1. AEM 3031, Deformable Body Mechanics

2. 3 credits, 4 contact hours

3. Instructors: N/A


5. Specific course information:
   b. Prerequisites: AEM 2011 or AEM 2021, MATH 2374, MATH 2373
   c. Elective course for ME students.

6. Course outcomes (related ABET student outcomes indicated in square brackets):
   a. A basic knowledge of the properties of engineering materials. [1]
   b. An ability to analyze the stress state of members in tension, torsion and bending. [1]
   c. An ability to analyze twist of torsion members. [1]
   d. An ability to analyze deflections of beams. [1]
   e. A knowledge of Mohr’s circle techniques for stress and strain. [1]
   f. A basic understanding of buckling and stability of columns. [1]
   g. An ability to analyze statically indeterminate structures. [1]

7. Course topics:
   a. Axially loaded members
   b. Torsion
   c. Shear forces and bending moments
   d. Stresses in beams
   e. Analysis of stress and strain and combined loadings
   f. Deflection of beams
   g. Statically indeterminate beams
   h. Column buckling