Materials, Solid Mechanics or Structural Mechanics

Course Selection Guidance for Students with Interests in Materials, Solid Mechanics or Structural Mechanics

What is "solid mechanics"?
• The mechanics and physics of materials
• Mechanics of structures and solid mechanics,
• Computational science and statistical mechanics & physics
• Analytical, experimental and computational methods,
• Continuum, multi-scale and non-continuum approaches
• And some materials that are not so "solid"

Suggested core courses:

- MAE 6110 Foundations of Solids Mechanics (Fall)
- MAE 5700 Finite Element Analysis for Mech and Aero Design (Fall)
- MAE 4130 Mechanics of Composite Structures (Fall)

Typically, students take two or more of these core courses.

Follow-on courses include:

- MAE 5130 - Mechanical Properties of Thin Films (Spring) (not offered 2019-20)
- MAE 5200 Dimensional Tolerancing in Mechanical Design (Spring)

Most students could benefit from taking a course in Applied Mathematics such as:

- MAE 3100 Intro to Applied Math (Fall) (not offered 2019-20)
- MAE 6810 Methods of Applied Mathematics I (Fall)
- CEE 6000 Numerical Methods for Engineers (Fall) (not offered 2018-19)

Additional courses to broaden engineering knowledge

- MAE 5730 Intermediate Dynamics and Vibrations (Fall)
- MAE 5230 Intermediate Fluid Dynamics with CFD (Spring)