

Title:	Plant-Environment Interactions
Lecture hours:	30 hrs: 10 hrs lectures + 20 hrs laboratory classes
Study period: (summer/winter)	summer or winter (to choose from)
Number of credits:	3 ETCS
Assessment methods:	<ul style="list-style-type: none"> • final test in which knowledge presented during the lecture and gained during the laboratory will be evaluate. • attendance in practical laboratory work, reporting and presenting results and conclusion of laboratory experiments
Language of instruction:	English
Prerequisites:	Basic knowledge of plant and fungi biology
Course content:	<ol style="list-style-type: none"> 1. Plant physiology under abiotic and biotic stress. 2. Anthropogenic induced stress and its impact on plants. 3. Mechanical integration of plant cells. 4. Osmotic stress in plants and adaptive mechanisms. 5. Root behaviour in response to osmotic stress. 6. Communication and signaling in the plant-fungus symbiosis: the mycorrhiza. 7. Plant physiology experiments.
Learning outcomes:	<ul style="list-style-type: none"> • Student will be able to characterize the major types of environmental stresses and their impact on plant physiology. • Student will understand the role of mycorrhizas in ecological interactions. • Student will know rules of planning and conducting of experiments with the use of specific methods applied in stress physiology and environmental experiments. • Student will feel desire of constant upgrading of his education and actualisation of knowledge concerning plant biology, using scientific and popular literature sources.

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Literature:	<ul style="list-style-type: none">• Plant-Environment Interactions. F.Baluška (ed.) 2009 Springer-Verlag Berlin Heidelberg• Plant-Environment Interactions Wiley Online Library (selected articles)• Practicals in Plant Physiology and Biochemistry. M.Bala, S. Gupta, N.K. Gupta, M.K. Sangha 2013 Scientific Publishers (India)• Mycorrhizal Symbiosis Third Edition. S.E. Smith & D.J. Read 2008 Elsevier Ltd.