PARKLAND COLLEGE

Course Information Form (CIF)

Course Code: MFT 211

Course Title: Advanced Machining Processes and Inspection Practices

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 15.0613
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 3-2-4
Credit Hour Distribution:

Lecture: 3	Lab: 2	Clinical: 0	**Total: 4**

General Course Information

Catalog Description

Advanced manual machine tool operation and inspection practices.

General Course Objectives

Students will have an increased ability to manufacture components and assemblies on a variety of manual machine tools. Emphasis will be on advanced machining and inspection practices.

Minimum Placement Levels

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

Prerequisites

Credit in MFT 132 or equivalent

Methods of Evaluation

Students will be given 2 one-hour exams, 4 quizzes, 3 lab projects, and 1 final exam.

Instructional Materials and Additional Supplies

Machine Tool Practices, by Kibbe, Neely, Meyer, and White. Prentice Hall.

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
Safety	1. Describe proper machine shop safety procedures while setting up and operating various machine tools.	1	1	0
Course Introduction	1. Identify the course objectives and grading system used for evaluation.	1	0	0
Thread Forms; Terminology; and Cutting of Left-handed, Acme, and Multiple Start Threads	1. Demonstrate proper application, use, and limits of various thread forms and multiple start threads. Cutting of left-handed threads will also be included.	10	7	0
Grinding and Abrasive Machining Processes; Terminology and Production of Ground Components Using Surface Grinders	1. Identify terminology and application of abrasive machining processes to produce parts using surface grinding.	10	6	0
Advanced Setup Techniques for Lathe, Milling Machine, and Surface Grinder	1. Demonstrate ability to produce advanced setups on the lathe, milling machine, and surface grinder.	15	10	0
Advanced Inspection Techniques Used to Verify Conformance to Specifications	1. Demonstrate ability to check accuracy of components made in class to determine conformance to specifications; will include traditional surface plate-based inspection techniques.	8	6	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
45	30	0