

Master Syllabus

CAM 1107 - Principles of Manufacturing

Division: Science, Mathematics and Engineering

Department: Computer Aided Manufacturing

Credit Hour Total: 3.0

Lecture Hrs: 3.0

Prerequisite(s): MET 1131 OR OPT 1198

Date Revised: March 2014

Course Description:

The study of manufactured products from the perspective of design, tooling, processing, communication, computer numerical control, machine elements, tool design and specifications. The course also examines problem solving and critical thinking in product development using both standard and automated communication methods.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving
- ▣ Written Communication
- ▣ Information Literacy

Course Outcomes:

Product Specifications

Create specifications for manufactured products.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students score 80% or better on applicable exam questions

Assessment Method: Portfolios

Performance Criteria: Maintain a collection of work samples to exhibit competency of skills learned graded by a rubric. 70% of students perform higher than a "70" on rubric.

Communication

Effectively communicate ideas about processing and producing a product.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students score 80% or better on applicable exam questions

Assessment Method: Portfolios

Performance Criteria: Maintain a collection of work samples to exhibit competency of skills learned graded by a rubric. 70% perform at a "70" or higher on the rubric

Engineering Drawings

Demonstrate the ability to read and interpret engineering drawings for problem solving.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students score 80% or better on applicable exam questions

Product Development

Apply the product development process by successfully completing individual design and drafting projects.

Assessment Method: Locally developed exams

Performance Criteria: 70% of students score 80% or better on applicable exam questions

Assessment Method: Portfolios

Performance Criteria: Maintain a collection of work samples to exhibit competency of skills learned graded by a rubric with 70% of students earning a "70" or better on rubric

Outline:

Orthographic Projection
Isometric and Pictorial Drawings
Sectional Views
Dimensioning and Tolerancing
Computer Aided Drafting
Geometric Dimensioning and Tolerancing
Drafting and CAD Symbolology
Print Reading and Sketching