

## Master Syllabus

### CAM 2114 - Jig & Fixture Design

**Division:** Science, Mathematics and Engineering

**Department:** Computer Aided Manufacturing

**Credit Hour Total:** 3.0

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

**Prerequisite(s):** CAM 1107AND CAM 1109OR CAM 1161

**Date Revised:** January 2015

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### Course Description:

Theory, principles and drawing techniques for the design of jigs and fixtures. Two classroom, two lab hours per week.

### General Education Outcomes:

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

### Course Outcomes:

#### Drafting and Design Techniques

Recognize and apply the drafting and design techniques used in tool drawings.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% of students score of 80% or better

#### Principles of Jig and Fixture Design

Apply the principles of jig and fixture design by completion of an individual design project.

**Assessment Method:** Performance appraisals

**Performance Criteria:**

70% of students score 80% or higher on project as demonstrated to the instructor by use of an evaluation rubric.

#### Toolmaking practices

Demonstrate the ability to examine and identify toolmaking practices related to the design of jigs and fixtures.

**Assessment Method:** Locally developed exams

**Performance Criteria:**

70% of students score 80% or better

### Outline:

Theory of Jigs

Theory of Fixtures

Locating and Clamping Methods

Design Projects for Jigs and Fixtures

Welding Fixtures

Geometric Dimensioning and Tolerancing

Jig and Fixture Problem Solving