

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

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