- **Course Number and Title:**   M E 502. Elasticity I

- **Catalog Description:**   Introduction to stress tensor, strain tensor, constitutive law, energy theorems, plane stress and plane strain. Also covers torsion of shafts and propagation of stress waves in elastic solids.

- **Credit Hours:**   3 Credits (3)

- **Prerequisite(s) / Corequisite(s)**   Prerequisite(s): None
  Corequisite(s): None
- **Required:**   Graduate Core

- **Course Availability:**   Fall Semester

- **Instructor (Usual):**   Dr. Young H. Park (See https://mae.nmsu.edu/people/faculty.html)

- **Textbook:**   None

- **Course Learning Objectives:**   <u>After completing this course, a student should be able to:</u>
  1) Understand the fundamental principles and solution methods used in the analysis of elastic solids and structures.
  2) Use Cartesian tensors for formulations of general deformations and states of stress.

- **Topics Covered:**
  - Introductory mathematical concepts
  - Stress and equilibrium
  - Deformation and strain
  - Three-dimensional elasticity theory