Universidad Zaragoza

Academic Year/course: 2023/24

28926 - Herbaceous crops

Syllabus Information

Academic year: 2023/24
Subject: 28926 - Herbaceous crops
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 overall objective of the course is that students know and understand the production techniques of extensive arable crops (cereals, legumes, industrial and fodder crops) and that they are able to integrate this knowledge in the management of arable crop systems. These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs): Goal 2: Zero hunger and Goal 15: Life of terrestrial ecosystems.

Specifically in the targets: Target 2.3 Doubling of small-scale agricultural productivity and income, Target 15.5 Measures against biodiversity degradation and loss, and Target 15.6 Access to and adequate use of genetic resources.

2. Learning results

The course Arable Crops should provide the student with sufficient knowledge about the technologies and systems of cultivation of herbaceous species, as well as their uses, including their possibilities as energy crops.

They must be able to plan and manage the production and exploitation systems of these herbaceous species.

Arable crops occupy most of the cultivated area, and are especially important in extensive systems , so a graduate in Agri-Food and Rural Engineering who wants to specialize in Agricultural Operations should know the systems and management of these crops. Given the importance of herbaceous crops as the basis of human nutrition, the learning outcomes of this subject are in line with the UNSDGs , specifically Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture.

3. Syllabus

Module I: General aspects of arable crop systems (45 classroom hours)

I.1 Introduction and statistical data

I.2. Cereals: morphology

I.3 Tillage techniques in arable crops

I.4 Fertilization in arable crops

I.5 Use of certified seed

I.6 Main pests in arable crops

I.7 Cereal quality indexes

Module II. Specific aspects of each crop (15 classroom hours)

II.8 Cereals: Soft and durum wheat

II.9 Cereals: Barley

II.10 Other winter cereals: oats, rye, triticale

II.11 Cereals: Corn

II.12 Cereals: Rice

II 13 Cereals: Sorghum

II. 14 Grain legumes

II.15 Forage legumes: Alfalfa

II.16 Forage grasses

II.17 Sunflower

II.18 Rapeseed

4. Academic activities

Theoretical sessions (30 hours): expository and participative lessons

Practical in cabinet and laboratory (20 hours): activities of demonstrative-active-interrogative type in which the students will learn different techniques and procedures and will train their observation, analysis and critical sense.

Field practices (10 hours): 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 (11 hours): sessions, at the students' request, to solve any kind of doubts.

Non-attendance activities (76 hours)

Examinations Preparation and conduct of examinations (3 hours). 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. Objective test of recognition of plant material (25%)
3. Written and oral presentation of a practical work (15%). Individual or group work of 2 students. The quality of the presentation of the written work and the clarity, order and ability to answer the questions posed during the presentation will be assessed . Presentation dates will be published well in advance.

Students who want to improve their grade in this section must submit an individual written test on the same day as indicated in the EPS exam calendar on a topic agreed upon by the student and the teacher.

A minimum score of 4 out of 10 points must be reached in sections 1 and 2

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