



Pembroke Hopkins Park Construction Outreach Program
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MECHANIC

Competencies / Objectives

Level One

Module 32101-07 - Orientation to the Trade

1. Covers the history of the trade, and the kinds of work and work environments industrial maintenance craftspeople would find in the field.
2. Describes the apprenticeship and training programs available, as well as the career opportunities in industrial maintenance.
3. The responsibilities and characteristics a worker should possess are also described.

Module 32102-07 - Tools of the Trade

1. Provides an introduction to the hand and power tools used in industrial maintenance.
2. Covers safety procedures and techniques for use of these tools.

Module 32103-07 - Fasteners and Anchors

1. Covers the hardware and systems used by an industrial maintenance craftsperson.
2. Describes various types of anchors and supports, their applications, and how to install them safely.



Module 32104-07 - Oxyfuel Cutting

1. Explains the safety requirements for oxyfuel cutting. Identifies oxyfuel cutting equipment.
2. Provides instructions for setting up, lighting, and using the equipment.
3. Includes straight line cutting, piercing, beveling, washing, and gouging.

Module 32105-07 - Gaskets and Packing

1. Introduces types of gaskets and gasket material, types of packing and packing material, and types of O-ring material.
2. Explains the use of gaskets, packing, and O-rings, and teaches how to fabricate a gasket.

Module 32106-07 - Craft-Related Mathematics

1. Explains how to use ratios and proportions.
2. Solve basic algebra, area, volume, and circumference problems.
3. Solve for right triangles using the Pythagorean theorem.

Module 32107-07 - Construction Drawings

1. Introduces plot plans, structural drawings, elevation drawings.
2. Built drawings, equipment arrangement drawings, P&IDs.
3. Isometric drawings, basic circuit diagrams, and detail sheets.

Module 32108-07 - Pumps and Drivers

1. Explains centrifugal, rotary, reciprocating, metering, and vacuum pump operation.
2. Installation methods, types of drivers.
3. Covers net positive suction head and cavitation.

Module 32109-07 - Valves

1. Identifies and provides installation methods for different types of valves.
2. Covers valve storage and handling.



Module 32110-07 - Introduction to Test Instruments

1. Introduces the basic test equipment for industrial maintenance.
2. Including tachometers, pyrometers, strobe meters, voltage testers
3. Automated diagnostic tools.

Module 32111-07 - Material Handling and Hand Rigging

1. Introduces the equipment and techniques of material handling,
2. Describes the procedures for rigging and communicating with riggers.

Module 32112-07 - Mobile and Support Equipment

1. Introduces the safety procedures and methods of operation for motorized support equipment, including forklifts, manlifts, compressors, and generators.

Module 32113-07 - Lubrication

1. Explains lubrication safety, storage, and classifications.
2. Explains selecting lubricants, additives, lubrication equipment, and lubricating charts.