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