390301 - MA - Agricultural Mechanisation

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 AGRONOMIC SCIENCE ENGINEERING (Syllabus 2018). (Teaching unit
Compulsory)
BACHELOR’S DEGREE IN AGRICULTURAL ENGINEERING (Syllabus 2009). (Teaching unit
Compulsory)
ECTS credits: 6

Teaching languages: English

Teaching staff
Coordinator: EMILIO GIL MOYA

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.

Learning objectives of the subject

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### Content

<table>
<thead>
<tr>
<th>(ENG) EL TRACTOR AGRÍCOLA</th>
<th>Learning time: 12h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 4h</td>
</tr>
<tr>
<td></td>
<td>Self study: 8h</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>MECHANIZATION OF OPERATIONAL ACTIVITIES IN THE FARM</th>
<th>Learning time: 40h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 8h</td>
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<tr>
<td></td>
<td>Laboratory classes: 8h</td>
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<tr>
<td></td>
<td>Self study: 24h</td>
</tr>
</tbody>
</table>

**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.


**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
# 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

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# SPRAY APPLICATION TECHNOLOGY

**Description:**

**Related activities:**
(ENG) Activitat 1: Classes d'explicació teòrica
Activitat 2: Proves individuals d'avaluació
### Planning of activities

<table>
<thead>
<tr>
<th>ACTIVITY 1: LECTURES (THEORETICAL ACTIVITY)</th>
<th>Hours: 95h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 38h</td>
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<tr>
<td></td>
<td>Self study: 57h</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>ACTIVITY 2: PERSONAL TEST FOR EVALUATION</th>
<th>Hours: 2h</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Theory classes: 2h</td>
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</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>(ENG) ACTIVITAT 3: PRACTICAL ACTIVITIES IN LABORATORY</th>
<th>Hours: 26h</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Laboratory classes: 10h</td>
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<tr>
<td></td>
<td>Self study: 16h</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>(ENG) ACTIVITAT 4: PRACTICAL ACTIVITIES AT COMPUTER’S LABORATORY</th>
<th>Hours: 21h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Laboratory classes: 8h</td>
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<tr>
<td></td>
<td>Self study: 13h</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>(ENG) ACTIVITY 5: EXERCICES AND CASE STUDIES</th>
<th>Hours: 6h</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Laboratory classes: 2h</td>
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<tr>
<td></td>
<td>Self study: 4h</td>
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</tbody>
</table>

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

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**Bibliography**

**Basic:**


