



Direzione Ricerca,
Innovazione e
Internazionalizzazione

**UNIVERSITÀ
DI TORINO**

ID

VP_167_STF

Visiting Professor Program Academic Year 2025/2026

TEACHING COMMITMENT: 16 hours

COURSE TITLE

Bioinspired Nanoengineering

TEACHING PERIOD

II semester

SCIENTIFIC AREA

Pharmaceutical Technology

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

Part 1:

This course will present bioinspired nano-engineering and its applications in biology and medicine. It will focus on nanomedicines based on biotech drugs (proteins, nucleic acids, vaccines), in particular for cancer therapy. The topics to be discussed are of considerable interest across a broad range of research areas in bioinspired nano-engineering and medicine.

Part 2:

This course will focus on bioinspired nano-engineering and its applications in biology and medicine. The topics to be discussed are of considerable interest across a broad range of research areas in bioinspired nano-engineering and medicine. In particular, it will describe the possible application of nanomaterials for theranostic (Therapeutic+Diagnostic) purposes.

LEARNING OBJECTIVES

Part 1:

- (1) Understand the state-of-the-art bioinspired nano-engineering technologies, applied to biotechnology for cancer therapy.
- (2) Be able to critically read, analyze, and interpret the scientific literature in bioinspired nanoengineering.
- (3) Apply knowledge of bioinspired nano-engineering to think critically about possible biomimetic nanoparticle solutions for unmet needs in medicine.
- (4) Be able to represent ideas in oral presentations.

Part 2:

- (1) Understand the state-of-the-art bioinspired nano-engineering technologies.
- (2) Be able to critically read, analyze, and interpret the scientific literature in bioinspired nano-engineering.
- (3) Apply knowledge of bioinspired nano-engineering to think critically about possible biomimetic nanoparticle solutions for the development of theranostics.

OTHER ACTIVITIES BESIDE THE COURSE

The visiting professor will be available for a seminar to the Department, available to Ph.D students, researchers, and faculty members

Four hours will be dedicated by the visiting professor to the demonstration of synthetic and analytical techniques for bioinspired nano-engineered materials.

VISITING PROFESSOR PROFILE

The Visiting Professor has a background in chemical or biomedical engineering and is an expert in the development of nanosized biomaterials for the sustained release of genetic cargo, proteins, and small molecules. His/Her contribution to the state of the art of the nanomedicine and bioengineering field must be proven by his/her excellent publication record and outstanding international experience. Furthermore, he/she should have a proven teaching experience in international institutions.

CONTACT REFERENT

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