

# Minnesota State College Southeast

## MDAD 1242: Design Projects

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course is a design class that will focus on the design process itself. The student will gain confidence in her or his ability to apply sound product design parameters based on design considerations. A holistic approach will be used to incorporate the many functions of a designer in a company. Many times this course is completed in a group format. The content goals of the course will change with the individual students design. The course will be taken in conjunction with Design Project Lab. (Prerequisites: MDAD1206, MDAD1208, MDAD1214, MDAD1218, MDAD1236) (3 credits: 3 lecture/0 lab)

**B. COURSE EFFECTIVE DATES:** 10/11/2002 - Present

**C. OUTLINE OF MAJOR CONTENT AREAS**

## **D. LEARNING OUTCOMES (General)**

1. Analyze product design
2. Analyze manufacturing design
3. Analyze the designers role
4. Analyze product parameters
5. Analyze parametrics
6. Analyze finite element analysis
7. Analyze structural design
8. Analyze industrial design
9. Analyze related design field
10. Identify design goal
11. Analyze product complexity
12. Examine similar designs
13. Formulate design sequence
14. Contact consultants
15. Analyze manufactures' catalogs
16. Identify handbooks
17. Identify trade journals
18. Identify technical library
19. Identify trade magazines
20. Analyze power sources
21. Analyze product strength
22. Analyze product rigidity
23. Analyze product size
24. Analyze product weight
25. Analyze safety
26. Analyze lubricants
27. Analyze product appearance
28. Analyze materials
29. Analyze interchangeability
30. Analyze servicing
31. Analyze protective coatings
32. Calculate material costs
33. Analyze preliminary layout
34. Organize work

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

None

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted