

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

# **COURSE SYLLABUS**

# **Biological Complexity**

2526-1-F0602Q110-F0602Q11001

#### **Aims**

This course will focus on applied botany, specifically on the main identification techniques of tree and shrub taxa useful for bioactive metabolites bioactive metabolites useful for human health.

#### **Contents**

The lab will focus on the main plant species that can be used for bioactive metabolites extraction.

## **Detailed program**

Students will be trained on the main techniques used in the field for sampling and identifying plants, with particular focus on trees and shrubs. These activities will be implemented in a specific area during field trips on an actual operational setting. Most species encountered during the field trip activities will be identified and described with a particular emphasis on their potential for the extraction of specific bioactive metabolites. Also ecological and environmental aspects affecting the composition of plants in terms of bioactive metabolites will be described.

## **Prerequisites**

**Botany** 

# **Teaching form**

Lectures will be held in Italian language in person (no streaming). Field trips are substantial part of the program.

- 1/5 of the lessons will be carried out in delivery mode (delivery teaching, DE) focused on the presentation of the laboratory contents
- 4/5 of the lessons will be carried out in an interactive way through field experiences that include daily and multi-day excursions

# Textbook and teaching resource

Reading material provided by the teacher (ppt slides in Italian)

#### Semester

Second semester

#### **Assessment method**

Students will be asked to elaborate a short report (max 3 pages) on one plant (tree or shrub) species encountered during field trip or (when not possible) on a plant with high potential bioactive metabolite production. The report should briefly describe morphology, ecology and distribution of the plants highlighting the main bioactive metabolites and their potential uses.

#### Office hours

By appointment

### **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | SUSTAINABLE CITIES AND COMMUNITIES | CLIMATE ACTION | LIFE ON LAND