

DEPARTMENT OF MECHANICAL ENGINEERING
MANUFACTURING LAB
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SYLLABUS FALL/SPRING Sessions 1-4 (Level-1)

Welcome to Manufacturing Lab. This is an introductory lab course. The course objective is to help you understand the engineer's role in manufacturing, through hands on learning exercises. Safety is taught, practiced, and enforced throughout the course. Please note that a flash-drive, and closed toed shoes will be required for this course.

GRADING

This is a “HANDS ON” course. Grading for this class is broken down as follows:

The FOUR components that make up YOUR total grade are:

- ATTENDANCE 100 pts (4 @ 25 pts each) NOTE: 2 or more labs missed you will be dropped)
- HOMEWORK 35 pts (1 @ 10 pts each, 1 @ 25 pts each)
- PROJECTS 65 pts (1 @ 50 pts each, 1 @ 15 pts each)
- FINAL EXAM 100 pts

TOTAL: 300 points

GRADE SCALE

A = 275-300 pts
B = 225-274 pts
C = 200-224 pts
D = 175-199 pts
F = 174 and below

NOTE:

Attendance: There are only 4 lab meetings, no makeups allowed due to session scheduling.
** If you cannot attend all 4 labs, it is advised you drop the lab and sign up for another session where you can attend all of the labs. **

Homework: Must be complete and turned in by DUE date to get full points. Homework is to be done on YOUR time not class time. LATE Homework will lose additional points.
**Put YOUR name and Panther ID on your work in order to get credit. **

Projects: Must be 100 percent completed to get full points.

Weekly Lab requirements

LAB WEEK# 1

- INTRODUCTION TO MANUFACTURING LAB.
- GET EMAIL AND CONTACT INFORMATION
- GO OVER SYLLABUS/ HAND OUTS
- ASSIGN HOMEWORK #1 (Intro to CNC videos.)
- SAFETY BRIEFING
- DISCUSS THE 3 F's (Fit, Form and Function)
- ASSIGN, Project-1
- HAND OUT COST ANALYSIS PROJECT-2 (Project Tracking Sheet).
- MICROMETER AND DIAL CALIPER INSTRUCTION
- LAB TOUR
- START CUTTING BLOCKS TO SIZE (Top Bottom)
- BEGIN FILLING IN PROJECT TRACKING SHEET

LAB WEEK# 2

- HOMEWORK #1 DUE
- REVIEW HOMEWORK #1
- LECTURE: G-CODES, FORMAT AND MACHINING PRACTICES
- ASSIGN HOMEWORK #2: (Watch video/ Mastercam Engrave Card Holder)
- CONTINUE MACHINING METAL PROJECTS (Front/Back and 1-side).
- UPDATE PROJECT TRACKING SHEET

LAB WEEK# 3

- HOMEWORK #2 DUE
- FINISH BLOCK ENDS
- POST G-CODE, MACHINE AND COMPLETE CARD HOLDER PROJECT
- FILL IN PROJECT TRACKING SHEET

LAB WEEK# 4

- TRACKING SHEETS DUE (PROJECT-2)
- FINALIZE ALL PROJECTS
- PROJECT TRACKING SHEET REVIEW / DISCUSSION
- FINAL EXAM
- CLEAN-OUT LOCKERS and TAKE HOME PROJECTS

REMEMBER: Your attendance, participation, and effort are key factors in your final grade so please come prepared and ready to work.