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