ROCHESTER COMMUNITY AND TECHNICAL COLLEGE COMMON COURSE OUTLINE

Course discipline/number/title: ENGR 1101: Introduction to Engineering

A. CATALOG DESCRIPTION
1. Credits: 2
2. Hours/Week: 2 Lecture
3. Prerequisites (Course discipline/number): None
4. Other requirements: None
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course helps students gain an understanding of the profession of engineering, the pathway to an engineering career, and knowledge of the different fields of engineering. Hands-on projects and invited speakers will be included. Knowledge gained will be applied by students to guide their engineering education and to help in determining their career choice.

C. DATE LAST REVISED (Month, year): February, 2025

D. OUTLINE OF MAJOR CONTENT AREAS:
1. Overview of areas of engineering
   a) Mechanical
   b) Civil
   c) Electrical
   d) Computer
   e) Other
2. Engineering Design
   a) Research
   b) Project Planning
   c) Building and Testing
   d) Communication of Results orally and in writing

E. LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Communicate visually, orally, and in writing using engineering graphics, presentations, and written reports.
2. Gather information using the internet, the library, and patent research.
3. Understand the design process from concept generation and selection, through brainstorming and working in teams, project planning, and the building and testing phases.
4. Describe in detail the different fields of engineering.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:
1. Objective exams
2. Projects
3. Research papers
4. Quizzes
5. Presentations

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): None