Visiting Professor Program
Academic Year 2023/2024

TEACHING COMMITMENT: 12 hours

COURSE TITLE
Sustainable Polymers and Composites

TEACHING PERIOD
1st term

SCIENTIFIC AREA
Chemistry

LANGUAGE USED TO TEACH
English

COURSE SUMMARY
Sustainable polymers/composites in healthcare management.
Tentative Outline:
- Polymers in disease prevention, diagnosis, and treatment
- History & introduction
- Polymers/composites in disease prevention
- textiles,
- food packaging,
- personal cares
- Polymers/composites in early diagnosis of diseases
- biosensors for biomarkers sensing,
- imaging,
- wearable sensors
- Polymers/composites in disease treatment
- polymeric drugs; polymer conjugates
- polymeric drug/gene delivery systems
- smart drug delivery systems; pH-, temperature-, light,...-responsive polymers
- effect of size on the efficacy
- surface engineering
- Polymeric theranostics

**LEARNING OBJECTIVES**

To give to the students relevant information of the use of polymers and polymer composites in different fields of applications

**TUTORSHIP ACTIVITIES**

N/A

**LAB ACTIVITIES**

N/A

**OTHER ACTIVITIES BESIDES THE COURSE**

N/A

**VISITING PROFESSOR PROFILE**

Multidisciplinary expertise in material science, with particular referring to polymers and polymer composites in disease prevention, diagnosis, and treatment. International recognized experience in the fields of Nanobiosensor, Nanobiomaterials, Advanced Nanobiotechnology, Nanofood and Advanced Drug Delivery Systems.

**FURTHER INFORMATION**

Lessons and seminars could be held in co-presence with UNITO Professors.

**CONTACT REFERENT**

Francesco Trotta
francesco.trotta@unito.it