

DEPARTMENT OF MECHANICAL ENGINEERING
EIN 3390L MANUFACTURING PROCESSES LAB
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FALL- SPRING SYLLABUS

Welcome to Manufacturing Processes Lab. There will be 3 hands on projects assigned to you during this semester. One metal project, one plastic project, and one, IN-Class written project. 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 70 pts (7 @ 10 pts each) NOTE: 3 or more labs missed lose ALL 70 pts)
- HOMEWORK 75 pts (3 @ 25 pts each)
- PROJECTS 75 pts (3 @ 25 pts each)
- QUIZ 10 pts
- FINAL EXAM 100 pts

TOTAL: 330 points

FINAL GRADE

A = 315-330 pts	
B+ = 308-314 pts	B= 300-307 pts
C+ = 291-299 pts	C= 230-290 pts
	D= 180-229 pts
	F= 179 pts and Below

NOTE:

Attendance: “Excused” absences will not lose points if approved by Instructor.
Coming in Late or leaving early without approval will cost additional points.

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.

Feedback

If you wish to know your status at any time during this course, then ask me and I will be happy to give it to you.

Weekly Lab requirements

LAB WEEK# 1

- **INTRODUCTION TO EIN3390L.**
- **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, VISE or FIU CARD HOLDER PROJECTS**
- **ASSIGN MOLD SHAPE FOR FADAL PROJECT FOR EACH STUDENT**
- **HAND OUT COST ANALYSIS PROJECT (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**
- **QUIZ ON MASTERCAM VIDEO LECTURE**
- **FINISH BLOCK ENDS**
- **WISE PROJECT: MILL CENTER CUT OF MAIN BODY ON ANILAM AND DRILL AND TAP ON FADAL.**
- **CARD HOLDER: POST G-CODE AND ENGRAVE CARD HOLDER BLOCKS ON ANILAM**
- **FILL IN PROJECT TRACKING SHEET**

LAB WEEK# 4

- **ASSIGN HOMEWORK-3 MOLD PROJECT (Watch Video and write molds)**
- **DEMONSTRATE CNC LATHE**
- **MACHINE VISE SCREW ON CNC LATHE, CUT OFF SCREW AND FINISH FACE**
- **MACHINE MOVABLE JAWS.**
- **FINISH ALL CARD HOLDER PROJECTS AND PAINT (optional)**
- **FILL IN PROJECT TRACKING SHEET**

LAB WEEK# 5

- **HOMEWORK #3 DUE**
- **CHECK/ POST FADAL PROGRAMS**
- **RUN MOLDS ON FADAL**
- **DRILL RUNNER/SPRUE, TRIM TO SIZE AND PRY-SLOTS**
- **FILL IN PROJECT TRACKING SHEET**

LAB WEEK# 6

- **FINALIZE ALL PROJECTS**
- **ENGRAVE (OPTIONAL)**
- **TURN IN ALL HOMEWORK ASSIGNMENTS**
- **FILL MOLDS**
- **COMPLETE FILLING IN PROJECT TRACKING SHEET**

LAB WEEK# 7

- **TRACKING SHEETS DUE (project 3)**
- **PROJECT TRACKING SHEET Discussion** (Total cost and manufacturing alternatives)
- **FINAL EXAM REVIEW**
- **FINAL EXAM**
- **EVALUATIONS**
- **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.