

CUMBERLAND COUNTY COLLEGE

Course: EG 201 Engineering Statics

Credits: 2 (2:2:0)

Corequisite: MA130

Description: This course covers vector calculation of forces, moments, and equilibrium of particles and rigid bodies, centroid and moment of inertia. Students will gain an adequate knowledge of simple mechanical systems and develop the necessary skills to analyze a moderately complicated system.

Learning Outcomes:

At the completion of this course, students will be able to:

- Practice principles of manipulation of vectors
- Explain laws of motion
- Recognize the conditions of static equilibrium
- Examine a system at static equilibrium
- Modify a system of forces
- Evaluate reaction and contact forces
- Calculate the center of gravity and centroid of a system
- Recognize frictional forces
- Design and analyze systems of basic trusses
- Perform vector manipulation
- Analyze the conditions of equilibrium
- Simplify force system
- Calculate the positions of center of gravity of an object

Topical Outline:

- Vectors and vector operations
- Equilibrium of particles
- Moment of a force
- Force system resultant
- Equilibrium of rigid body
- Trusses and structural analysis
- Center of gravity and Centroid
- Moments of Inertia

Text:

Engineering Mechanics, Statics, 10th ed., R. C. Hibbeler, Prentice Hall Pearson Education, Inc.

Student Assessment:

In the course of this semester two examinations will be given in addition to a comprehensive final exam. These exams in addition to the homework assignments constitute the basis for evaluation of the student proficiency.

The course grade will be calculated as follows:

Two exams	50%
Final exam	30%
Homework	20%

Academic Integrity:

Plagiarism is cheating. Plagiarism is presenting in written work, in public speaking, and in oral reports the ideas or exact words of someone else without proper documentation.

Whether the act of plagiarism is deliberate or accidental [ignorance of the proper rules for handling material is no excuse], plagiarism is, indeed, a “criminal” offense. As such, a plagiarized paper or report automatically receives a grade of **ZERO** and the student may receive a grade of **F** for the semester at the discretion of the instructor.

Tutoring & Project Assist:

If you are having difficulty with work in this class tutoring is available through the Center for Academic & Student Success. If you think that you might have a learning disability, contact Project Assist at 856.691.8600 x 1282 for information on assistance that can be provided to eligible students.

Before Withdrawing From This Course:

If a student experiences adverse circumstances while enrolled in this course and considers withdrawing, s/he should see an advisor (division or advisement center) BEFORE withdrawing from the class. A withdrawal may cause harmful repercussions to completion rate standards and overall GPA which can limit or eliminate future financial aid in addition to causing academic suspension.