

Plant Reproduction

Syllabus

1-2-2041

Lecturer: Prof. Noemi Tel-Zur

Credit points: 3, Semester A

Required attendance: a weekly lecture (2 hours) and a lab exercise (1 hour)

Subjects:

- **Overview of plant reproduction, flower development, asexual and sexual reproduction, microgametogenesis and megagametogenesis**
- **Mechanisms of sex determination**
- **Pollination strategies**
- **Male sterility**
- **Hormones and reproduction**
- **Pollen tube growth and guidance**
- **Self incompatibility systems**
- **Fertilization**
- **Fruit production, apomixis and parthenocarpy**

Description: Reproductive mechanisms in flowering plants (molecular, genetics and physiology aspects) will be studied. The main topics include: pollination strategies, pollen tube growth and guidance, mechanisms of male sterility and floral sex determination, hormones and reproduction self-incompatibility systems, fertilization, apomixis and parthenocarpic fruit development.

During the lab exercise the students will use *Brassica rapa* (fast-plants) seeds to study plant growth, flowering, crossing, breaking of the self-incompatibility system, and breeding techniques.

Course bibliography: The course texts are scientific articles that will be supplied by the instructor.