

28959 - Integrated production and agroecology

Syllabus Information

Academic year: 2024/25

Subject: 28959 - Integrated production and agroecology

Faculty / School: 201 - Escuela Politécnica Superior

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

ECTS: 5.0

Year: 4

Semester: Second semester

Subject type: Optional

Module:

1. General information

The overall objective of the course is that students know and understand the different management systems of agricultural systems that have their point of view in reducing the impacts of agriculture on the environment and that they are able to integrate this knowledge in the management of more sustainable systems. These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda: Goal 2: Zero hunger, Goal 6: Clean water and sanitation and Goal 12: responsible production and consumption. Specifically in the targets: Target 2.3, Target 2.4, Target 6.3, Target 6.4 and Target 12.2.

2. Learning results

The subject Integrated Production and Agroecology should provide the student with sufficient knowledge about the legislation and regulations of integrated and organic production, the ecological principles of operation of agricultural systems, as well as the management of agricultural ecosystems from a sustainability point of view. They should be able to plan and manage agricultural production and farming systems considering the sustainability of such systems.

The learning results are aligned with the SDGs mentioned in section 1.

Importance of the learning outcomes Sustainability aspects in the management of agricultural systems are nowadays highly valued as agricultural systems are analyzed not only as producers of plant material, but also for their environmental conservation aspect. This subject takes a global approach, very much in line with the UN's Sustainable Development Goals (SDGs), specifically Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

3. Syllabus

Module I. Crop ecology

Topic I.1 Introduction: sustainability of agricultural systems

Topic I.2 Community concepts

Module II Legislation and regulations on integrated production and organic farming

Topic II.1 Legislation

Topic II.2 Integrated production regulations

Topic II.3 Organic farming regulations

Topic II.4 Other regulations

Module III Management in sustainable agriculture

Topic III.1 Handling of plant material

Topic III.2 Water management

Topic III.3 Soil management

Topic III.4 Integrated crop protection

4. Academic activities

Theoretical sessions (20): expository and participative lessons

Laboratory and laboratory practices(24): activities of demonstrative-active-interrogative type in which students will learn different techniques and procedures and will train their observation, analysis and critical sense.

Field practices(6): visits to different places where the student will be able to observe and analyze some of the objects and processes studied in the classes. These activities are subject to the budget available for their realization Tutorials (20): sessions, at the students' request, to solve any kind of doubts.

Non-attendance activities (52.5)

Exams Preparation and conduct of exams (2.5). It includes the oral presentation of practical work.

5. Assessment system

Global test that will be divided into the following sections:

1. Written test at the end of the term (60%), according to the syllabus of the subject and according to the calendar of exams of the EPS. The test will consist of:
 - a. Multiple choice questions
 - b. short questions to be developed in which the accuracy of the answer and the order in the wording will be valued
2. Written and oral presentation of a practical work (40%). Each student will carry out an individual or group work of 2 students. The quality of the presentation of the written work and the clarity, order and ability to answer questions raised during the presentation to the teacher and the rest of the group. The dates of presentation will be published well in advance

Students who, having passed this section, wish to raise their grade and all those students who do not submit the report on the agreed date, must take an individual written test on the same day that appears in the EPS exam calendar on a topic agreed between the student and the teacher.

The success rates for the subject in the last three years are: 2020/21: 100%; 2021/22: 100%; 2022/23: 100%

6. Sustainable Development Goals

2 - Zero Hunger

6 - Clean Water and Sanitation

12 - Responsible Production and Consumption