

MECHANICAL TECHNIQUES - MARINE ENGINE APPRENTICESHIP

Program: MEAP

Credential: Ontario College Certificate

Delivery: Full-time

Work Integrated Learning: Apprenticeship Placement

Length: 720 hours

Effective: Fall 2023

Location: Midland

Description

The Mechanical Techniques - Marine Engine Apprenticeship program consists of three levels designed to provide apprentices with the theoretical knowledge and practical training necessary to complement the Marine Engine Technician apprentice's on-the-job training.

A Marine Engine Technician inspects, diagnoses and repairs marine and watercraft systems including gasoline and diesel engines, fuel management systems, engine electrical systems, marine electrical, electronic and navigation systems, steering and hydraulic systems, drives and propulsion systems.

Career Opportunities

Motorcycle or all-terrain vehicle and other related mechanics test, repair and service motorcycles, motor scooters, snowmobiles, outboard motors, forklifts and all-terrain vehicles. They are employed by service shops of motorcycle dealers and retailers and by independent service establishments.

- All-terrain vehicle repairer
- Marine engine mechanic
- Marine engine technician
- Motor boat mechanic
- Outboard motor mechanic
- Snowmobile repairer

Other small engine and small equipment repairers test, repair and service small gasoline and diesel-powered engines and equipment, such as garden tractors, lawn mowers and other related equipment. They are employed by dealer service shops and by independent service establishments. Jobs titles may include the following:

- Air-cooled engine mechanic
- Apprentice small engine mechanic
- Gas-powered small equipment mechanic
- Outdoor power equipment technician
- Small engine and equipment mechanic
- Small engine mechanic
- Small engine repairer
- Small engine technician
- Small equipment mechanic apprentice

- Small equipment repairer
- Off road powersports equipment apprentice

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.

External Recognition

Upon successful completion of their Level 3 in-school training, these apprentices must complete the remainder of the required skills outlined in the Training Standard Log Book to qualify for their Apprenticeship Certificate. Thereafter, they are eligible to write their Certificate of Qualifications exam.

Graduates may be able to receive credit toward further education in related post secondary diploma, advanced diploma, or degree programs.

Admission Requirements

- Ontario Secondary School Diploma (OSSD), or equivalent, mature student status
- Apprentices must to be registered with the Ministry of Labour, Training, and Skills Development

Additional Information

An apprenticeship involves practical training provided on-the-job by a skilled worker, or trainer. The skills or competencies to be developed are set out by the trade's apprenticeship training standard and are recognized by the industry as being essential to the practice of the trade.

As these essential skills are developed, the apprentice's sponsor or trainer signs the relevant sections of the training standard to indicate that the apprentice has met the individual training objectives by demonstrating the skills required of a skilled worker, or journeyman, in the trade.

Graduation Requirements

Students must successfully complete all three levels to receive a certificate.

- Marine Engine Technician Level 1 - Basic (MEAB)
- Marine Engine Technician Level 2 - Intermediate (MEAI)
- Marine Engine Technician Level 3 - Advanced (MEAA)

work terms, placements, internships and other requirements may be delivered differently than published.

Graduation Eligibility

Students must successfully complete all required courses as noted below. Further details, if applicable, are noted under "Additional Information" above.

Program Tracking

Level 1- Basic (MEAB)

Program Courses	Hours
SMEN 1005 Engine Systems - Level 1	54
SMEN 1008 Work Practices and Procedures - Level 1	60
SMEN 1009 Electrical /Electronic Systems - Level 1	45
SMEN 1010 Fuel Systems - Level 1	24
SMEN 1011 Braking, Transmission and Auxiliary Drive Systems - Level 1	39
SMEN 1012 Safe Working Practices and Techniques - Level 1	18
Hours	240
Total Hours	240

Level 2 - Intermediate (MEAI)

Program Courses	Hours
SMEN 2007 Work Practices and Procedures - Level 2	36
SMEN 2008 Electrical and Electronic Systems - Level 2	45
SMEN 2009 Engine Fuel Management Systems - Level 2	45
SMEN 2010 Engine Systems - Level 2	24
SMEN 2011 Steering, Suspension, and Brake Systems - Level 2	42
SMEN 2012 Transmission and Auxiliary Drive Systems - Level 2	48
Hours	240
Total Hours	240

Level 3 - Advanced (MEAA)

Program Courses	Hours
MEAA 1008 Work Practices and Procedures - Level 3	21
MEAA 1009 Propulsion Systems - Level 3	39
MEAA 1010 Advanced Engine Systems - Level 3	54
MEAA 1011 Electronic Fuel Management Systems - Level 3	30
MEAA 1012 Handling, Rigging, Running and Storing - Level 3	36
MEAA 1013 Auxiliary Systems - Level 3	60
Hours	240
Total Hours	240

Disclaimer: *The information in this document 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.*

Program outlines may be subject to change in response to emerging situations, in order to facilitate student achievement of the learning outcomes required for graduation. Components such as courses, progression, coop