

001-2-2005 Physiology of plants under stress

Course teachers: Prof. Jhonathan Ephrath and Dr. Gilaad Gabay

Syllabus

The course deals with the development and growth of plants under stress. Students will study the basics knowledge of several processes taking part in plants.

More specifically the course will cover the following topics:

Week 1: The physiological basis of growth

Week2: Water movement in the plant - the cellular aspects of water

Week 3: potential in the plant, water availability, measurement of the water ratio of the plant

Week 4: Water stress and its effect on plant development

Week 5*: Professional tour to Ramat Negev Experimental Farm (see comment)

Week 6: The carbon balance of the plant

Week 7: Excess water and compensation and response mechanisms

Week 8 : Salt stress and its effect on the plant

Week 9: Cold and freezing stresses.

Week 10: Absorption and compartmentalization of salts

Week 11: ROS (Reactive Oxygen Species) and their importance to the plant
Strains and premature aging.

Week 12 – summary

Component Weight:

Presence	10%
Presentation	20 %
Assignments	70%
_____	_____
Total:	100%

- **The final date of the tour will be decided according to the staff of Ramat Negev Experimental Farm and might be changed**