

Indigenous Heavy Equipment Pre-Apprenticeship Training Program (11-Week + 8-Week Work Placement)

The International Union of Operating Engineers (IUOE) Local 793 see the Indigenous population as a sustainable solution to help meet the growing demand for qualified crane, heavy equipment, and concrete pump operators in Ontario. One of our goals within our *Indigenous Engagement Strategy* is to provide training opportunities for Indigenous people who show the dedication and commitment necessary to build successful careers as heavy equipment operators. The Operating Engineers Training Institute of Ontario (OETIO), in cooperation with the Ministry of Labour, Immigration, Training and Skills Development of Ontario created the Indigenous Pre-Apprenticeship Program for this sole purpose. 2026 will mark the tenth year for the Program which will see twelve Indigenous people recruited from various districts across Ontario.

Trade Entrance Exam Preparation Course (3-Weeks – 120 Hours)

This three-week course is designed to prepare candidates to successfully pass the trade entrance exam.

Upon completion of the preparation course, the participant will need to successfully pass the exam with 70% or higher to proceed to the next level, which is the Pre-Apprenticeship Program.

Topics

Test Taking Strategies

- Multiple choice strategies
- Multiple choice practice

Reading

- Extracting information
- Summarizing main points
- Drawing inferences

Trade Math

- Basic calculations
- Metric to imperial conversions
- Geometry
- Percentages
- Ratios
- Reading graphs and charts

Trade Science

- Properties of gases, water, sound, minerals
- Principles of combustion, buoyancy, density, pH, electricity, and magnetism
- Effects of heat on water, gases, metals
- Basic hydraulics
- Basic action of valves

Mechanical Aptitude and Space Relations

- Tools and instruments
- Mechanical action of gears, levers, pulleys, screws, and turbines
- Spatial relations



Heavy Equipment Pre-Apprenticeship Theory

(3-Weeks – 120 Hours)

The Fundamentals of Heavy Equipment is a pre-requisite to the operator training program and provides participants with the fundamentals of OHSA & O. Reg. 213/91, safety, equipment types and components, operating techniques, transportation, and maintenance that apply to heavy equipment in the construction industry.

The participant practices essential skills which include construction principles, techniques with practical application of weights, volumes, conversion, and the costs associated with construction. Additional exercises with site layout, staking, survey and applied mathematical calculations.

Participants also complete training in Working at Heights, WHMIS, First Aid and CPR, Ground Disturbance, Pipeline Construction Safety Training, Basic Construction Safety Training, Propane in Construction, Traffic Control, Rigging, Vertical Mast and Telescopic Boom Forklift, MOL Health and Safety Awareness and Union Education.

Heavy Equipment Pre-Apprenticeship Trade Readiness Practical Training

(4-Weeks – 162 Hours)

Participants will operate 3 categories of machines

- Articulating Vehicles (Sheep's foot and smooth drum compactors)
- Front-End Loader (Skid steer loader)
- Compact Excavator (Bulldozer/TLB/Excavator)

Perform pre-operational inspections

Comply with scheduled maintenance requirements

Plan work procedures

Comply with grades and stakes

Operation of machines, including:

- Traveling and maneuvering
- Preparing a level surface with the loader
- Building and maintaining a working table
- Digging and backfilling trenches
- Preparing a work surface up to three machines wide
- Digging an excavation with spoil pile on both sides
- Moving material from a stockpile to another location
- Grading and compacting rough areas
- Preparing machine to be left for an extended period of time



Heavy Equipment Mechanical Simulators

Also, students can access the simulation lab after-hours and on weekends. An after-hours simulation exercise book is available to further skillset knowledge.

Selection Process

In Ontario, the 15 IUOE Local 793 area offices play a key role in the selection process and meeting with industry and owner/client representatives to identify, interview, and select pre-apprenticeship candidates. These candidates are then referred to our Director of Training and Apprenticeship to ensure the recommended candidates meet the pre-apprenticeship program requirements.

Work Placement

Each student is placed on an eight-week paid work placement with a Local 793 contractor. This places participants in the construction industry to gain exposure to a workplace and allow them to determine whether the heavy equipment trade is a suitable career. The employers will have the opportunity to evaluate, provide valuable feedback on the student's abilities, attitude, and willingness to learn. A member of our Marketing Department calls and monitors the pre-apprentices during their work placement. If any issues arise between the employer and the pre-apprentice, our Director of Training and Apprenticeship may need to become involved to resolve the matter.

Course Location - OETIO Morrisburg Campus

Indigenous Pre-Apprenticeship Training Program Pre-requisites:

- Achieving a Trade Entrance Exam mark of 70% or higher after completing the 3-week Trade Entrance Exam Preparation Course
- Resume
- Grade 12 transcript/diploma or equivalent
- Current driver's abstract
- SIN Card

eLearning Courses**(1-Week – 40 Hours)**

- Health and Safety for Workers (Ministry of Labour)
- WHMIS (approx. 2 hours)
- Working at Heights (8 hours)
- Ground Disturbance (approx. 4 hours)
- Pipeline Construction Safety Training (approx. 4 hours)
- Union Education (approx. 2 hours)
- Basic Construction Safety Training (3 hours)
- Rigging (4 hours)
- Traffic Control (3 hours)
- Vertical Mast and Telescopic Boom Forklift Operator – theory portion (approx. 2 hours)
- Environmental Protection
- Industry Sector Definitions
- Fundamentals of GNSS by Topcon
- Fundamentals of 3DMC by Topcon

Total Course Duration

11-Weeks + 8-Week Work Placement

Participant/Instructor Ratio

- Theory - 12 participants to 1 instructor
- Practical – 6 participants to 1 instructor



Participant Seat Time

Participants will always be allocated one piece of heavy equipment on a rotational basis of 8 hours per day for practical training.

Evaluations – 70% to Pass

- Trade Entrance Exam
- FHE Theory Exam: Mid and Final Exam
- Practical Evaluation
- Essential Skills

Certificates

- Heavy Equipment Pre-Apprenticeship Training Program
 - Fundamentals of Heavy Equipment
 - Essential Skills Training
 - Trade Readiness Practical Field Training
- First Aid & CPR
- Working at Heights
- Vertical Mast and Telescopic Boom Forklift
- Basic Construction Safety Training
- Traffic Control
- Rigging
- Ground Disturbance Training
- Pipeline Construction Safety Training
- MOL Health and Safety Awareness
- Union Education

Program Cost Breakdown

There is no charge to participants in the Indigenous Pre-Apprenticeship Training Program. The program is sponsored by the Ministry of Labour, Immigration, Training and Skills Development of Ontario and the IUOE Local 793.

What is included

- Books
- Exams
- Hard hat and safety vest
- Certificates upon successful completion

It will be the responsibility of the Pre-Apprentice to arrange transportation to and from the OETIO Campus in Morrisburg.

Participants in the program are required to bring their own CSA approved safety boots, safety glasses, work gloves and overalls/coveralls.

***Note:** *Participants returning to be trained for Heavy Equipment Apprenticeship Practical Training are exempt from Fundamentals of Heavy Equipment (2 weeks – 78 hours)*