



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Plant Molecular Physiology

2021-1-F0601Q051

Aims

To know the molecular aspects of plant growth and development and of the interaction between plants and biotic environmental factors. 1. Knowledge and understanding: at the end of the course students will have acquired knowledge about the molecular mechanisms of the main processes of plant growth and development and of the biotic interactions (plant-plant, plant-herbivore, plant-pathogen). 2. Applying knowledge and understanding: the learned concepts could be useful for other courses or for work in the field of plant biology. 3. Making judgements: at the end of the course students will be able to understand plant growth and developmental processes and biotic interactions and they will also be able to establish the correct relations among the treated topics observing similarities and differences in some cases with the animal field too. 4. Communication skills: at the end of the course students will be able to properly explain the learned concepts. 5. Learning skills: the learned concepts enable the student to further pursue personal studies.

Contents

The main growth and developmental processes and the various biotic interactions will be considered.

Detailed program

Growth and development Morphogenesis, seed maturation and germination, fruit ripening, leaf senescence and programmed cell death; regulation of these processes by endogenous (hormones and phytohormones) and environmental factors.

Biotic interactions: plant-plant (allelopathy), plant-herbivore, plant-pathogen; molecular mechanisms of the

interaction and of the defense response.

Prerequisites

None

Teaching form

Frontal lessons

Textbook and teaching resource

L. Taiz, E. Zeiger, Fisiologia Vegetale, IV Italian Edition, Piccin Editore

Semester

Second semester

Assessment method

Oral

An argument of student's choice and a question of the teacher.

Office hours

By appointment (raffaella.cerana@unimib.it)
