Course Information Form (CIF)

Course Code: MFT 110

Course Title: Mechanical Assemblies

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 47.0303
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 2-2-3
Credit Hour Distribution:

Lecture: 2	Lab: 2	Clinical: 0	**Total: 3**

General Course Information

Catalog Description

Interpreting documentation for assembly and installation requirements; fundamentals of power transmission; basic and precision measuring tools; fasteners, tools, and torque specifications; bearing types and applications; seals; gaskets; lubrication.

General Course Objectives

Students will read documentation and prints; determine assembly, connection, and installation requirements; and describe and employ power transmission systems, basic and precision measurement, and mechanical assembly components.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 059

Prerequisites

None

Methods of Evaluation

The minimum evaluation methods include 12 lab exercises, 3 objective exams, and 1 final exam.

Instructional Materials and Additional Supplies

Industrial Maintenance, Cengage, Current Edition.

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Documentation and Prints	1. Identify components, symbols, and dimensioning on prints. Discuss their relationship to the assembly or installation.	4	2	0
Dimensioning and Tolerance	1. Describe the dimension and tolerance methods used in blueprints. 2. Demonstrate the ability to interpret and discuss dimensions and tolerance.	2	4	0
Fundamentals of Power Transmissions	1. List common methods of transferring power from engines and motors to mechanical assemblies, gearing changes, torque, and horsepower.	8	8	0
Basic and Precision Measurement Tools	1. List the tools used for basic and precision measurement. 2. Demonstrate the ability to use measuring tools in the placement, installation, and alignment of mechanical components.	2	2	0
Fasteners	1. Define and describe fasteners used in mechanical assemblies, advantages and disadvantages, and the tools used to properly install them. 2. Demonstrate the ability to select the proper fasteners for an application. 3. Properly utilize the correct tool.	4	4	0
Bearing Types	1. Describe bearing types and applications, advantages and disadvantages, removal, inspection, and installation.	4	4	0
Mechanical Seals	1. Describe seals and applications, advantages and disadvantages, removal, inspection, and installation.	2	2	0
Gaskets	1. List gasket materials and their applications, removal, preparation, and installation.	2	2	0
Lubrication Systems	1. Compare and contrast lubricants. 2. Select lubricants based on application. 3. Install and maintain lubrication systems.	2	2	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0