for off-road vehicles and powered equipment. This includes gasoline engines, diesel engines, fuel management systems, electrical systems, frames, steering and suspension systems, transmission and auxiliary power systems, braking systems, hydraulic systems and onboard computer systems. A significant hands-on component allows individuals to develop practical and technical skills to meet the current needs of the Small Engine and Powersports industries, and will provide a basis to respond to emerging trends in the field. Finally, students become effective communicators and problem solvers who will have an awareness of environmental issues, effective customer service, and basic business operations.

## Career Opportunities

Graduates may find a range of occupations in the mechanical field, including manufacturing, dealers, operations, sales, service, and self-employment. A graduate may find employment as a Small Engine Technician Apprentice, retail sales support, business operations, off road and small powered equipment handling. They may also opt to return to school for additional technical training and specialization.

## Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. complete all work in compliance with current legislation, standards, regulations and guidelines;
2. contribute to the application of quality control and quality assurance procedures to meet organizational standards and requirements;
3. comply with current health and safety legislation, as well as organizational practices and procedures;
4. support sustainability best practices in workplaces;
5. use current and emerging technologies to support the implementation of mechanical and manufacturing projects;
6. troubleshoot and solve standard mechanical problems by applying mathematics and fundamentals of mechanics;
7. contribute to the interpretation and preparation of mechanical drawings and other related technical documents;
8. perform routine technical measurements accurately using appropriate instruments and equipment;
9. assist in manufacturing, assembling, maintaining and repairing mechanical components according to required specifications;

10. select, use and maintain machinery, tools and equipment for the installation, manufacturing and repair of basic mechanical components;
11. role model professional behavior consistent with environmental stewardship;
12. apply basic entrepreneurial strategies when considering new business opportunities.

## The Program Progression

### Fall Intake

- **Sem 1:** Fall 2018
- **Sem 2:** Winter 2019

## Articulation

A number of articulation agreements have been negotiated with universities and other institutions across Canada, North America and internationally. These agreements are assessed, revised and updated on a regular basis. Please contact the program co-ordinator for specific details if you are interested in pursuing such an option. Additional information can be found on our website at <http://www.georgiancollege.ca/admissions/credit-transfer/>

## Admission Requirements

OSSD or equivalent with

- Grade 12 English (C or U)
- any Grade 11<sup>1</sup> or 12 Mathematics (C, M, or U)

<sup>1</sup> Minimum of 60% in Grade 11 College or University level Mathematics (MBF3C or MCF3M)

Mature students, non-secondary school applicants (19 years or older), and home school applicants may also be considered for admission. Eligibility may be met by applicants who have taken equivalent courses, upgrading, completed their GED, and equivalency testing. For complete details refer to: [www.georgiancollege.ca/admissions/policies-procedures/](http://www.georgiancollege.ca/admissions/policies-procedures/) (<http://www.georgiancollege.ca/admissions/policies-procedures/>)

Applicants who have taken courses from a recognized and accredited post-secondary institution and/or have relevant life/learning experience may also be considered for admission; refer to the Credit Transfer Centre website for details: [www.georgiancollege.ca/admissions/credit-transfer/](http://www.georgiancollege.ca/admissions/credit-transfer/) (<http://www.georgiancollege.ca/admissions/credit-transfer/>)

## Additional Information

The very nature of the work requires manual dexterity and lifting. Applicants are advised to consult with the Program Co-ordinator if they have specific questions related to the physical demands of the program and future employment.

## Graduation Requirements

13 Program Courses  
1 Communications Course  
1 Field Placement

## Graduation Eligibility

To graduate from this program, the passing weighted average for promotion through each semester, and to graduate is 60%. Additionally, a student must attain a minimum of 50% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester unless otherwise stated on the course outline.

## Program Tracking

Semester 1		Hours
Program Courses		
MATH 1007	Mathematics Techniques	42
MENG 1000	Workshop Procedures	42
MENG 1001	Engine Fuel Systems Principles	42
MENG 1002	Engine Electrical Systems Diagnostics	42
MENG 1003	Engine Function and Design	42
MENG 1009	Basic Electrical Principles	42
MENG 1011	Health and Safety Fundamentals	42
Hours		294
Semester 2		
Program Courses		
BUSI 1004	Service and Information Techniques	42
MENG 1010	Diesel and Overhead Valve Engines	42
SENG 1000	Outdoor Power Tool Fundamentals	42
SENG 1001	ATV Repair Principles	42
SENG 1002	Principles of Residential Grounds Maintenance Equipment	42
SENG 1003	Snowmobile Repair Principles	42
Communications Course		
Select 1 course from the communications list during registration.		42
Field Placement		
SENG 1004	Field Placement	160
Hours		454
Total Hours		748

*Information contained in College documents respecting programs is correct at the time of publication. Academic content of programs and courses is revised on an ongoing basis to ensure relevance to changing educational objectives and employment market needs. The college reserves the right to add or delete programs, options, courses, timetables or campus locations subject to sufficient enrolment, and the availability of courses.*