

Course discipline/number/title: CAD 2424: Special Projects II

A. CATALOG DESCRIPTION

1. Credits: 2
2. Hours/Week: 4 lab
3. Prerequisites (Course discipline/number): CAD 2323, CAD 2324, CAD 2358, CAD 2460
4. MnTC Goals (if any): NA

In this course students will work on advanced design projects to reinforce skills and knowledge gained during the coursework, or a new area that was not covered in the regular program course offerings. Projects will be assigned or selected with approval of instructor. A contract will be written on required work. This course will be taught in a state-of-the-art facility featuring the latest release of SolidWorks. Students must receive a grade of C or better in all prerequisite courses.

B. DATE LAST REVISED (Month, year): October, 2017

C. OUTLINE OF MAJOR CONTENT AREAS:

1. Identification of project
2. Identification of software to document project
3. Drawing creation using conventional drafting practices
4. Project objectives and outcomes
5. Electronic documentation of project: (Electronic and paper copies of a PowerPoint slideshow, detail drawings, assembly drawings, bill of material, cost estimates)
6. Reverse engineering

D. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Create a project journal using PowerPoint.
2. Demonstrate writing techniques to clearly state project objectives.
3. Draw and document projects using standard CAD dimensioning standards.
4. Apply problem-solving methods.
5. Apply conventional drafting practices to the drawings.
6. Demonstrate reverse engineering and prototyping techniques using the CAD prototype shop.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:

Methods may include but not limited to:

1. Evaluation of PowerPoint project documentation
2. Class participation
3. Completed electronic CAD files
4. Completed prototypes and projects

G. RCTC CORE OUTCOME(S) ADDRESSED:

Personal and Professional Accountability. Students will take responsibility as active learners for achieving their educational and personal goals.

H. SPECIAL INFORMATION (if any): None