ROCHESTER COMMUNITY AND TECHNICAL COLLEGE

COMMON COURSE OUTLINE

Course discipline/number/title: CAD 2500: CAD Software and Standards

A.   CATALOG DESCRIPTION
   1. **Credits: 2**
   2. **Hours/Week: 1 Lecture, 2 lab**
   3. **Prerequisites (Course discipline/number):** CAD 1039
   4. **Other requirements:** Students must receive a grade of C or better in all CAD courses.
   5. **MnTC Goals (if any):** NA

B.   COURSE DESCRIPTION: Students will be able to create CAD projects using AutoDesk products such as AutoCAD and Revit along with other "freeware" parametric CAD software. Students will learn the basics of these CAD software packages to become familiar with them for working in various industries. Students will learn and apply different industry drafting standards, revisions, and Engineering Change Orders (ECO's). Students must receive a grade of C or better in all CAD courses.

C.   DATE LAST REVISED (Month, year): May, 2022

D.   OUTLINE OF MAJOR CONTENT AREAS:
   1. Introduction to basic CAD commands for each CAD software listed above.
   2. Learning CAD interfaces
   3. Basic commands to create parts and drawings
   4. Dimensioning
   5. Drawing layouts and drafting views
   6. Various specialty commands for each software.
   7. Drafting standards as seen in industry
   8. Revisions and ECO's of drawings

E.   LEARNING OUTCOMES (GENERAL): The student will be able to:
AutoCAD
   1. Demonstrate job application skills.
   2. Demonstrate job interviewing skills.
   3. Follow employers' policy/procedures and supervisor direction.
   4. Exhibit acceptable workplace habits including punctuality, appearance, dependability, and attitude.
   5. Follow and demonstrate safe practices in office and machine shop settings.
   6. Carry out training plan goals.

REVIT
   1. Understanding the interface.
   2. Create and add walls, openings and dimensioning them.
   3. Drafting views and elevations.
   4. Adding basements, footings, foundations, and slabs.
   5. Understanding Stairs.
   6. Inserting Roof systems (hip and gabled) floors, skylights.
   7. Dimensioning and detailing notes.

Parametric CAD Software
   1. Create extruded, modifying, and revolved features.
   2. Utilizing feature manipulation tools.
   3. Create a drawing, section view, and other advance drawing views.
   4. Create assembly models.
   5. Learning minimal advanced modeling techniques.

F.   LEARNING OUTCOMES (MNTC): NA

G. **METHODS FOR EVALUATION OF STUDENT LEARNING:** Methods may include but are not limited to:
1. Evaluation of electronic drawing files.
2. Lab assignments
3. Quizzes
4. Examinations

H. **RCTC CORE OUTCOME(S).** This course contributes to meeting the following RCTC Core Outcome(s):
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

I. **SPECIAL INFORMATION (if any):**
1. Tuition differential