

Master Syllabus

CAM 1161 - Machine Operations Laboratory I

Division: Science, Mathematics and Engineering

Department: Computer Aided Manufacturing

Credit Hour Total: 8.0

Lecture Hrs: 2.0 **Lab Hrs:** 18.0

Other Prerequisite(s): Approval of Department

Date Revised: December 2014

Course Description:

An introduction to the manufacturing processes used in the tooling and machining industry. Safety, handtools, metrology, engine lathe, milling, sawing and grinding will be the major focus of this course. Two classroom, eighteen lab hours per week.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving
- ▣ Values/Citizenship/Community
- ▣ Information Literacy

Course Outcomes:

Proper use of machine tools

Set up and manipulate machine tool equipment to make parts to print specifications.

Assessment Method: Portfolios

Performance Criteria: Inspect parts from print specifications with a rubric. 70% of students scoring a "70" or better on the rubric

Safety

Students will demonstrate safety procedures while running machine tools and working in the shop.

Assessment Method: Behavioral observations

Performance Criteria: All students exhibit safety procedures learned from lectures and exams, as observed by instructor against checklist.

Assessment Method: Locally developed exams

Performance Criteria: All students correctly answer safety exams with 90% accuracy

Inspection equipment

Set up and manipulate inspection equipment to check parts against print specifications.

Assessment Method: Portfolios

Performance Criteria: Inspect parts from print specifications with a rubric, 70% of students score "70" or better on the rubric.

Outline:

Milling Machine
Drill Press
Semi-Precision Layout Techniques
Lathe
Grinding
In Process Inspection
Machine Shop Safety