Course Objectives/Course Outline
Spokane Community College

Course Title: Precision Metal Fabrication Technology 1
Prefix and Course Number: PMF 102

Course Learning Outcomes:
By the end of this course, a student should be able to:

— Operate CNC Turret Punch Press
— Describe CNC equipment theory, functions and processes, maintenance of the machines, and machine setup.
— Utilize basic G&M programming, reading G&M code, XYZ coordinates, automatic machine functions.
— Concentrate on the role of rapid and feed override, distance to go, single block, and reading and identifying the program for successful crash avoidance
— Troubleshooting part defects with regards to the Turret Punch
— Establish tool locations in the turret, set appropriate tool length settings for default and forming tools, set TLOs, and establish coordinates.
— Monitor and troubleshoot machine noises and behavior
— Use the shear to produce accurate blanks
— Deburr punched materials

Course Outline:

      A. *NOTE:* This course schedule is subject to change at the discretion of the instructor.

Week 1: Introduction & Safety Course Review Introductions Safety	**Week 7: Midterm** Review Midterm
Week 2: Planning & Coordinates Review: Job Planning Coordinates	**Week 8: Introduction to Manual Mill** Mill Safety Introduction to the Mill Introduction to Drilling
Week 3: CNC Systems and Controls CNC Punch Press Systems CNC Punch Press Controls	**Week 9: Mill for Drilling** Safety Review Drilling, continued… Tools, Toolholding, & Workholding
Week 4: Punch Setup & Proving CNC Punch Press Setup	**Week 10: Open Lab** Open lab for project and skills
Week 5: CNC Operation & G-code CNC Punch Press Operation Punch Press G-code	**Week 11: Open Lab** Open lab for project and skills
Week 6: Crash Avoidance Punch Press Crash Avoidance	**Week 12: Final** Final Final Lab