Direzione Ricerca,
Innovazione e
Internazionalizzazione

UNIVERSITÀ
DI TORINO

ID

VP_050_DISAFA

Visiting Professor Program
Academic Year 2025/2026

TEACHING COMMITMENT: **12 hours**

COURSE TITLE

Microorganisms as Biological Control Agents for Sustainable Agriculture: from Selection to Production of Formulations

TEACHING PERIOD

I semester

SCIENTIFIC AREA

Applied Microbiology

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

The course aims to illustrate the role of microorganisms in controlling different plant diseases caused by fungi, oomycetes, insects and nematodes or in eliminating weeds through a sustainable approach linked to the selection of useful microorganisms that can be introduced into the field. During the course the methods for isolating and selecting potential biological control agents will be illustrated, to create formulations that facilitate their use and maximize their effectiveness and some successful examples will be provided.

LEARNING OBJECTIVES

The teaching aims to provide theoretical and practical knowledge on industrial processes related to the use of microorganisms (mainly bacteria and fungi) in the environmental to support the primary production in a sustainable way (reducing the chemical input) or the loss of food (post harvest diseases). Students completing the course will have the ability to explore and exploit the potential

of the use of microorganisms for various biotechnological applications. The purpose of the teaching will also be to illustrate to the student the rudiments of the different methodologies used to isolate, identify select and formulate microorganisms as potential biocontrol agents.

OTHER ACTIVITIES BESIDE THE COURSE

Some seminar and webinar for the UNITO communities and also for the MIRRI Research Infrastructures communities will be organized. Perhaps also some meeting with private companies of our Region can be organized.

VISITING PROFESSOR PROFILE

The visiting professor must be an expert in isolation, identification and conservation of microorganisms. Work within internationally recognized microorganism collections will be an advantage. Experience in the selection and formulation of microorganisms to be used as biological control agents against different diseases and pests is also required.

CONTACT REFERENT

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