

## 27114 - Plant Physiology

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	100 - Facultad de Ciencias
<b>Degree</b>	446 - Degree in Biotechnology
<b>ECTS</b>	6.0
<b>Course</b>	2
<b>Period</b>	Second semester
<b>Subject Type</b>	Compulsory
<b>Module</b>	---

### 1. Basic info

#### 1.1. Recommendations to take this course

#### 1.2. Activities and key dates for the course

For students enrolled in the subject, places, times and dates of lectures and practical sessions will be public via Bulletin Board advertisements of the grade on the platform Moodle at the University of Zaragoza, <https://moodle2.unizar.es/add/>, and in the moodle page for the course. These routes will be also used to communicate enrolled students their distribution by groups of practical sessions, which will be organized by the coordination of degree. Provisional dates will be available on the website of the Faculty of Sciences in the corresponding section of the Degree in Biotechnology: <https://ciencias.unizar.es/grado-en-biotecnologia>.

In this web there will be also available the dates of exams.

### 2. Initiation

#### 2.1. Learning outcomes that define the subject

#### 2.2. Introduction

### 3. Context and competences

#### 3.1. Goals

#### 3.2. Context and meaning of the subject in the degree

#### 3.3. Competences

#### 3.4. Importance of learning outcomes

### 4. Evaluation

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### 5. Activities and resources

#### 5.1. General methodological presentation

#### 5.2. Learning activities

#### 5.3. Program

1. Introduction
2. The Plant Cell and tissues
3. Plant Structure
4. Transport and Translocation of Water and Solutes
5. Mineral Nutrition
6. Gas Exchange: stomata physiology
7. Photosynthesis: light reactions
8. Photosynthesis: the carbon reactions
9. Nitrogen Metabolism: Nitrogen Assimilation
10. Nitrogen Metabolims: Biological Nitrogen Fixation
11. Growth and Development
12. Reproductive Physiology: Flowers, Seeds and Fruits
13. Growth and Development Regulators: Plant Hormones
14. Growth and Development Regulators: Environmental factors
15. Plant movements
16. Plant Stress Physiology; secondary metabolites and plant defense

#### 5.4. Planning and scheduling

Schedules of lectures and problems will coincide with the officially established and will be available at:  
<https://ciencias.unizar.es/grado-en-biotecnologia>.

The places, calendar and groups for training and practical sessions will be established in coordination with the rest of maters at beginning of course. The Coordinator will produce the groups of students for these activities at beginning of course to avoid overlaps with other subjects.

#### 5.5. Bibliography and recomended resources