

25223 - Agrosilvopastoral systems

Syllabus Information

Academic year: 2023/24

Subject: 25223 - Agrosilvopastoral systems

Faculty / School: 201 - Escuela Politécnica Superior

Degree: 571 - Degree in Environmental Sciences

ECTS: 6.0

Year: 3

Semester: First Four-month period

Subject type: Compulsory

Module:

1. General information

The overall objective of the subject is for students to identify and recognize the main impacts of agroforestry and pastoral activities on the environment, and to be able to design and recommend cultural practices that reduce the negative effects of these processes, within the framework of sustainable agricultural production systems.

These approaches and objectives are aligned with the Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), specifically, the learning activities planned in this subject will contribute to the achievement of Objective 2.4 of Goal 2: Zero hunger, Objective 12.2 of Goal 12: Responsible production and responsible consumption, Objective 15.4 of Goal 15: Life in terrestrial ecosystems.

2. Learning results

1. Recognize the main environmental degradation processes related to agroforestry and pastoral activities, indicating their causes and proposing solutions.
2. Know how to apply methodologies to identify, quantify and/or propose solutions to environmental problems derived from agricultural activity.
3. Recommend cultivation techniques that favour biological biodiversity.
4. Analyse the productive prospects of the primary sector, its dependence on "CAP" benefits and the figures of environmental protection.
5. Ability to produce and present orally: assignments (individual), works (group) and practice reports (group) making an adequate use of ICT in the different teaching activities proposed.

3. Syllabus

Program theory:

Module I: Fundamentals of Agriculture:

- Origin of agriculture
- Agriculture and Environment
- Sustainable agricultural production
- Soil management and fertility
- Water management
- Genetic resources
- Crop protection

Module II: Agrosilvopastoral systems:

- Agricultural systems
- Silvopastoral systems

Module III. Agricultural Policy:

- PAC
- Good agricultural practices

- Agri-environmental aid
- Vulnerable areas
- Rural development

Practical Program:

- Choice of a practical monographic work (PMW)
- Nitrogen fertilization
- Crop water requirements.
- Plant material.
- Control of invasive species.
- Production and biodiversity meadows.
- Livestock loads.
- Irrigation water efficiency.
- PMW Presentation.

4. Academic activities**Master classes:**

Sessions in which the contents of the subject are explained.

Cabinet and computer practices:

Sessions in which the students, working in small groups of 4-5 students, will solve problems and cases of environmental content related to agroforestry and pastoral activities, some of them with specific software.

Field practices:

External technical visit to an agrosilvopastoral production system in the Pyrenees

Teaching assignments:

Preparation and presentation of a seminar-type practical work.

Tutoring:

Sessions, at the students' request, to solve any kind of doubts.

Assessment test:

Global evaluation test in accordance with UNIZAR regulations and calendar.

5. Assessment system

1. Preparation of the report, presentation and defence of the practical work. Proportion of the final grade: 20%. The students who wish to improve their grade may do so in the Global Assessment Test.

2. Global evaluation test: Written test at the end of the semester, according to the PS exam calendar, of all the contents of the subject. The accuracy of the answer and the order in the writing will be valued. It will consist of:

- a) Multiple-choice test questions and/or short questions on the theoretical sessions. Proportion of the final grade: 50%.
- b) Resolution of 2 to 4 problems, multiple-choice test questions and/or short questions, on the sessions of problem solving and case studies and field practices: 30%.
- 3) Essay questions or free and open response, on the teaching work of the subject. This part will be taken by students who want to raise the grade of their practice teaching assignments or those who have not done them for various reasons. Proportion of the final grade: 20%.

Success rate

18/19	19/20	20/21	21/22
61,54%	68,57%	67,50%	72,73%