Faculty are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Collegewide Curriculum Committee.

DEPT. PHYSICS COURSE NO. 1235

NUMBER OF CREDITS: 2

COURSE TITLE Introduction to Engineering

CATALOG DESCRIPTION An introduction to the study of engineering. This course highlights the keys to success in engineering study, a description of the engineering profession, academic success strategies, and orientation to the engineering education process.

AUDIENCE: Primarily for students who wish to enter the engineering profession and wish to explore the career opportunities.

FULFILLS MN TRANSFER CURRICULUM AREA(S) (Leave blank if not applicable)
PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: General Reading and Writing skills

LENGTH OF COURSE One Semester

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ fall ☑ spring ☐ summer ☐ undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT:
   a. Studying academic success strategies.
   c. Studying keys to success in studying engineering.

2.) THINKING SKILLS:
   a. Developing study skills.
   b. Personal development techniques.
   c. Doing self-assessments.

2) COMMUNICATIONS SKILLS:
   a. Writing answers to questions covering the reading material.
   b. Writing a term paper or interviewing an engineer.
3) HUMAN DIVERSITY:

Exploring the many opportunities in engineering and the diverse ways people can obtain their goals.

TOPICS TO BE COVERED:

A. Factors which lead to success in engineering study.
B. Models for viewing your education.
C. The engineering profession as a career.
D. Employment opportunities now and in the future.
E. Academic success strategies.
F. Personal development.
G. Broadening your education.
H. Orientation to the engineering education process.

LIST OF EXPECTED COURSE OUTCOMES:

a. Studying academic success strategies.
c. Studying keys to success in studying engineering

LEARNING/TEACHING TECHNIQUES used in the course are:

- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos/Slides
- Demonstrations
- Other (describe below)
- Lab
- Trips to area industries

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- Reading
- Tests
- Oral Presentations
- Individual Projects
- Textbook Problems
- Collaborative Projects
- Group Problems
- Portfolio
- Other (describe below)
- Term Paper

EXPECTED STUDENT LEARNING OUTCOMES:

1. The student will learn how to be successful academically in the engineering profession by exploring their own strengths and weaknesses.
2. The student will learn the foundation of engineering fundamentals in a variety of the different engineering professions.
3. The student will design their own project related to his/her choice of engineering field.
4. The student will learn of the interconnectedness of the mathematics and science courses that are required as prerequisites to entering the engineering courses.
5. The student will cultivate problem solving skills.
The information in this course outline is subject to revision

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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