COMMON COURSE OUTLINE: Course discipline/number/title: CAD 2424: Special Projects II

A. CATALOG DESCRIPTION
1. Credits: 2
2. Hours/Week: 0 hour lecture, 2 hour lab
3. Prerequisites (Course discipline/number): CAD 1039, CAD 2323, CAD 2324, CAD 2358, CAD 2460 or instructor’s permission.
4. Co-requisites (Course discipline/number): None
5. MnTC Goals (if any): NA

In this course students will select an area of interest and specialization in advance drafting work to reinforce skills and knowledge gained during the first year or a new area that was not covered in the regular program course offerings. Projects will be selected with the 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.

B. DATE LAST REVISED (Month, year): April, 2013

C. OUTLINE OF MAJOR CONTENT AREAS:
1. Document weekly project progress using PowerPoint
2. Document project using SolidWorks
3. Apply conventional drafting practices to drawings
4. Draw three view objects using proper conventions, placement, and alignment
5. Define the problem/project or need
6. Brainstorm for ideas
7. Clearly state project objective and what you hope to accomplish
8. Turn in a completed project package including the following information: Electronic and paper copies of a PowerPoint slideshow, detail drawings, assembly drawings, bill of materials, cost estimates.
9. Develop good worker attitudes: Promptness, regular attendance, cooperation, reliability and persistence.
10. 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. Apply problem-solving methods.
4. Apply conventional drafting practices to the drawings.
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:
1. Evaluation of PowerPoint project documentation
2. Class participation
3. Completed electronic CAD files
4. Completed prototypes and projects

G. RTC CORE OUTCOME(S) ADDRESSED:
- Communication
- Critical Thinking
- Global Awareness/Diversity
- Civic Responsibility
- Personal/Professional Accountability
- Aesthetic Response

H. SPECIAL INFORMATION (if any):
Tuition differential