### Obiettivi formativi specifici:
This Course aims to provide to the students the knowledge able to manage and apply composite materials to bioapplication tasks.

### Contenuti essenziali:
- Composite structure, matrix and reinforcement core, anisotropy properties of composite materials to be applied to bioapplications. Carbon based material, different tipologies of Carbon Fibers, Pitch and Pan, fiber and matrix creation techniques, methods to build a composite material.
- Polymer based materials for scaffolding, mechanical and chemical properties toward adhesion issues. Scaffold absorption and desorption. Techniques to make scaffolds: 3D printing, Rapid Prototyping, porogen diffusion.

### Risultati d’apprendimento previsti:
- Students are supposed to achieve a full comprehension concerning the use and application of non-isotropic materials, where all the properies and features are highly dependant up on the loading directions. They are also requested to be aware of the meaning of apply non permanent-anisotropic materials to bio tasks.

### Propedeuticità:  
Material Science is highly recommended

### Tipologia e modalità d’esame:
Oral Exam with eventual test in classroom.

### Recapiti e orari di ricevimento docente:
Fiera del mare, Pad D, 010 3536566 – fabrizio.barberis@unige.it

### Testi di studio:
Suggested by Professor during the introduction course.

### Dati statistici relativi alle votazioni d’esame conseguite dagli studenti: