

OPERATING ENGINEERS, CERTIFICATE OF PROFICIENCY



Students must be currently working in a registered apprenticeship program in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training. A four-year apprenticeship emphasizes the skill set required to be a highly skilled craftsman and equipment mechanic. Operating engineers operate and maintain hoisting, grading, excavating and paving equipment, consisting of cranes, bulldozers, scrapers, graders, endloaders, concrete and asphalt plants, rollers and pumps. The Operating Engineer is generally employed in the building of highways, airports, buildings, waterways, stadiums and sewers. The apprenticeship certificate recognizes student attaining journey level status at the completion of the technical studies.

Program contact: Learn more

Financial Assistance funds cannot be applied towards this program.

This certificate will be automatically awarded when the certificate requirements are completed. If you do not want to receive the certificate, please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree.

Program Admission Requirements

- High School Diploma/GED
- Aptitude test – contact Program Coordinator for information.
- Intent-to-hire agreement with participating contractor.

Other Information

- Participant must be working in an apprenticeship in conjunction with the U.S. Department of Labor, Bureau of Apprenticeship and Training.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Recognize hazardous conditions, wear appropriate safety equipment and take preventative measures following company, federal, and state procedures.
2. Operate and maintain a variety of construction equipment in a safe and productive manner.
3. Recognize and apply underlying engineering principles of the operating engineers trade, including machine characteristics, blueprint reading, problem solving and technology skills.
4. Plan and manage personal and professional life to accommodate all job requirements, including providing reliable transportation, meeting

contractor needs, balancing family obligations, adapting to a flexible work schedule, complying with a drug-free environment, and taking opportunities to upgrade skills.

5. Commit to and understand the nature of working in the construction trade, especially, planning for seasonal work.
6. Communicate verbally, nonverbally and in writing with the construction team, which includes members of all other trades, contractors, and government agencies.
7. Be prepared to sit for the CDL License exam, Forklift Operating Certification exam, and other optional specialty certifications such as the National Crane Certification Organization exam.

Suggested Semester Sequence

First Semester		Credit Hours
ATOE-1100	Operating Engineering Concepts	4
ATOE-1200	Basic Mechanical Concepts	3
ATOE-1650	Graders and Plans	2
ATOE-1700	Paving, Tractor, Backhoe Operations	3
Credit Hours		12
Second Semester		Credit Hours
ATOE-2100	Mobile Crane	2
ATOE-2200	Mechanical Repair	3
ATOE-2600	Bulldozer Practice	3
ATOE-2620	Backhoe Practice	3
ATOE-xxxx	ATOE Elective course	1-3
Credit Hours		12-14
Summer Completion		Credit Hours
ATOE-2640	Advanced Grader Practice	3
ATOE-2660	Grader Safety	2
ATOE-xxxx	ATOE Elective course	1-3
Credit Hours		6-8
Total Credit Hours		30-34

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.