

**Course offered for the PhD program
in Civil, Chemical and Environmental Engineering
Curriculum in Structural and Geotechnical Engineering, Mechanics and Materials
a.a. 2017/2017 (XXXIII ciclo)**

(course is open for participation of students from other PhD cycles or programs)

1. Title

Continuum Mechanics

2. Course Description

Deformation and motion of continua. Reynolds transport theorem. Balance laws. Balance of mass and continuity equation. Balance of linear momentum, Cauchy's theorem, stress tensor. Balance of moment of momentum, symmetry of the stress tensor. Balance of energy. Need of non-mechanical quantities. Second law of thermodynamics, some constitutive models, thermodynamic restrictions. Balance of mass and linear momentum for fluid mixtures.

3. Course Organization

The course is provided via theoretical lectures and some applications to particular continua.

4. Teacher

Angelo Morro

5. Duration and credits

30 hours, 6 credits

6. Activation mode and teaching period

The course is annual. This year the course will start beginning of February (end by mid-March).

Application: email message to the teacher (angelo.morro@unige.it)

7. Deadline for registration

End of January 2018

8. Final exam

The final exam is oral, in the period March-December.