Course guide
390301 - MA - Agricultural Mechanisation

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 AGRICULTURAL ENGINEERING (Syllabus 2009). (Compulsory subject). BACHELOR'S DEGREE IN AGRONOMIC SCIENCE ENGINEERING (Syllabus 2018). (Compulsory subject).
Academic year: 2022  ECTS Credits: 6.0  Languages: English

LECTURER

Coordinating lecturer: EMILIO GIL MOYA
Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

Transversal:
2. TEAMWORK - Level 3. Managing and making work groups effective. Resolving possible conflicts, valuing working with others, assessing the effectiveness of a team and presenting the final results.

TEACHING METHODOLOGY

LEARNING OBJECTIVES OF THE SUBJECT

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STUDY LOAD

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Hours large group</td>
<td>40,0</td>
<td>26.67</td>
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<tr>
<td>Hours small group</td>
<td>20,0</td>
<td>13.33</td>
</tr>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
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</tbody>
</table>

Total learning time: 150 h
CONTENTS

(ENG) EL TRACTOR AGRÍCOLA

Description:

Related activities:
(ENG) Activitat 1: Classes d'explicació teòrica
Activitat 2: Probes individuals d'avaluació
Activitat 3: Pràctiques de camp/laboratori i resolució de exercicis

Full-or-part-time: 12h
Theory classes: 4h
Self study: 8h

MECHANIZATION OF OPERATIONAL ACTIVITIES IN THE FARM

Description:
Equipment for soil preparation: Objectives of soil work. Primary work tools. Secondary work and preparation of the seed bed. Combination of tools. Techniques of minimum work or simplified work.

- Machinery for the distribution of fertilizers, planting and protection of crops: Type of fertilizers and their main characteristics. Regulation of fertilizers. Semigadoras volumétricas and seeders monograno. Planters. Seed selection and regulation criteria.


Related activities:
(ENG) Activitat 1: Classes d'explicació teòrica
Activitat 2: Probes individuals d'avaluació
Activitat 3: Pràctiques de camp/laboratori
Activitat 4: Pràctiques en aula informàtica
Activitat 5: Resolució de exercicis / problemes

Full-or-part-time: 40h
Theory classes: 8h
Laboratory classes: 8h
Self study: 24h
OPERATIONAL COST OF AGRICULTURAL MACHINERY. SELECTION PROCEDURE

Description:

Related activities:
(ENG) Activitat 1: Classes d’explicació teòrica
Activitat 2: Proves individuals d’avaluació
Activitat 4: Pràctiques a aula informàtica
Activitat 5: Resolució d’exercicis / problemes

Full-or-part-time: 25h
Theory classes: 6h
Laboratory classes: 4h
Self study: 15h

SPRAY APPLICATION TECHNOLOGY

Description:

Related activities:
(ENG) Activitat 1: Classes d’explicació teòrica
Activitat 2: Proves individuals d’avaluació

Full-or-part-time: 73h
Theory classes: 22h
Laboratory classes: 8h
Self study: 43h

ACTIVITIES

ACTIVITY 1: LECTURES (THEORETICAL ACTIVITY)

Full-or-part-time: 95h
Theory classes: 38h
Self study: 57h

ACTIVITY 2: PERSONAL TEST FOR EVALUATION

Description:
There will be three parts: the first part of visual recognition of different types of machines; The second part consists of a multiple choice test (V or F); and a third of problem solving. In addition, the evaluation of the course will be completed with the presentation by each of the students (individually or in groups of two) of a topic chosen voluntarily at the beginning of the course (the teacher will provide a list of items). The work will be presented in writing and made an oral presentation in class during the last week of the course.

Full-or-part-time: 2h
Theory classes: 2h
**ACTIVITY 3: PRACTICAL ACTIVITIES IN LABORATORY**

**Description:**
Students will perform several field tests with the equipment available in the laboratory of agricultural mechanization. It is a mixed laboratory and field activity in which the student learns to handle, calibrate and evaluate the different teams.

**Full-or-part-time:** 26h
Laboratory classes: 10h
Self study: 16h

**ACTIVITY 4: PRACTICAL ACTIVITIES AT COMPUTER’S LABORATORY**

**Description:**
In these activities, the student will be able to work in a variety of eases for the management, selection of agricultural machinery. Examples of cost of utilization costs will be made available, as well as the results of the laboratory tests, and will be used to manage create software programs for a greater management of agricultural machinery.

**Full-or-part-time:** 21h
Laboratory classes: 8h
Self study: 13h

**ACTIVITY 5: EXERCICES AND CASE STUDIES**

**Description:**
In small groups, students will have to solve problems related to the use and/or selection of agricultural machinery.

**Full-or-part-time:** 6h
Laboratory classes: 2h
Self study: 4h

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**GRADING SYSTEM**

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**BIBLIOGRAPHY**

**Basic:**