Course guide  
390226 - PV - Plant Production

Unit in charge: Barcelona School of Agri-Food and Biosystems Engineering  
Teaching unit: 745 - DEAB - Department of Agri-Food Engineering and Biotechnology.

Degree: BACHELOR'S DEGREE IN FOOD ENGINEERING (Syllabus 2009). (Compulsory subject).

Academic year: 2023  
ECTS Credits: 6.0  
Languages: Catalan

LECTURER

Coordinating lecturer: Gil Gorchs Altarriba

Others: Nuria Carazo Gómez, Fran García Ruiz, Anna Gras Moreu, Xavier Sorribas

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
CE-BC-10.2. Systems of production, protection and exploitation of vegetals

Transversal:
04 COE N2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.

TEACHING METHODOLOGY

In the classes of theoretical explanation (large grup) concepts to know, to understand and to use will be presented to reach the learning objectives of the subject. Applied examples and questions are raised by teachers and students to capture transcendence and facilitate discussion within the group.

In the practical sessions, in Small group, the student leads the activity raised. The basic capacity that is varied varies with the session, ranging from the ability to observe, solve problems, locate data or information, prepare and present reports with the results obtained, propose actions, individually or in a group.

LEARNING OBJECTIVES OF THE SUBJECT

The main objective of Crop Production is that students achieve a comprehensive view of the factors that determine the quality of a plant product according to its final use, from how to define and measure and preserve and manages the quality of these products.

On the other hand, students should acquire the basic vocabulary and understand the basics of plant production, from agronomy (irrigation management, fertilization and plant protection) to cropping systems (rotation and technical route) and cultivation technology that allows obtaining safe, high quality and environmentally friendly products.

STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours small group</td>
<td>20,0</td>
<td>13.33</td>
</tr>
<tr>
<td>Hours large group</td>
<td>40,0</td>
<td>26.67</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
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</tbody>
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Total learning time: 150 h
## CONTENTS

### Principles of crop production

**Description:**
This content is devoted to the basic aspects of plant production, particularly to understand the technical solutions that allow a production environmentally friendly:
Challenges of agriculture and structure of agricultural production. Concept of cropping systems and types
Basic agronomic tools to establish and manage efficient and sustainable farming systems: rotation, soil work and other complementary elements

**Related activities:**
- Activity 1: Theory lessons
- Activity 2: Individual assessment test
- Activity 3. Classroom or computer practices
- Activity 4: Laboratory practices

**Full-or-part-time:** 56h
- Theory classes: 15h
- Laboratory classes: 8h
- Self study : 33h

### Field crops for agri-food industries

**Description:**
This content is aimed at knowing the field crops and understanding how genetics, environment and culture technology affect quality and safety of its products.
Agronomic features of large herbaceous crops
Cereals, oleoproteaginous and other crops
Factors, production techniques and quality management in large crops
Grain preservation
Effect of pests and diseases on the quality of the products of large crops

**Related activities:**
- Activity 1: Theory lessons
- Activity 2: Individual assessment test
- Activity 4: Laboratory practices
- Activity 5: Field practices

**Full-or-part-time:** 30h
- Theory classes: 9h
- Laboratory classes: 3h
- Self study : 18h
Vegetable and fruit products

Description:
This content is dedicated to:
Systems, factors, production process and fruit and vegetable plant material.
Factors that determine the quality of fruit and vegetable products
Post-harvest of vegetables and fruits
Effect of pests and diseases on the quality of horticultural and fruit products

Related activities:
Activity 1: Theory lessons
Activity 2: Individual assessment test
Activity 4: Laboratory practices
Activity 5: Field practices

Full-or-part-time: 64h
Theory classes: 16h
Laboratory classes: 9h
Self study: 39h

GRADING SYSTEM
The overall assessment of the subject will be done taking into account the following partial assessments:

N1 is the result of the two individual assessment tests described in activity 2 (50% P1, plus 50% P2)
N2 is the note of the reports and questionnaires of practices: A1 and C weigh twice more than other activities

Final mark = 0.7 * N1 + 0.3 * N2

EXAMINATION RULES.
Attendance and completion of the proposed activities is mandatory
The work must be submitted by the deadline
BIBLIOGRAPHY

Basic:

Complementary: