



The Hebrew University of Jerusalem

Syllabus

WEED MANAGEMENT - 73911

Last update 13-10-2024

HU Credits: 2

Degree/Cycle: 2nd degree (Master)

Responsible Department: Field and Vegetable Crops-International Prog.

Academic year: 0

Semester: 2nd Semester

Teaching Languages: English

Campus: Rehovot

Course/Module Coordinator: Dr. Tuvia Yaacoby

Coordinator Email: yaacoby@agri.huji.ac.il

Coordinator Office Hours: By appointment

Teaching Staff:

Dr. Tuvia Yaacoby

Course/Module description:

Students will learn the basic structure of the weed management system. The first part of the course will explain the relations of plant biology, plant ecology, and plant parasitism with weed management. The second part of the course will be dedicated to weed control methods including herbicides MOA (mode of action), herbicides in the environment and resistance.

Course/Module aims:

To provide a wide-ranging understanding of basic weed management system.

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

- Explain the differences between annual and perennial weed populations in correlation with seed bank and weed distribution.
- Understand the weed/crop interactions, the importance of invasive weeds and weed parasitism phenomenon.
- Know and understand the weed control methods: Agrotechnical, Chemical and Biological (including: pre-emergence, post-emergence, foliar or soil applications).
- Understand the herbicides mode of action (including: inhibition of photosynthesis, amino acid and lipid biosynthesis, cell division etc.)
- Know and understand the plant/herbicide relationship (including: herbicides uptake and translocation, herbicide selectivity, herbicide resistance and GMO).
- Understand the fate of herbicide in soil and water, and the interaction of herbicides with non target organisms.

Attendance requirements(%):

90

Teaching arrangement and method of instruction: Lectures

Course/Module Content:

- Weed biology and ecology
- Weed control methods
- Herbicides mode of action
- Herbicides and plants
- Herbicide and the environment

Required Reading:

Selected chapters from:

1. B.D. Booth, S.D. Murphy and C.J. Swanton, 2003: *Weed Ecology in Agriculture and Agricultural Systems*.
2. R.C. Kirkwood, 1991: *Target Site for Herbicides*.
3. R. De Prado, J. Jorin and L. Garcia-Torres, 1997: *Weed and Crop Resistance to Herbicides*.
4. T.K. Das, 2008: *Weed Science Basics and Applications*.

Additional Reading Material:

none

Grading Scheme:

Written / Oral / Practical Exam 100 %

Additional information:

none