COMMON COURSE OUTLINE: Course discipline/number/title: CAD 1223: Technical Drafting I

A. CATALOG DESCRIPTION
   1. Credits: 2
   2. Hours/Week: 1 hour lecture and 2 hour lab
   3. Prerequisites (Course discipline/number): CAD 1230, CAD 1234, CAD 1224
   4. Co-requisites (Course discipline/number): None
   5. MnTC Goals (if any): NA

This course is a basic class in technical drafting which is designated to provide a working knowledge and skills involving several fundamental drafting concepts including the use of freehand and electronic sketches along with the creating of detailed drawings in CAD. Projection drawing theory, the multiview system, auxiliary and section views, dimensioning and basic projection will be covered. All CAD courses will be taught in a state-of-the-art facility featuring the latest release of AutoCAD or SolidWorks.

B. DATE LAST REVISED (Month, year): May, 2010

C. OUTLINE OF MAJOR CONTENT AREAS:
   1. Create Technical sketches and Detailed Drawings
      a) Use of AutoCAD
      b) Freehand and other forms of sketching
   2. Orthographic Projection and Multi view Drawings
      a) Orthographic views
      b) Visualization techniques
      c) Drafting rules
   3. Basic Working Theory of Detailed Technical Drawings
   4. Auxiliary views
   5. Basic Dimensioning Practices

D. LEARNING OUTCOMES (GENERAL): The student will be able to:
   1. Create sketches of two and three-dimensional objects.
   2. Develop the ability to visualize objects from different positions.
   3. Identify several key types of projected views.
   4. Identify the key areas of the overall drawing layout.
   5. Draw two-dimensional objects using proper drafting techniques.
   6. Draw three view objects using proper conventions, placement and alignment.
   7. Apply conventional drafting practices to the drawings.
   8. Draw and project normal, inclined and oblique surfaces in all views.
  10. Describe the concept of first and third angle projections.
  11. Create auxiliary views of an object.

E. LEARNING OUTCOMES (MNTC): NA

F. METHODS FOR EVALUATION OF STUDENT LEARNING:
   1. Evaluation of electronic files
   2. Skill proficiency exercises
   3. Quizzes
   4. Exams

G. SPECIAL INFORMATION (if any):
   Tuition differential