Course discipline/number/title: CAD 1323: Basic Dimensioning

A.   CATALOG DESCRIPTION
1. Credits: 3
2. Hours/Week: 1 lecture, 4 lab
3. Prerequisites (Course discipline/number): CAD 1039, CAD 1120, CAD 1220, CAD 1221
4. MnTC Goals (if any): NA

This course is designed to teach basic machine dimensioning using various drafting standards. Students will be introduced to dimensioning multi-view drawings and assemblies using several different dimensioning methods including ordinate, baseline, continuous, and dual dimensioning. Students will also learn how to implement drawing revisions and be introduced to the concept of flat pattern design. 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. Working drawings
2. Dimensioning Standards
3. Dimensioning variations
4. Ordinate dimensioning
5. Baseline dimensioning
6. Tabular dimensioning
7. Reverse Engineering
8. Development drawings (flat patterns)
9. Integrate Product Data Management add-in and concepts with windows and Solid works

D.   LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Create a variety of working drawings of parts and assemblies.
2. Demonstrate the ability to alter CAD dimension settings for different situations.
3. Create CAD drawings, which follow different dimensioning variations including ordinate and tubular.
4. Produce flat pattern drawings.
5. Use revision blocks to accurately record revisions.
6. Product Data Management (PDM)
    a) Use PDM to check drawings in/out.
    b) Secure CAD files and various data files within the PDM Workgroup.
    c) Search for CAD files using the PDM.
    d) View files using the PDM viewer.
    e) Create a file and directory structure with industry standard

E.   LEARNING OUTCOMES (MNTC): NA

F.   METHODS FOR EVALUATION OF STUDENT LEARNING:
Methods may include but not limited to:
1. Evaluation of electronic files
2. Skill proficiency exercises
3. Quizzes and Exams

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