

Master Syllabus

CAM 1162 - Machine Operations Laboratory II

Division: Science, Mathematics and Engineering

Department: Computer Aided Manufacturing

Credit Hour Total: 8.0

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

Prerequisite(s): CAM 1161

Other Prerequisite(s): AND Approval of Department

Date Revised: October 2012

Course Description:

Students will advance their proficiency in the use of manually operated machine shop equipment. Emphasis will be on precision grinding, fitting parts for assembly, increasing independence developing process plans and setting up machinery. Two classroom, eighteen lab hours per week.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Values/Citizenship/Community Competency

Course Outcomes:

Inspection Equipment

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

Assessment Method: Behavioral observations

Performance Criteria: Correctly select appropriate inspection 80% of the time on first attempt

Assessment Method: Portfolios

Performance Criteria: 100% of completed inspection sheets

Safety

Demonstrate safety procedures while running machine tools and working in the shop.

Assessment Method: Behavioral observations

Performance Criteria: Apply 100% of safety procedures learned from lectures and demonstrations

Assessment Method: Locally developed exams

Performance Criteria: Correctly answer safety exams with 90% accuracy

Proper Use of Machine Tools

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

Assessment Method: Behavioral observations

Performance Criteria: Select the best machine process 80% of the time on first attempt

Outline:

Safety procedures in the machine shop
Using inspection tools to measure parallelism and perpendicularity
Development of process operation plan
Milling machine operation
Lathe operations
Precision grinding using surface grinders
Fitting components into assemblies