

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

Prerequisite(s): MAT 0050

Other Prerequisite(s): AND Approval of Department

Date Revised: January 2017

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 Competency
- ▣ Values/Citizenship/Community Competency
- ▣ Information Literacy Competency

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

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