

## Master Syllabus

### OPT 2205 - Manufacturing Processes

**Division:** Science, Mathematics and Engineering

**Department:** Operations Technology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 3.0

**Prerequisite(s):** OPT 1101

**Date Revised:** June 2014

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### Course Description:

Students will gain a basic understanding of manufacturing processes within a safe working environment.

### General Education Outcomes:

- Oral Communication Competency
- Written Communication Competency
- Critical Thinking/Problem Solving Competency
- Values/Citizenship/Community Competency
- Computer Literacy Competency
- Information Literacy Competency

### Course Outcomes:

#### Relationships between safety, profitability and quality.

Identify the safety and quality components of a profitable manufacturing process by using process planning, computer integrated manufacturing, and group technology.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Correctly answer 70% of exam questions

**Assessment Method:** Portfolios

**Performance Criteria:** Score 70% of possible points for portfolio presentation

#### OSHA standards for industry

Recognize safe and unsafe work practices, comprehend reporting requirements for safety concerns, and conduct material selections.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Correctly answer 70% of exam questions

**Assessment Method:** Portfolios

**Performance Criteria:** Score 70% of possible points for portfolio presentation

#### Process plans

Describe, compare and contrast several types of manufacturing processes and equipment and integrate safe OSHA behavior practices.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Correctly answer 70% of exam questions

**Assessment Method:** Portfolios

**Performance Criteria:** Score 70% of possible points for portfolio presentation

### Outline:

History of manufacturing processes  
Taxonomy of manufacturing processes  
Material properties  
Casting  
Molding  
Shearing  
Forming  
Machining  
Joining  
Finishing  
Process planning  
10 hours OSHA training