

North Hennepin Community College

ENGR 2302: Mechanics of Materials

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites:

This course requires all three of these prerequisite categories

1. PHYS 1601 - General Physics I

And

2. ENGR 2301 - Statics

And

3. Any one of these six

MATH 1221 - Calculus I (Minimum grade: 1.67 GPA Equivalent)

MATH 1222 - Calculus II (Minimum grade: 1.67 GPA Equivalent)

MATH 2010 - Probability and Statistics (Minimum grade: 1.67 GPA Equivalent)

MATH 2220 - Calculus III (Minimum grade: 1.67 GPA Equivalent)

MATH 2300 - Linear Algebra (Minimum grade: 1.67 GPA Equivalent)

MATH 2400 - Differential Equations (Minimum grade: 1.67 GPA Equivalent)

Corequisites: None

MnTC Goals: None

This course is designed for people interested in mechanical, civil, industrial, and aerospace engineering. The topics include: stress, strain, mechanical properties of materials, axial load, torsion, bending, transverse shear, combined loadings, stress transformation and strain transformation. Prerequisite: Math 1221, Physics 1601 and Engr 2301

B. COURSE EFFECTIVE DATES: 08/26/2002 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Topics covered: stress, strain, mechanical properties of materials, axial load, torsion bending, transverse shear, combined loadings, stress transformation.

D. LEARNING OUTCOMES (General)

1. Course Outcomes: An understanding of the principles of mechanics of materials and an ability to solve problems involving these principles.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted