האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

The Hebrew University of Jerusalem

Syllabus

PHYSIOLOGY OF PLANTS UNDER STRESS - 71426

Last update 26-09-2024

HU Credits: 2

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Plant Science in Agriculture

Academic year: 0

Semester: 2nd Semester

Teaching Languages: Hebrew

Campus: Rehovot

Course/Module Coordinator: Assaf mosquna

Coordinator Email: assaf.mosquna@mail.huji.ac.il

Coordinator Office Hours:

Teaching Staff:

Prof. Assaf Mosquna

Course/Module description:

The basic course in plant physiology gives its students knowledge and understanding of the basic processes that enable the growth and existence of plants. However, under natural and field conditions, plants are exposed to a variety of changing environmental conditions, a fact that affects the rate of growth or even the survival of the plant. Hence the changing environmental conditions have a cardinal effect on agricultural crops. In this course, we strive to understand how changing environmental conditions affect basic processes in plant physiology. The course focuses on sensing the ABA hormone, which is the bottleneck of many stress responses. We will use the scientific literature to deeply understand research that combines physiology, biochemistry, and genetic engineering in plants to understand how plants deal with stressful conditions. In previous years, the impression received was that the students undergo a transformation during the course, especially in the way they approach a scientific text, with the majority reporting a positive experience.

Course/Module aims:

Learning outcomes - On successful completion of this module, students should be able to:

At the end of the course, students should be able to:

1. Explain how the plant tissue reacts to stress at the biochemical and molecular level.
2. Critical reading of current articles in the field.
3. Plan new experiments to answer open questions in the field.

Attendance requirements(%):

Teaching arrangement and method of instruction: Frontal lectures.
Reading of current articles by the students.
Group discussion.
Writing questions and answering in the model.
Summary of articles - filmed sections.

Course/Module Content:

-Introduction - foundational concepts in the field, the effect of weeds on crops, types of weeds.
- The molecular basis of stress response.
- Subjects change according to articles published in recent years.

Required Reading:
-

Additional Reading Material:

Grading Scheme:
Submission assignments during the semester: Exercises / Essays / Audits / Reports / Forum / Simulation / others 100 %

Additional information: