

Academic Year/course: 2021/22

## 30839 - Enrichment in the Oil, Sugar and Cereal Derivatives Sector

### Syllabus Information

**Academic Year:** 2021/22

**Subject:** 30839 - Enrichment in the Oil, Sugar and Cereal Derivatives Sector

**Faculty / School:** 105 - Facultad de Veterinaria

**Degree:** 568 - Degree in Food Science and Technology

**ECTS:** 5.0

**Year:** 4

**Semester:** Second semester

**Subject Type:** Optional

**Module:**

### 1. General information

### 2. Learning goals

### 3. Assessment (1st and 2nd call)

### 4. Methodology, learning tasks, syllabus and resources

#### 4.1. Methodological overview

The course is organized in 22 participatory lectures, 19 hours seminars, 4 hours of laboratory sessions and 5 hours visits to industries.

The student will need also to make a practical work. The different subjects for this work will be assigned when the academic year will start. The students will make the work in 3-4 people workgroups. Finally the students will make an oral presentation of the work.

Students must follow the regulations described in:

- Prevention: A guide for students at the University of Zaragoza:  
[https://uprl.unizar.es/sites/uprl.unizar.es/files/archivos/Procedimientos/guia\\_preventiva\\_para\\_estudiantes.pdf](https://uprl.unizar.es/sites/uprl.unizar.es/files/archivos/Procedimientos/guia_preventiva_para_estudiantes.pdf)
- Manual de seguridad en los laboratorios de la Universidad de Zaragoza y normas marcadas por la Unidad de Prevención de Riesgos Laborales:

[https://uprl.unizar.es/sites/uprl.unizar.es/files/archivos/Procedimientos/manual\\_de\\_seguridad\\_en\\_los\\_laboratorios\\_de\\_la](https://uprl.unizar.es/sites/uprl.unizar.es/files/archivos/Procedimientos/manual_de_seguridad_en_los_laboratorios_de_la)

<https://uprl.unizar.es/inicio/manual-de-procedimientos>

In addition, students will follow as well any instructions related to biosecurity given by the professor

#### 4.2. Learning tasks

The course includes the following learning tasks:

- 1. Lectures. 22 presential hours (1 hour sessions).
- 2. Laboratory sessions. 4 presential hours ( 4 hours session).
- 3. Visits. 5 hours

- 3. Seminars: 19 presential hours (2 hours sessions).

### 4.3. Syllabus

The course will address the following topics:

#### Section I- OIL SECTOR

Lectures

- 1. Oil extraction from oilseeds. Refining of edible oils and fats
- 2. Olive oil extraction. Milling, malaxation and centrifugation
- 3. Factors affecting olive oil quality
- 4. Oils and fats quality control. Margarine and vegetable fats production .
- 5. Pollutants generated. Techniques to reduce pollution. Waste management
- 6. Food safety, quality and legal regulations for oil sector
- 7. Market structure (national and international production, consumption and market). Olive oil Common market organization (CMO). Marketing channels

Practical sessions

- Olive oil mill visit
- Practice: Laboratory olive oil production and sensory analysis
- Seminar: Sector Company
- Seminar ( Problem and cases solving) about olive oil food safety, quality and legal regulations.

#### Section II- SUGAR SECTOR

Lectures

- 1. Beet sugar extraction. Sugar cane extraction. Molasses use technology
- 2. Candies and sweets. Nougat and marzipan. Chocolate
- 3. Pollutants generated. Techniques to reduce pollution. Waste management
- 4. Food safety, quality and legal regulations for sugar sector
- 5. Market structure (national and international production, consumption and market). Sugar Common market organization (CMO). Marketing channels

Practical sessions

- Seminar: Processing of sugar products
- Seminar ( Problem and cases solving) about sugar food safety, quality and legal regulations.

#### SECTION III ? CEREAL PRODUCTS SECTOR

Lectures

- 1. Cereals storage. Dry and wet milling. Flour and semola production
- 2. Bread processing technology.
- 3. Biscuits, bakery and cakes processing technology. Pasta and breakfast cereals technology.
- 4. Rice processing. Beer production technology.
- 5. Pollutants generated. Techniques to reduce pollution. Waste management.
- 6. Food safety, quality and legal regulations for cereal products sector.
- 7. Market structure (national and international production, consumption and market). Cereal products Common market organization (CMO). Marketing channels.

Practical sessions

- Flour mill visit
- Seminar: Flour quality
- Seminar: Sector Company
- Seminar (Problem and cases solving) about cereal products food safety, quality and legal regulations

### 4.4. Course planning and calendar

The calendar of the matter is described with the other matters for 4th course of CTA Degree in the web of Veterinary Faculty in the next address <http://veterinaria.unizar.es/gradocta/>). This address will be updated each academic year.