

INDUSTRIAL MAINTENANCE MECHANIC

Technical Diploma

About the Industrial Maintenance Mechanic Program

Designed for individuals seeking entry-level employment in manufacturing. This certificate provides opportunities for students to develop the foundational academic, employability, and technical skills needed in the modern manufacturing setting.

PROGRAM OUTLINE

SEMESTER: 1		
Course #	Course Title	Credits
1010311500	MS Word Beginning Provides practice in using basic word processing functions and features of MS Word.	1.00
1010312600	MS Excel Beginning Develops skills in using basic spreadsheet functions of MS Excel for business users.	1.00
1044910000	Industrial Safety Fundamentals Introduces general safety for a manufacturing environment while raising the awareness of the worker to the hazards around them, and how to best protect themselves while working safely. Students will earn an OSHA 30 card and confined space certificate upon completion.	2.00
1046212000	Basic Hydraulics for Industrial Mechanic Exposes the student to the theories and basic components of hydraulics. Basic component construction and operation is explored. The theory of function is supplemented by hands on disassembly and assembly of actual industrial components.	3.00
1046212500	Basic Pneumatics for Industrial Mechanic Exposes the student to the theories and basic components of pneumatics. Basic component construction and operation is explored. The theory of function is supplemented by hands on disassembly and assembly of actual industrial components.	3.00
1046212600	Industrial Electronic Concepts Introduces the student to basics of electricity needs by the industrial mechanic. Included are basic electrical theory, operation and use of the Volt-Ohm meter, AC and DC electric motors, motor controls and wiring, and applications as needed to install, operate, and control industrial machines.	3.00
1080119500	Written Communication Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments is designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents.	3.00
SEMESTER: 2		
Course #	Course Title	Credits
1046211000	Mechanical Concepts 1 This course is designed to give the student a basic understanding of the mechanical concepts that are found on industrial equipment. Since all industrial machinery is equipped with some type of mechanical drive, a firm understanding of these drives is necessary for both the industrial mechanical technician and the electro-mechanical technician.	2.00

Course #	Course Title	Credits
1046211100	<p>Mechanical Concepts 2</p> <p>This course is designed to further the understanding the industrial mechanical technician student has about the mechanical concepts found on industrial equipment. Since all industrial machinery is equipped with some type of mechanical drive, a definite understanding of these drives is necessary for the industrial mechanic. Prerequisite(s): 1046211000 Mechanical Concepts 1 (C or better) (concurrent enrollment allowed).</p>	2.00
1046214000	<p>Pneumatic Operations for Industrial Mech</p> <p>Provides the application of basic pneumatic principles into typical industrial circuits. The student will experience exercises with basic pneumatic components and simple air systems and how they are applied in circuits. Vacuum components and air logic systems will be included. Prerequisite(s): 1046212500 Basic Pneumatics for Industrial Mechanic (C or better).</p>	2.00
1046214200	<p>Hydraulic Operations for Industrial Mech</p> <p>Provides the application of basic hydraulic principles into typical industrial circuits, and helps develop skills in understanding hydraulic components and their interaction to each other in demonstration circuits. Prerequisite(s): 1046212000 Basic Hydraulics for Industrial Mechanic (C or better).</p>	2.00
1046215400	<p>Mechanical Print Reading and Schematics</p> <p>Allows the student to learn the symbols used in the maintenance industry and to put those symbols into circuits and diagrams. A unit is also given on blueprint reading consisting of basic symbols and reading the dimensions from various blueprints.</p>	1.00
1062012200	<p>Industrial Motor Control</p> <p>This course will lead you through the fundamentals of electric motor control and power circuits. You will learn to recognize and draw the basic symbols, the language of motor control, and how to apply these symbols, into current industrial format. Forward and reversing motor starters, contractors and frequency drives. 3-phase AC motors, single-phase, split-phase AC motors, and DC motors, motor starters and motor controls. Mounting and wiring of control systems for easy maintenance. You will also learn to draw and read ladder and wiring diagrams. You will be introduced to the logic used in motor control and be required to apply this logic in order to correctly interpret, design, and wire control circuits. Prerequisite(s): 1046212600 Industrial Electronic Concepts (C or better).</p>	3.00
1080413400	<p>Mathematical Reasoning</p> <p>An activity based approach is used to explore numerical relationships, graphs, proportional relationships, algebraic reasoning, and problem solving using linear, exponential and other mathematical models. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. This course is not designed for Science, Technology, Engineering, or Math (STEM) students and/or others who require calculus. Prerequisite(s): 7785478000 Principles of College Math (C or better) or Accuplacer Algebra score ≥ 35 or UW Math Placement Basic Math score ≥ 250 or ACT Math score ≥ 18 or Tailwind Math CMath Fund score ≥ 16.</p>	3.00

Total Credits: 31.00

Talk with an Academic Advisor about the program outline. Together, you will determine if credits you've already earned satisfy any requirements, discuss possible alternative courses, and choose the best classes if you're thinking of transferring.

AT A GLANCE

Flexible Options



ON CAMPUS

Term Start Dates

Fall 2019: September 4

Spring 2020: January 8

Summer 2020: May 8

Approximate Cost

\$4,160*

Financial Aid Eligible

*Based on 10-level courses - materials, books, and fees may be additional

Your Potential Careers

- Industrial Machinery Mechanic
- Machinery Maintenance Worker
- Maintenance Mechanic
- Master Mechanic

Get Started

Your application can be submitted online, it takes just a few minutes to complete.

APPLY NOW