SYLLABUS

1. COURSE DESCRIPTION

Degree:	**Environmental Sciences**
Course:	**Environmental Plant Physiology**
Module:	**Optional Training**
Department:	**Physiology, Anatomy and Cell Biology**
Academic Year:	**2017-18**
Term:	**First**
ECTS credits:	**6**
Year:	**4th year**
Type:	**Optional**
Language:	**Spanish**

Course Model:	**A1**
a. Basic learning (EB):	**70 %**
b. Practical learning (EPD):	**30 %**

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2. LECTURERS

Coordinator	
Name:	**Agustín González Fontes de Albornoz**
School:	**Experimental Sciences**
Department:	**Physiology, Anatomy and Cell Biology**
Area:	**Plant Physiology**
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3. TOPICS

BASIC LEARNING (EB):

1. Introduction. (2 h)
2. Water relations in the continuous soil-plant-atmosphere. (2.5 h)
3. The soil and nutrients. (2.5 h)
4. Water stress. (2 h)
5. Plant responses to drought (2.5 h)
6. Stress due to waterlogging. (1.5 h)
7. Salinity of soils: salt stress. (2.5 h)
8. Effects of temperature on the development of plants (1.5 h)
9. Stress due to low temperatures. (2 h)
10. Stress due to high temperatures. (2 h)
11. Effects of light radiation on the development of plants. (2.5 h)
12. Stress due to visible and ultraviolet radiation. (2.5 h)
13. Effects of the increase of CO_2 on the development of the plants. (2 h)
14. Phytotoxicity of heavy metals. (2 h)
15. Mycorrhizae. (1.5 h)

PRACTICAL LEARNING (EPD):

- Essential techniques for the cultivation of plants: germination and preparation of nutritious solution.
- Treatment of plants with different stresses (hydric, saline, herbicide) and maintenance of stressed plants in culture chambers.
- Determinations of various parameters indicative of water status and content in pigments.
- Determinations of photosynthesis, transpiration and efficiency in the use of water in plants subjected to various stresses.