COMMON COURSE OUTLINE: Course discipline/number/title: PMT 1300: Open Manufacturing Lab I

A. CATALOG DESCRIPTION
1. Credits: 8
2. Hours/Week: 16/week
3. Prerequisites (Course discipline/number): None
4. Co-requisites (Course discipline/number): CAD 1050, CAD 1230, PMT 1105, PMT 1155, PMT 1255
5. MnTC Goals (if any): NA

This course is an open lab in machining fundamentals. The student will have hands on experience on manual and basic CNC machine shop equipment. Topics of study include safety, measuring parts to print, proper set up, speeds and feeds, and cutting tool usage.

B. DATE LAST REVISED (Month, year): April, 2009

C. OUTLINE OF MAJOR CONTENT AREAS:
1. Shop Safety
2. Speeds and Feeds
3. Cutting tools
4. Measurements
5. Manual Mill
6. Manual Lathe
7. CNC Turning Basics
8. CNC Machining Basics

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
Skillfully setup and use basic precision manufacturing techniques working in a hands on lab environment.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
1. Skill evaluation
2. Project evaluation
3. Tests
4. Pre and Post tests
5. Time keeping for hours working in an open lab

G. RCTC CORE OUTCOME(S) ADDRESSED:

- Communication
- Critical Thinking
- Global Awareness/Diversity
- Civic Responsibility
- Personal/Professional Accountability
- Aesthetic Response

H. SPECIAL INFORMATION (if any):
Lab will be held in CAD prototype shop with open labs four days a week. Flexible lab time will be offered for students to work on projects.