

ENGR-334 : Mechanics of Materials

Formulation and application of solid mechanics: analysis of forces, stresses, deformation and strains in solids (equilibrium, kinematic, and constitutive relations). Assessment of strength and stability, effects of pure and combined loading, and statically-indeterminate structures. Different mechanisms of strengthening of metals are also considered: grain refining, alloying with interstitial and substitutional solutes, precipitates, second-phase, etc. Contemporary approaches of modelling the strain hardening behavior are highlighted. Includes a two-hour weekly lab. Offered alternate years.

Credits 4

Prerequisites

[ENGR-304](#)

Term Offered

Fall Only

Session Cycle

F