

**SEWARD COUNTY COMMUNITY COLLEGE
COURSE SYLLABUS**

I. TITLE OF COURSE: EN1102- Introduction to Engineering Careers

**II. COURSE DESCRIPTION: 2 credit hours
2 credit hours of lecture and 0 credit hours of lab per week.**

The course introduces students to the various disciplines within the field of engineering via lectures given by professional engineers working in the field. The course also allows students to discover the skills and knowledge needed to become an engineer. During the semester students will be assigned projects and problems involving elementary engineering concepts. For each unit of credit, a minimum of three hours per week with one of the hours for class and two hours for studying/preparation outside of class is expected.

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Pre-requisite: MA 1103 Intermediate Algebra or the permission of the instructor.

III. PROGRAM AND/OR DEPARTMENT MISSION STATEMENT:

The Science Program at Seward County Community College provides opportunities to improve and enhance each student's understanding and comprehension of the natural world through a variety of courses and experience to develop a scientifically literate citizen.

IV. TEXTBOOK AND MATERIALS:

Oakes (2015), Engineering Your Future: A Brief Introduction to Engineering (5th Ed). Oxford University Press.

V. SCCC OUTCOMES

Students who successfully complete this course will demonstrate the ability to do the following SCCC Outcomes.

- 1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life
- 2: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.

- 5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information

VI. COURSE OUTCOMES:

1. Gather information to aid in selecting a particular engineering field by participating in talk and discussions with engineers of various disciplines.
2. Develop an awareness of engineering profession, current employment and salary information, and future career opportunities.
3. To identify and develop the skills, knowledge, and habits of mind necessary to earn a degree in engineering.
4. Investigate problem solving methods and basic engineering design process.

VII. COURSE OUTLINE:

1. Engineering Majors
2. The Engineering Profession
3. Succeeding in the classroom
4. Problem solving strategies
5. Ethics and engineering
6. Teamwork
7. Engineering Design
8. Technical Communication

VIII. INSTRUCTIONAL METHODS:

1. Guest Engineering Speakers
2. Field Trips
3. Lecture
4. Discussions
5. Problem Solving Activities
6. Group Projects

IX. INSTRUCTIONAL AND RESOURCE MATERIALS:

1. Textbook
2. Resources on Internet
3. Guest Speakers

X. METHODS OF ASSESSMENT:

SCCC Outcome #1 will be assessed by discussions and written assignments following reading the text or accessing and reading resources online.

SCCC Outcome #2 will be assessed using a written paper over information learned in class.

SCCC Outcome #3 will be assessed through informal oral presentations explaining solutions to problems.

SCCC Outcome #5 and 6 will be assessed using engineering related projects in class.

XI. ADA STATEMENT:

Under the Americans with Disabilities Act, Seward County Community College will make reasonable accommodations for students with documented disabilities. If you need support or assistance because of a disability, you may be eligible for academic accommodations. Students should identify themselves to the Dean of Students at 620-417-1106 or going to the Student Success Center in the Hobbie Academic building, room 149 A.