EGR 202 - MECHANICS OF MATERIALS

Course Description

This course introduces the engineering behavior of real materials, including stress/strain at a point, principle stresses and strains, stress-strain relationships, determination of stresses and deformations in situations involving axial loading, torsional loading of circular cross sections, and flexural loading of prismatic members. Also covers stresses due to combined loading and buckling of columns. Vector algebra and differential calculus are used throughout this course. Group 2 course.

Credit Hours

3

Contact Hours

3

Lecture Hours

3

Required Prerequisites

EGR 201

Recommended Prerequisites or Skills Competencies

ENG 111, MTH 142

General Education Outcomes supported by this course

Critical Thinking - Direct

Course Learning Outcomes

Knowledge:

- Gain proficiency in the concepts of engineering mechanics of materials.

Application:

- Use specialized mechanics of materials skills to solve problems.

Integration:

- Utilize skills learned in statics (EGR 201) as well as math and physics coursework to solve mechanics problems.

Human Dimension:

- Develop an understanding of how mechanics affects real-world systems.

Caring - Civic Learning:

- Develop an understanding of why mechanics is important for solving real-world problems in the community.

Learning How to Learn:

- Develop an engineer's point of view by utilizing a formulaic approach to solving problems.