

**Course offered by the PhD program
in Civil, Chemical and Environmental Engineering
a.y. 2025/2026 (41 cycle)**

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

1. Title

Elastic behavior of anisotropic materials and laminate, sandwich and layered composites

2. Course Objectives and Description

Fundamental knowledge on the mechanical response of linear anisotropic materials, laminate and sandwich composites.

- Introduction to composite materials
- Generalized Hooke's law: linear anisotropy and curvilinear anisotropy
- Effective elastic constants: mixture rules
- Elastic behavior of laminates and sandwich composites
- Classical Lamination Theory and Shear Deformation theories.

3. Course Organization

Frontal lessons and practical applications

4. Teacher

Prof. Roberta Massabò

5. Duration and credits

5 hours; 1 credit

6. Activation mode and teaching period

Spring 2026

7. Deadline for registration

End of February 2026 (by email: Roberta.massabo@unige.it)

8. Final exam

Solution of practical problem