390447 - IAAB - Food and Beverages Industries

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 Optional)
ECTS credits: 6
Teaching languages: Catalan, Spanish

Teaching staff
Coordinator: Elena Gordún Quiles
Others: Elena Gordún Quiles
Elena Sánchez Sánchez

Degree competences to which the subject contributes

Specific:
1. Food engineering and technology: Engineering and basic operations in food industry. Food technology. Processes in
   Food analysis. Traceability.

Transversal:
2. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 3. Communicating clearly and efficiently in oral and
   written presentations. Adapting to audiences and communication aims by using suitable strategies and means.

Teaching methodology

The teaching methodologies used in this course will be oral lecture, problem solving, case study and laboratory and pilot
plant practice. The oral lectures will be combined with active learning activities (puzzle and debate) using the teaching
material made from professors and students (they will develop it during their autonomous learning period). Problem
solving sessions will be conducted in small groups at the computer lab with specific software together with student
autonomous learning period (moodle quizzes, excel, minitab). The laboratory and pilot plant practice (face-to-face
sessions) will be carried out by small groups at the Food technology facilities of the ESAB. Case study will be done during
the course using task-based lessons, active learning activities (peer review and debates), oral presentation and visits to
food industry

Learning objectives of the subject

Study load

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 0h</th>
<th>0.00%</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Hours medium group: 40h</td>
<td>26.67%</td>
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<tr>
<td></td>
<td>Hours small group: 20h</td>
<td>13.33%</td>
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<td></td>
<td>Guided activities: 0h</td>
<td>0.00%</td>
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<tr>
<td></td>
<td>Self study: 90h</td>
<td>60.00%</td>
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### Content

<table>
<thead>
<tr>
<th>(ENG) INDÚSTRIES DE BEGUDES NO ALCOHÒLIQUES</th>
<th>Learning time: 40h</th>
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<tbody>
<tr>
<td></td>
<td>Practical classes: 10h</td>
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<tr>
<td></td>
<td>Laboratory classes: 6h</td>
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<tr>
<td></td>
<td>Self study: 24h</td>
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**Description:**

Sucs de fruites i altres productes similars. Línies d'envasament de begudes.

**Related activities:**

(ENG) Activitat 1. Classes de teoria  
Activitat 2. Prova individual d'avaluació  
Activitat 3. Treball de laboratori i planta pilot

<table>
<thead>
<tr>
<th>(ENG) BEGUDES FERMENTADES I DESTIL·LATS</th>
<th>Learning time: 35h</th>
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<tbody>
<tr>
<td></td>
<td>Practical classes: 10h</td>
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<tr>
<td></td>
<td>Laboratory classes: 4h</td>
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<td>Self study: 21h</td>
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**Description:**

(ENG) Vins especials. Sidra i altres fermentats vegetals. 
Begudes espirituoses i altres begudes alcohòliques.

**Related activities:**

(ENG) Activitat 1. Classe de teoria  
Activitat 2. Prova individual d'avaluació  
Activitat 3. Treball de laboratori i planta pilot  
Activitat 4. Sortida a la Industria alimentària
### INDUSTRIES OF OTHER FOOD PRODUCTS

**Learning time:** 29h  
Practical classes: 8h  
Laboratory classes: 4h  
Self study: 17h

**Description:**  

**Related activities:**  
(ENG) Activitat 1. Classe de teoria  
Activitat 2. Prova individual d’avaluació  
Activitat 3. Treball de laboratori i planta pilot  
Activitat 4. Sortida a Indústria alimentària

### CEREAL DERIVED INDUSTRY

**Learning time:** 46h  
Practical classes: 12h  
Laboratory classes: 6h  
Self study: 28h

**Description:**  

**Related activities:**  
(ENG) Activitat 1. Classe de teoria  
Activitat 2. Prova individual d’avaluació  
Activitat 3. Treball de laboratori i planta pilot  
Activitat 4. Sortida a Indústria alimentària
### Planning of activities

<table>
<thead>
<tr>
<th>(ENG) ACTIVITAT 1: CLASSES DE TEORIA</th>
<th>Hours: 98h</th>
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<tbody>
<tr>
<td></td>
<td>Practical classes: 38h</td>
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<td>Self study: 60h</td>
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<table>
<thead>
<tr>
<th>(ENG) ACTIVITAT 2: PROVES INDIVIDUALS D'AVALUACIÓ</th>
<th>Hours: 2h</th>
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<tbody>
<tr>
<td></td>
<td>Practical classes: 2h</td>
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<thead>
<tr>
<th>(ENG) ACTIVITAT 3: TREBALL EXPERIMENTAL DE LABORATORI I PLANTA PILOT</th>
<th>Hours: 30h</th>
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<tbody>
<tr>
<td></td>
<td>Laboratory classes: 12h</td>
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<tr>
<td></td>
<td>Self study: 18h</td>
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<thead>
<tr>
<th>(ENG) ACTIVITAT 4: SORTIDES A INDUSTRIES ALIMENTÀRIES</th>
<th>Hours: 20h</th>
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<tbody>
<tr>
<td></td>
<td>Laboratory classes: 8h</td>
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<tr>
<td></td>
<td>Self study: 12h</td>
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### Qualification system

The course grade will be calculated as, $N_{\text{final}}$ (Course grade):

$$N_{\text{final}} = 50\% \text{ Part I (Contents 1 and 2)} + 50\% \text{ Part II (Contents 3 and 4)}$$

Part I = $0.80N_1+0.15N_2 +0.05N_3$

N1: Activity 2: Individual exam and course assignments (individual and group tasks)
N2: Activity 3: Lab and pilot plant sessions and group report
N3: Activity 4: Food industry visit test

Part II = $0.50N_1+0.50N_2$

N1: Activity 2, 3 and 4: Individual exam of contents of theory classes and practices
N2: Activity 2 and 3: Course assignments (individual and group tasks)

### Regulations for carrying out activities

Students will have a schedule with the course activities and due dates. The attendance to the active learning activities is required, as well as lab sessions and external visits.
Bibliography

Basic:


Complementary:


Others resources:

Hyperlink

Codex alimentarius

AECOSAN, Agencia Española de Consumo Seguridad Alimentaria y Nutrición

Resource