

26241 - Enrichment in the Oil, Sugar and Cereal Derivatives Sector

Información del Plan Docente

Academic Year	2016/17
Academic center	105 - Facultad de Veterinaria
Degree	294 - Degree in Food Science and Technology
ECTS	6.0
Course	4
Period	Second semester
Subject Type	Optional
Module	---

1. Basic info

1.1. Recommendations to take this course

1.2. Activities and key dates for the course

2. Initiation

2.1. Learning outcomes that define the subject

2.2. Introduction

3. Context and competences

3.1. Goals

3.2. Context and meaning of the subject in the degree

3.3. Competences

3.4. Importance of learning outcomes

4. Evaluation

5. Activities and resources

5.1. General methodological presentation

The learning process designed for this course is based in...

The course is organized in 30 participatory lectures, 12 hours seminars and 18 hours of laboratory practices and visits to industries.

The seminars will be organized in 2 hours sessions. The laboratory practices will be done in two sessions (4 and 2 hours). The visits will have different duration.

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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.

5.2.Learning activities

The program offered to the student to help him to get the expected results includes the following activities:

1. Lectures. 30 presential hours (1 hour sessions).
2. Laboratory practices. 6 presential hours (2 and 4 hours sessions).
3. Visits. 12 hours (4 hours sessions).
3. Seminars: 6 presential hours (2 hours sessions).
4. Elaboration and presentation of the practical work. 20 not presential hours.

ACTIVITY	PRESENTIAL HOURS	FACTOR	NON PRESENTIALS	TOTAL
Lectures	30	1,5	45	75
Seminars	12	1	12	24
Practices	18	0,5	9	27
Practical work			20	20
Exam			4	4
Total	60		90	150

5.3.Program

BLOCK I- OIL SECTOR

Lectures (11 hours)

1. Oil extraction from oilseeds. Refining of edible oils and fats (1 hour).
2. Olive oil extraction. Milling, malaxation and

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centrifugation (2 hours).

3. Factors affecting olive oil quality (2 hours).

4. Oils and fats quality control. Margarine and vegetable fats production (1 hour).

5. Pollutants generated. Techniques to reduce pollution. Waste management (1 hour)

6. Food safety, quality and legal regulations for oil sector (2 hours).

7. Market structure (national and international production, consumption and market). Olive oil Common market organization (CMO). Marketing channels (2 hours).

Practical sessions (11 hours)

- Olive oil mill visit (3 hours).

- Practice: Laboratory olive oil production (4 hours)

- Seminar: Sector Company (2 hours).

- Seminar (Problem and cases solving) about olive oil food safety, quality and legal regulations (2 hours).

BLOCK II- SUGAR SECTOR

Lectures (8 hours)

1. Beet sugar extraction. Sugar cane extraction. Molasses use technology (2 hours)

2. Candies and sweets. Nougat and marzipan. Chocolate (3 hours).

3. Pollutants generated. Techniques to reduce pollution. Waste management (1 hour)

4. Food safety, quality and legal regulations for sugar sector (1hour).

5. Market structure (national and international production, consumption and market). Sugar Common market organization (CMO). Marketing channels (1 hour).

Practical sessions (8hours)

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- Visit: Sector Company (4 hours)
- Seminar: Sector Company (2 hours).
- Seminar (Problem and cases solving) about sugar food safety, quality and legal regulations (2 hours).

BLOCK III - CEREAL PRODUCTS SECTOR

Lectures (11 hours)

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

Practical sessions (11 hours)

- Flour mill visit (4 hours).
- Practice: Flour quality (3 hours)
- Seminar: Sector Company (2 hours).
- Seminar (Problem and cases solving) about cereal products food safety, quality and legal regulations (2 hours).

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5.4.Planning and scheduling

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.

5.5.Bibliography and recommended resources

<http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=26241&Identificador=12160>

- BB** Aparicio, Ramón. Manual del aceite de oliva / Ramón Aparicio, John Harwood. 1ª ed. Madrid : Madrid Vicente; Mundi-Prensa, 2003
- BB** Caja Rural de Almería y Málaga. Sector del aceite de oliva y aceituna de mesa. Informes y memorias / Cajamar. Almería : CAJAMAR, 2004 [Para acceder al texto completo mirar URL]
- BB** Cauvain, Stanley P.. Productos de panadería : Ciencia, tecnología y práctica / Stanley P. Cauvain y Linda S. Young ; traducción a cargo de : Alejandro García Nogueiras, con la colaboración de Agustín Galiano Gutiérrez . Zaragoza : Acribia, 2008
- BB** Dendy, David A. V.. Cereales y productos derivados : química y tecnología / David A. V. Dendy, Bogdan J. Dobraszczyk ; [traducción a cargo de : Francisco León Crespo, José Fernández-Salguero Carretero, Francisco Rincón León] . Zaragoza : Acribia, 2004
- BB** Evaluation of agricultural policy reforms in the European Union /OECD Paris : OCDE, cop. 2011
- BB** García Brenes, D. " El papel de la distribución comercial en la cadena de valor del aceite de oliva". En : Distribución y consumo.2006, núm. 89, p.57-70 Madrid : E. N. Mercasa, 1991- [Publicación periódica]

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BB Guía de Mejores Técnicas Disponibles en España del sector azucarero / [directora, Carmen Canales Canales ; coordinador, Cecilia Alcalá Muñoz] . Madrid : Ministerio de Medio Ambiente, Centro de Publicaciones, 2005 [Para acceder al texto completo mirar URL]

BB Hosney, R. Carl. Principios de ciencia y tecnología de los cereales / R.Carl Hosney ; traducido por: Mariano González Alonso . [1ª ed.] Zaragoza : Acribia, 1991

BB Lawson, Harry. Aceites y grasas alimentarios : tecnología, utilización y nutrición / Harry Lawson ; [traducido por Francisco Javier Carballo García] . Zaragoza : Acribia, D. L. 1999

BB Los aceites y grasas : composición y propiedades / [editor] Enrique Graciani Constante . Madrid : A. Madrid Vicente : Mundi-Prensa, 2006

BB Renwick, A. [et al.] " Sugar and Spice and all things nice? Assessing the impact of the 2006 EU sugar regime reforms". En : Agricultural Economics Society. Annual Conference (87th. Warwick. 2012). The 87th AES annual conference will be held at the University of Warwick, Monday 8th to Wednesday 10th of April, 2012. Ashford, Kent : Agricultural Economics Society, 2012

BB Sánchez, R." Reflexiones sobre el sector de cereales desde la perspectiva de la industria harinera española". En : Agricultura familiar en España. 2007, p. 157-163 . Madrid : Fundación de Estudios Rurales D.L. 2007- [Publicación periódica]

BB Smit, Betr. Sugar quotas: yes or no? Economic consequences for sector, chain, international market situation and third world /Bert Smit, Kees de Bont. The Hague :LEI, 2011 [LEI Report 2011-056]

BB Sugar confectionery manufacture / edited by E.B. Jackson . 2nd ed. London [etc.] :

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Blackie Academic & Professional, 1995

BB Tratamiento de los residuos de la industria del procesado de alimentos / editado por : Lawrence K. Wang... [et al.] ; traducción a cargo de : Alberto Ibarz Ribas . Zaragoza : Acribia, D. L. 2008

BB Valle, Diego, del " El sector remolachero/azucarero en España". En : Agricultura familiar en España.2007, p. 170-175. Madrid : Fundación de Estudios Rurales D.L. 2007- [Publicación periódica]

BB Vera Hernández, Manuel. Aceite de oliva virgen extra : su obtención y conservación / Manuel Vera Hernández . 1ª ed. Madrid : A. Madrid Vicente, 2011

BC Belitz, Hans-Dieter. Química de los alimentos / Hans-Dieter Belitz, Werner Grosch, P. Schieberle ; traducción de José Fernández Salguero Carretero, Juan Luis de la Fuente Moreno, Pascual López Lorenzo . 3ª ed. Zaragoza : Acribia, D.L. 2011

BC Ciencia de los alimentos : bioquímica, microbiología, procesos, productos. Volumen 2, Tecnología de los productos alimentarios / coordinadores, Romain Jeantet ... [et al.]. Zaragoza : Acribia, 2010

LISTADO DE URLs:

Agencia para el Aceite de Oliva -
[<http://aplicaciones.magrama.es/pwAgenciaAO/General.aao?idioma=ESP&contro>

Cajamar, Instituto de Estudios. Sector del aceite de oliva y aceituna de mesa. Informes y monografías -
[<http://www.publicacionescajamar.es/series-tematicas/informes-coyuntura-monog>

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Guía de las mejores técnicas disponibles
en España del Sector azucarero -

[<http://www.magrama.gob.es/es/alimentacion/temas/industria-agroalimentaria/guia>]