Universidad Zaragoza

Academic Year/course: 2023/24

28916 - Plant Science/ Plant production

Syllabus Information

Academic year: 2023/24
Subject: 28916 - Plant Science/ Plant production
Faculty / School: 201 - Escuela Politécnica Superior
Degree: 583 - Degree in Rural and Agri-Food Engineering
ECTS: 6.0
Year: 2
Semester: Second semester
Subject type: Compulsory
Module:

1. General information

The overall objective of the subject is that students know and understand the principles of the basics of plant production , so that they can use them in the development of their professional activity. Linked to these bases, also aims to enable them to relate them to understand production systems at the farm level, applying the most appropriatetechnologies to the environment.

These goals are aligned with some of the Sustainable Development Goals (SDGs) of the 2030 Agenda and certain targets, specifically goal 2, target 2.3, 2.4 and 2.5. The stated objectives are also related to goal 15, target 15.3.

2. Learning results

- Knowledge of the basics of plant production
- Development of the capacity to analyze agricultural production systems with a sensitivity to environmental issues.
- Ability to solve crop management, irrigation and fertilization problems
- Ability to analyze concrete situations and make decisions, as well as demonstrate the ability to apply knowledge in practice.
- Ability to work autonomously and work in teams

These results are aligned with the Sustainable Development Goals (SDGs) and targets listed in section 1.1 Subject objectives

For the different specialties, what is acquired in this subject has a differential importance:

Specialization in agricultural and livestock operations: For students who choose this specialty, the subject serves as the basis for two other more specific subjects, which are herbaceous crops and arboriculture.

Specialty in horticulture and gardening: For students who choose this specialty, the subject serves as the basis for two other more specific subjects, which are horticultural production and fruit production I and II.

Specialization in agricultural and agri-food industries: For students who choose this specialty, the subject provides the basics of plant production that will help them in the management of agri-food industries.

3. Syllabus

Module I: Agricultural systems. 16 classroom hours

I.1 Farming systems: definitions

I.2 Decision-making in agriculture

I.3 Rotations in agriculture

Module II: Environmental conditions. 28 classroom hours

II.1 Temperature

II.2 Radiation

II.3 Water and Irrigation

II.4 Wind

II.5 Soil

Module III. Production techniques. 16 classroom hours

III.1 Sowing

III.2 Fertilization

4. Academic activities

Theoretical sessions: expository and participative lessons

Practical work in the laboratory: demonstrative-active-interrogative activities in which students will learn various techniques and procedures and will train their observation, analysis and critical thinking skills.

Field practices: 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: sessions, at the students' request, to solve any kind of doubts.

Non-attendance activities

Examinations preparation and exams. 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

c. Problem solving; case studies

2. Written and oral presentation of a report of laboratory and cabinet practices I.3, II.1, II.2 and II.3 (15%).

3. Written presentation of a report and/or a test of the laboratory practices II.5, III.1 and III.2 (15%).

4. Written presentation of a report of the field views (10%). The report shall be made individually and shall consist of a summary of the management of the operation and a critical and technical commentary on it

Paragraphs 2 and 3: Each student will carry out a group work of 2 or 3 students that will be evaluated taking into account the learning process followed and the results obtained.

Students who wish to obtain a higher grade in sections 2, 3 and 4 must take a theory exam on the same day as the day shown in the exam calendar.

A minimum grade of 4 points out of 10 must be achieved in section 1.

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

Success rates for the last three years: 2019/20: 100%; 2020/21: 83,33%; 2021/22:I 78,26%