

MECHANICAL TECHNIQUES - MARINE ENGINE MECHANIC

Program: MTME

Credential: Ontario College Certificate

Delivery: Full-time

Work Integrated Learning: 1 Field Placement

Length: 2 Semesters

Duration: 1 Year

Effective: Fall 2019

Location: Midland

Description

In this program, students prepare for a career as a Marine Engine Mechanic, or further education in a related field. Students develop a concentrated understanding of marine and watercraft systems. This includes gasoline and diesel engines, fuel management systems, engine electrical systems, marine direct current electrical systems, steering and hydraulic systems, drives, and propulsion systems. A significant hands-on component allows students to develop practical and technical skills to meet the current needs of the Recreational Marine industry, and provides a basis to respond to emerging trends in the field. Finally, students become effective communicators and problem solvers who have an awareness of environmental issues, effective customer service, and basic business operations. Upon completion, the graduate may return for additional technical training and specialization.

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 Marine Engine Technician Apprentice, retail sales support, marina operations, in water and out of water boat 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 2019
- **Sem 2:** Winter 2020

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 11¹ or 12 Mathematics (C, M, or U)

¹ 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/>)

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/>)

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 |
| MARE 1000 | Alternate Marine Propulsion Systems | 42 |
| MARE 1001 | Recreational Boat Principles | 42 |
| MARE 1002 | Stern Drive System Repair Principles | 42 |
| MARE 1003 | Outboard Motor Repair Principles | 42 |
| MENG 1010 | Diesel and Overhead Valve Engines | 42 |
| Communications Course | | |
| Select 1 course from the communications list during registration. | | 42 |
| Field Placement | | |
| MARE 1020 | Field Placement - MTME | 160 |
| Hours | | 454 |
| Total Hours | | 748 |

Graduation Window

Students unable to adhere to the program duration of one year (as stated above) may take a maximum of two years to complete their credential. After this time, students must be re-admitted into the program, and follow the curriculum in place at the time of re-admission.

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.