

## 28934 - Ornamental crops

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	201 - Escuela Politécnica Superior
<b>Degree</b>	437 - Degree in Rural and Agri-Food Engineering
<b>ECTS</b>	6.0
<b>Course</b>	3
<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**

### **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**

### **5.Activities and resources**

#### **5.1.General methodological presentation**

This course develops knowledge of ornamental crop production. Special emphasis will be placed on (1) nursery in-ground and protected cultivation techniques including and irrigations, fertilization and light management, and (2) cut flower production, biotechnological methods and cultural practices associated

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### 5.2.Learning activities

Theoretical dissertation, practical sessions, written coursework, and formal examinations related to ornamental crops production.

### 5.3.Program

#### Theoretical Programme

##### **Block I. Economic importance of ornamental species.**

Production of ornamental flowers and plants in Europe. Production of ornamental flowers and plants in Spain. Production centres. Surfaces. Value and characteristics of production. Marketing systems and formats. Market evolution. Foreign trade. (2 hours.)

##### **Block II. Materials and facilities.**

Substrata for ornamental plant cultivation. Containers. Premises. Irrigation and fertigation systems. Climatic control. Special facilities. (6 hours.)

##### **Block III. Cultural practices: propagation and cultivation methods.**

Propagation: seeds, cuttings, bulbs, layering. Planting out, transplants. Pinching and pruning. Application of hormones and similar products. Application of biotechnology to the production of ornamental plants. Plagues and diseases. Dispatch. (8 hours).

##### **Block IV- Cultivation of ornamental species for cut flower production.**

Floriculture. Woody plants; rose cultivation. Herbaceous plants; carnation cultivation. Bulbous plants; gladioli cultivation. Other cut flower species of interest at a national level. (6 hours).

##### **Block V- Cultivation of ornamental species for live plant production.**

Growing in plantpots; interior and exterior plants. Ornamental trees and shrubs. Growing bulbs. Regulations and quality standards for ornamental production. (8 hours).

#### Practical Programme

1- Practical laboratory experience. (20 hours)

Practical experience in laboratory/greenhouse; propagation. Recognition of substrata, containers and materials relating to ornamental cultivation. Recognition of cut flower species. Recognition of ornamental trees. Recognition of ornamental shrubs. Recognition of ornamental bulbs. Recognition of grasses, creepers and ground cover.

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2- Visits to commercial ornamental plant nurseries. (16 hours)

Field trips are considered to be a cross-curricular educational activity. Their specific programming will take place over the duration of the course and will be published on the Moodle platform of each specific subject. Where possible, the technical visits will be coordinated with other course subjects with the objective of optimising resources.

### 5.4.Planning and scheduling

Week	1	2	3	4	5	6	7	SS	8	9	10	11	12	13	14	15
Lectures		Bl. II	Bl. II	Bl. II	Bl. III	Bl. III	Bl. III		Bl. III	Bl. IV	Bl. IV	Bl. IV	Bl. V	Bl. V	Bl. V	Bl. V
Hours	2	2	2	2	2	2	2		2	2	2	2	2	2	2	2
Laboratory sessions																
Hours	2					2	2		2	2						
Technical visits	visits 1 , 2, 3							visits 4,5,6								
Hours	10							10								
Individual work	5	4	5	8	5	5	5	8	5	5	5	5	5	4	6	7

### 5.5.Bibliography and recommended resources

#### Basic Bibliography

- Galán, J.J; Caballer, V. (2011). Material Vegetal en el paisajismo Mediterráneo. Editorial Universitat Politècnica de València.
- López Lillo, A. (2007) Flora Ornamental Española. Las Plantas Cultivadas en la España peninsular e insular. Tomo I y II. Junta de Andalucía, Consejería de Agricultura y Pesca.
- Sánchez de Lorenzo Cáceres, J.M. (2001) Guía de las Plantas Ornamentales. Ed. Mundiprensa
- Stoecklein, M.(2001). The Complete Plant selection guide for landscape design, Purdue University

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### Complementary Bibliography

Col.legi Oficial d'Enginyers Tècnics Agrícoles i Pèrits Agrícoles de Catalunya (2010). Normas tecnológicas de Jardinería y paisajismo

\*NTJ 03S SUSTENTACIÓN ARTIFICIAL Y PROTECCIÓN DEL ARBOLADO

\*NTJ 08E TRASPLANTE DE GRANDES EJEMPLARES

\*NTJ11E CUBIERTAS ECOLÓGICAS EXTENSIVAS

\*NTJ 12S Parte 1 OBRAS DE BIOINGENIERÍA: TÉCNICAS DE RECUBRIMIENTO DE TALUDES

\* NTJ 14B MANTENIMIENTO DE PALMERAS