El Paso Community College
Syllabus
Part II
Official Course Description

SUBJECT AREA	**Engineering**
COURSE RUBRIC AND NUMBER	**ENGR 2332**
COURSE TITLE	**Mechanics of Materials**
COURSE CREDIT HOURS	**3 3 0** **Credits Lec Lab**

I. Catalog Description

Stresses deformations, stress-strain relationships, torsions, beams, shafts, columns, elastic deflections in beams, combined loading, and combined stresses. **Prerequisites: ENGR 2301 and MATH 2413 and CHEM 1311 and 1111. (3:0).**

II. Course Objectives

Upon satisfactory completion of this course, the student will be able to

A. Calculate the normal and shear stress on a body.
B. Find the strain in a deformed body.
C. Explain the Stress-Strain Diagram.
D. Solve for the internal axial forces.
E. Determine the torsion on a circular shaft.
F. Determine the maximum shear and moment on a beam using the shear and moment diagrams.
G. Calculate the shear stresses on a beam as well as the shear flow in built-up and thin-walled members.
H. Determine the internal stresses in thin-walled pressure vessels.
I. Use Mohr's Circle to calculate the stresses and strains on a plane.
J. Design a prismatic beam.
K. Determine the reactions on indeterminate beams and shafts using the method of integration, the moment area method, and the method of superposition.
L. Calculate the maximum deflection of a column before it starts buckling.
M. Determine the energy and work on trusses and beams using different methods.

III. Evaluation

A. Grading

It is recommended that four examinations be given, including the final examination. Quizzes and/or homework may also be assigned, and those grades may be included in the final average. The weight given to exams, quizzes, and homework is at the discretion of the instructor.

Grades will be assigned based on a student's average using the scale below:

A = 90 - 100%
B = 80 - 89%
C = 70 - 79%
D = 60 - 69%
F = Below 60%

B. I and W Grades

Incomplete (I) grades will be given at the instructor's discretion and only under special circumstances. The instructor is not obligated to issue a "W" (Withdrawal) grade. Students who wish to withdraw must submit the proper paperwork to the registrar prior to the "drop" deadline. A grade of "W" cannot be issued at the end of the semester.

IV. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

V. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.