

# Minnesota State College Southeast

## MDAD 1216: Mechanisms

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 1

Lab Hours/Week: 4

OJT Hours/Week: \*.\*

Prerequisites:

This course requires any of these three prerequisite categories

1. Both of these

MDAD 1204 - Autocad

MDAD 1250 - Print Reading for CAD Design

Or

2. Both of these

MDAD 1241 - Solidworks

MDAD 1250 - Print Reading for CAD Design

Or

3. Both of these

MDAD 1250 - Print Reading for CAD Design

MDAD 1252 - Working Drawings 1 for CAD Design

Corequisites: None

MnTC Goals: None

This course is an exploration of the inner workings of machines, namely mechanisms. This includes cams, linkages, belt and chain drives, gears, bearings and speed reducers. Also included will be a section on fluid power. (Prerequisites: MDAD1204 and MDAD1250, or MDAD1241 and MDAD1250, or MDAD1250 and MDAD1252) (Concurrent: MDAD 1241 if not already taken) (3 credits: 1 lecture/2 lab)

**B. COURSE EFFECTIVE DATES:** 11/09/1998 - Present

**C. OUTLINE OF MAJOR CONTENT AREAS**

**D. LEARNING OUTCOMES (General)**

1. Complete an all inclusive mechanisms project
2. Complete required drawings
3. Analyze fluid power
4. Prepare formal drawings from verbal instructions
5. Prepare formal drawings from layouts
6. Prepare formal drawings from sketches
7. Analyze chain drives
8. Analyze horsepower
9. Analyze belt drives
10. Calculate gear box data
11. Analyze seals
12. Analyze bearings
13. Analyze gears
14. Analyze cams
15. Analyze linkages

**E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted