

Title

Professor

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Institution

University of Florence

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 developments in the study of the behaviour of materials and structures.

The course is held both in presence (room to be defined in Pisa) 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
23-03-2026, H 10-12	Bodies and deformations
25-03-2026, H 10-12	Motions
30-03-2026, H 10-12	Conservation of mass; linear and angular momentum
01-04-2026, H 10-12	Force, stress, balance of momentum
13-04-2026, H 10-12	Constitutive assumptions
15-04-2026, H 10-12	Change of observer
20-04-2026, H 10-12	Finite elasticity
22-04-2026, H 10-12	Linear elasticity
27-04-2026, H 10-12	Linear elastodynamics
Total 18 Hours - 3 Credits. For any information www.indicee.unifi.it	