Solid Mechanics

Professor Email Institution

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General Information

The course presents an introduction to the classical theories of continuum mechanics, in particular to linear and nonlinear theories of elasticity. These theories are important both for their applications and because they constitute the basis for further development in the study of the behaviour of materials and structures. The course is held both in presence and online.

Materials

M. E. Gurtin "An Introduction to Continuum Mechanics" Academic Press (1981).

M. E. Gurtin, E. Fried, L. Anand "The Mechanics and Thermodynamics of Continua", Cambridge U. P.(2010). Lecture notes

Schedule

Dates	Description
13-03-2024, H16-18	Bodies and deformations
15-03-2024, H9-11	Motions
20-03-2024, H16-18	Conservation of mass; linear and angular momentum
22-03-2024, H9-11	Force, stress, balance of momentum
27-03-2024, H16-18	Constitutive assumptions
03-04-2024, H16-18	Change in observer
05-04-2024, H9-11	Finite elasticity
10-04-2024, H16-18	Linear elasticity
12-04-2024, H10-12	Linear elastodynamics
	Total 18 Hours – 3 Credits

For any information www.indicee.unifi.it - dott-dicea@unifi.it