

OPERATING ENGINEER (UNIVERSAL EQUIPMENT)

APPENDIX A

O*NET CODE 47-2073.00

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

WORK PROCESSES

Sponsor must choose at least 5 of the Work Processes lettered A-K. For each Work Process chosen, each apprentice must observe the operation of the equipment, and must learn the following:

1. All applicable safety precautions and procedures.
2. Starting procedures, shut-down procedures, controls, and their functions.
3. Routine fueling, lubricating, servicing.
4. Actual operation of the equipment.

	Approximate Hours
A. Backhoe	500 - 750
B. Excavator	500 - 750
C. Dozer	1,000
D. Loader	500 – 1,000
E. Scraper	500 - 600
F. Grader	500
G. Dragline & Other Bucket-Type Equipment	1,000
H. Crane	800
I. Derricks & Piledrivers	700
J. Compaction Roller	500
K. Forklift	500
Approximate Total Hours	3,500 – 4,300

L. Other Universal or Trade-Related Equipment (including an optional* Welding component)	600 – 1,400
M. Handling Hazardous Materials (optional*)	0 – 300
Approximate Total Hours	4,100 – 6,000

** Sponsor may elect to train none, some, or all of its apprentices in this Work Process.*

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to <https://dol.ny.gov/public-work-and-prevailing-wage>.

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APPENDIX B

RELATED INSTRUCTION

Safety

1. Work zone safety awareness
2. OSHA 10-hour construction course
3. All OSHA rules, regulations, standards applicable to the trade
4. Drug and alcohol awareness
5. Hearing awareness and loss prevention
6. Hazard Communication, including MSDS
7. First aid/CPR – minimum 6.5 hours every 3 years
8. Welding safety – including the use of personal protective equipment; the OSHA hazcom standard covering all gases, fumes and vapors that can occur during welding; and OSHA confined-space rules (required for each apprentice who will do any welding)
9. Handling hazardous materials (required for each apprentice being trained in Work Process “M” on Appendix A):
 - a. 40-hour Hazmat certification course
 - b. Annual re-certification (8-hour refresher course and safety review)
10. Asbestos safety
 - a. If apprentice will do any handling of asbestos:
 - i. Successfully complete a course approved by the New York State Department of Health for “Asbestos Handler” and obtain, and keep current, an “Asbestos Handler (Worker)” certificate from the New York State Department of Labor.
 - b. If apprentice will do no handling of asbestos:
 - i. Asbestos Awareness – minimum 4 hours (see attachment)
11. Sexual Harassment Prevention Training – must comply with section 201-g of the Labor Law

Trade Theory and Science

1. Use of grade instruments and plans
 - a. Transit and hand level
 - b. Theodolite
 - c. Leveling rods
 - d. Measurement instruments
 - e. Stakes
2. Commercial Driver's License preparation
 - a. Testing requirements
 - b. Inspection stipulations
 - c. Driving course
3. Rigging (required for each apprentice being trained in Work Process "H" and/or "I" on Appendix A)
 - a. Chart reading
 - b. Crane set-up
 - c. Cable specs
4. Fuels and lubricants
 - a. Fuels, oils, grease and equipment
 - b. Grease truck and tools
5. Basic and advanced equipment skills (technical training and seat time)
 - a. Backhoe (required for each apprentice being trained in Work Process "A" on Appendix A)
 - b. Excavator (required for each apprentice being trained in Work Process "B" on Appendix A)
 - c. Dozer (required for each apprentice being trained in Work Process "C" on Appendix A)
 - d. Loader (required for each apprentice being trained in Work Process "D" on Appendix A)
 - e. Scraper (required for each apprentice being trained in Work Process "E" on Appendix A)
 - f. Grader (required for each apprentice being trained in Work Process "F" on Appendix A)
 - g. Dragline & Other Bucket-Type Equipment (required for each apprentice being trained in Work Process "G" on Appendix A)

- h. Crane (required for each apprentice being trained in Work Process “H” on Appendix A)
- i. Derricks & Piledrivers (required for each apprentice being trained in Work Process “I” on Appendix A)
- j. Compaction Roller (required for each apprentice being trained in Work Process “J” on Appendix A)
- k. Forklift, including forklift certification required by OSHA (required for each apprentice being trained in Work Process “K” on Appendix A)

Hydraulics

- 1. Theory
- 2. Repair
- 3. System changes
- 4. Maintenance
- 5. Mechanical System
 - a. Basic hydraulics
 - b. Basic electrical
 - c. Power trains

Welding (required for each apprentice who will do welding on-the-job)

- 1. Oxygen and acetylene welding
- 2. Electrical welding
- 3. Cutting

Interpersonal Workplace Skills

- 1. Industrial and labor relations
 - a. History and background (6 hours, 1st year)
 - b. Current laws and practices (14 hours, 2nd year)
 - c. Diversity

Other Related Courses as Necessary

These courses may include the following, or other courses required by the sponsor or the New York State Education Department:

- 1. Disaster site worker training
- 2. OSHA courses above and beyond those specified above
- 3. Homeland security

A minimum of 144 hours of Related Instruction is required for each apprentice for each year.

Appendix B topics are approved by New York State Education Department.

ATTACHMENT TO APPENDIX B

Asbestos Awareness

This course must be delivered by one of the following:

1. A provider currently approved by the New York State Department of Health to deliver asbestos safety training.
2. A person holding a current Asbestos Handler certificate from the New York State Department of Labor in the title of: Inspector, Supervisor, Project Monitor, Management Planner, or Project Designer.
3. Anyone otherwise approved by the New York State Education Department.

Minimum course contents must include the following:

1. Definition of asbestos
2. Types and physical characteristics
3. Uses and applications
4. Health effects:
 - a. Asbestos-related diseases
 - b. Risks to families
 - c. Cigarette smoking
 - d. Lack of safe exposure level
5. Employer-specific procedures to follow in case of potential exposure, including making a supervisor or building owner immediately aware of any suspected incidental asbestos disturbance so that proper containment and abatement procedures can be initiated promptly.

Notwithstanding the above course requirement, employers are advised that they must also be in compliance with New York State Department of Labor Industrial Code Rule 56 at all times.

Employers are further advised, and must advise all apprentices, that completion of the above course requirement does not authorize any person to remove, encapsulate, enclose, repair, disturb, or abate in any manner, any friable or non-friable asbestos, asbestos containing material, presumed asbestos containing material, or suspect miscellaneous asbestos containing material.