

## 28927 - Fruit Growing

### Syllabus Information

**Academic year:** 2023/24

**Subject:** 28927 - Fruit Growing

**Faculty / School:** 201 - Escuela Politécnica Superior

**Degree:** 583 - Degree in Rural and Agri-Food Engineering

**ECTS:** 6.0

**Year:**

**Semester:** Second semester

**Subject type:** Optional

**Module:**

#### 1. General information

The subject and its expected results respond to the following approaches and objectives:

Its overall objective is that students know and understand the basic principles of arboriculture, so that students can use them in the development of their professional activity. Linked to these bases, they must also relate them to understand the production systems at farm level, applying the most appropriate technologies of the production process.

Learning affects the SDGs: O2 Zero hunger (Target 2.3); O4 Ensure inclusive, equitable and quality education (Target 4.7); O12 Sustainable consumption and products (Targets 12.2 and 12.4); O13 Combat Climate Change (Target 13.3).

#### 2. Learning results

Arboriculture should provide the student with sufficient knowledge of useful agronomic techniques and enable them to interpret the effects of various production techniques in real and concrete situations, with sensitivity towards environmental issues. These results are linked to SDGs 4.7, 12.2, 12.4, 13.3.

The student should also know the basics of arboriculture, develop the analytical skills to identify, quantify and propose solutions to solve problems in the management of fruit trees, different cultivation techniques, and demonstrate the ability to apply knowledge in practice. These results are linked to SDGs 2.3, 4.7, 12.2, 12.4.

Students will show their ability to perform individual tasks, team work and practice reports; making appropriate use of ICT (word processing, spreadsheet, bibliographic searches on the Internet...) in the different teaching activities proposed. This outcome is linked to SDG 4.7 and, in a cross-cutting manner, all the goals and targets of the SDGs mentioned in point 1.1, which are the most closely linked to this subject, are intertwined with these learning results.

The learning results acquired in this subject are relevant because they allow understanding the agronomic aspects of the production process and develop the student's ability to manage the influence of the ecological environment for the development and fruit production, as well as the planning of cultural practices necessary to obtain the quality appropriate to the production objectives set. Always linked to the aforementioned SDG objectives.

#### 3. Syllabus

##### Theory

Module I. Morphology and physiology of fruit trees.

1. Fruit tree morphology. Flowering to maturity.

Module II. Multiplication of fruit trees

1. Sexual and asexual multiplication.
2. Asexual multiplication
3. Grafts

Module III. Planting techniques

1. Soil and climate
2. Planting techniques

Module IV. Cultivation techniques

1. Pruning and thinning
2. Formation pruning
3. Soil maintenance
4. Fertilization
5. Irrigation
6. Pest and disease control

7. Harvesting and conservation

Module V. Regulations

1. European regulations

## PRACTICAL SESSIONS PROGRAM

Problem solving and cases

1. Selection of cultivation areas

2. Strategic alternatives

Laboratory practices

1. Fruit tree identification

2. Fruit quality

3. Pruning systems

4. Multiplication

5. Grafts

6. Pest and disease control

7. Staking out a plantation

## 4. Academic activities

**Theoretical sessions.** They consist of expository-participative lessons. 30 hours.

**Cabinet practices.** These are demonstrative-active-interrogative activities in which students will learn various techniques and procedures related to the subject. Problem solving and case studies. 4 hours.

**Greenhouse, field and laboratory practices.** These are guided practical activities, the content is on applied aspects of the theoretical sessions. These are participatory-active-questioning activities. 14 hours.

**Special practice.** It will consist of visits to various plantations. These activities are subject to the budget available for their implementation. These are purely participatory-active-questioning activities. 6 hours.

**Non-face-to-face activities** They consist of reading and understanding the theoretical knowledge material and solving proposed exercises. 90h

**Exams** Includes oral presentation of course work. 6 hours.

## 5. Assessment system

It will be evaluated by means of a global test (the same in both calls) which will be divided in the following sections sections:

- Written test at the end of the term, according to the syllabus of the subject and according to the EPS exam calendar.

It consists of short and multiple-choice questions, as well as recognition tests linked to the content of the syllabus.

70% of the grade. Minimum 4 out of 10.

- Written and oral presentation of course work. Two papers must be prepared and written. These are bibliographic review of a topic chosen by the student and that must be defended in public. 30% of the grade.

The detailed assessment system will be explained in the presentation of the subject.

The success rates for the subject in the last three years are: 2019/20: 100%; 2020/21: 76,92%; 2021/22: 72,73%