COMMON COURSE OUTLINE: Course discipline/number/title: CAD 2323: Advanced Dimensioning

A. CATALOG DESCRIPTION
1. Credits: 3
2. Hours/Week: 1 hour lecture, 4 hours lab
3. Prerequisites (Course discipline/number): CAD 1120, CAD 1123, CAD 1150, CAD 1222, CAD 1323 or instructor’s permission.
4. Co-requisites (Course discipline/number): None
5. MnTC Goals (if any): NA

This course is designed to meet different drafting standards such as ANSI, 150 MIL or our own school standards. Tolerancing methods and dual dimensioning will be covered as well as geometric tolerancing symbols and standards. 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. Mastering SolidWorks default settings
2. Tolerancing
   a) Bilateral
   b) Unilateral
   c) Plus/minus
3. Understand the use for Limits and Fits
4. Calculate Limits and Fits for RC, FN, and LC
5. Isometric dimensioning
6. Ordinate dimensioning

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Understand and use all SolidWorks default settings.
2. Override existing dimension variable.
3. Create drawings and dimension using required standards.
4. Use SolidWorks dimensioning dialogue boxes.
5. Use dimensioning styles as required.
6. Dual dimension a drawing.
7. Calculate Limits and Fits for RC, FN and LC.
8. Use tolerancing methods listed above for holes and shafts.
9. Use geometric dimensioning and tolerancing symbols.
10. Create detailed dimensioned drawings to be manufactured in industry.
11. Create standard drawing revisions as necessary.
12. Understand and use the machinery handbook.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
1. Tests
2. Quizzes
3. Dimensioned drawings

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

H. SPECIAL INFORMATION (if any):
Tuition differential