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ME 243 (AUG) 3:0 Continuum Mechanics

Instructor(s): Chandrasekhar S Jog

Course description:

Introduction to vectors and tensors, finite strain and deformation-Eulerian and Lagrangian formulations, relative deformation gradient, rate of deformation and spin tensors, compatibility conditions, Cauchy's stress principle, stress tensor, conservation laws for mass, linear and angular momentum, and energy. Entropy and the second law, constitutive laws for solids and fluids, principle of material frame indifference, discussion of isotropy, linearized elasticity, fluid mechanics.

Prerequisites:

1. Malvern,L.E.,Introduction to the Mechanics of a continuous medium,Prentice Hall,1969. Gurtin

Resources:

Outcomes:

Additional information:

Course website: