390226 - PV - Plant Production

**Coordinating unit:** 390 - ESAB - Barcelona School of Agricultural Engineering

**Teaching unit:** 745 - EAB - Department of Agri-Food Engineering and Biotechnology

**Academic year:** 2019

**Degree:** BACHELOR'S DEGREE IN FOOD ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)

**ECTS credits:** 6

**Teaching languages:** Catalan

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**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.

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**Teaching methodology**

In the classes of theoretical explanation (large group) 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.

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**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 manage 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.
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### Study load

<table>
<thead>
<tr>
<th>Study load</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total learning time:</td>
<td>150h</td>
<td></td>
</tr>
<tr>
<td>Hours large group:</td>
<td>40h</td>
<td>26.67%</td>
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<tr>
<td>Hours small group:</td>
<td>20h</td>
<td>13.33%</td>
</tr>
<tr>
<td>Self study:</td>
<td>90h</td>
<td>60.00%</td>
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</tbody>
</table>
# Content

## Principles of crop production

**Learning time:** 56h  
- Theory classes: 15h  
- Laboratory classes: 8h  
- Self study: 33h

**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 croping 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

## Field crops for agri-food industries

**Learning time:** 30h  
- Theory classes: 9h  
- Laboratory classes: 3h  
- Self study: 18h

**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
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**Vegetable and fruit products**

<table>
<thead>
<tr>
<th>Description:</th>
<th>Learning time: 64h</th>
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</thead>
<tbody>
<tr>
<td>This content is dedicated to:</td>
<td>Theory classes: 16h</td>
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<tr>
<td>Systems, factors, production process and fruit and vegetable plant material.</td>
<td>Laboratory classes: 9h</td>
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<tr>
<td>Factors that determine the quality of fruit and vegetable products</td>
<td>Self study: 39h</td>
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<tr>
<td>Post-harvest of vegetables and fruits</td>
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<tr>
<td>Effect of pests and diseases on the quality of horticultural and fruit products</td>
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</tbody>
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**Related activities:**
- Activity 1: Theory lessons
- Activity 2: Individual assessment test
- Activity 4: Laboratory practices
- Activity 5: Field practices

**Qualification 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 (P1 and P2)
N2 is the note of the reports and questionnaires of practices.
CG Evaluation of the generic skill "Efficient oral and written communication" (mark of deliverable A1)

Final mark = 0.65 * N1 + 0.25 * N2 + 0.10 * CG

**Regulations for carrying out activities**

Attendance and completion of the proposed activities is mandatory
The work must be submitted by the deadline
Bibliography

Basic:


Complementary:


Others resources: