

## 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

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#### 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
- ▣ Values/Citizenship/Community

#### 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