SUBJECT GUIDE Academic year 2020-2021

Food Processing Plants

MODULE	CONTENT	YEAR	TERM	CREDITS	TYPE
Food Technology	Food Industry	4º	7º	6	Mandatory subject

LECTURER(S)	Postal address, telephone nº, e-mail address
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DEGREE WITHIN WHICH THE SUBJECT IS TAUGHT	
Science and Food Technology	

PREREQUISITES and/or RECOMMENDATIONS (if necessary)

The students should have completed the "Basic Training" module and the matter "Fundamentals of Food Technology"

BRIEF ACCOUNT OF THE SUBJECT PROGRAMME (ACCORDING TO THE DEGREE)

• Industrial processes food. Processing and modification of foods.
• Industries and food processing technology of plant and animal origin.
• Design, control and optimization of processes and food products.

• Design of industrial plants. • Modification and innovation in food and food industrial processes.
GENERAL AND PARTICULAR ABILITIES
General Skills included in the Report of the "Grade of Science and Food Technology (UGR)" Specific skills: CE.4 - Recognize and apply basic operations of industrial processes to ensure process control and food products for human consumption
OBJECTIVES (EXPRESSED IN TERMS OF EXPECTED RESULTS OF THE TEACHING PROGRAMME)
At the end of this course, the students should be able to: • Know about the main types of food production plants, as well as the general characteristics thereof. • Develop and design both the production process that takes place in a food processing plant, such as physical plant in question. • Assess the economic and financial viability of a food processing plant. • Know the structure a Project of plant food processing as well as content that these documents should have. • Identify and assess the environmental impact of a food processing plant and apply the different techniques that can be used for its reduction.
DETAILED SUBJECT SYLLABUS
THEORETICAL PROGRAM MODULE I. 1. Introduction. 2. Feasibility study of food processing plants. 3. Project of food processing plants. 4. Evaluation and environmental management in food processing plants. MODULE II. 5. Fundamentals of food plant design 6. Auxiliary facilities in food processing plants 7. Food industries PRACTICAL PROGRAM. Review of Feasibility Studies and Projects of food processing plants. Case study: economic and financial study. Seminary on layout of food processing plants Seminary on mass and energy balances in food processing plants
READING

Module I:
• Alonso R., Serrano A. (2008) Economía de la empresa agroalimentaria. 3ª Ed. Ediciones Mundi-Prensa.
• Ballestero E. (2000) Economía de la empresa agraria y alimentaria. 2ª Ed. Ediciones Mundi-Prensa.
• Bartholomai A. (1991) Fábricas de alimentos: procesos, equipamiento y costos. Ed. Acribia.
• Maroulis Z.B., Saravacos G.D. (2008) Food plant economics.CRC Press. Taylor and Francis Group.
• Rase H.F., Barrow M.H. (1988) Ingeniería de proyectos para plantas de proceso. John Wiley and Sons, Inc.
• Seoanez M. (2003) Manual de tratamiento, reciclado, aprovechamiento y gestión de las aguas residuales de las industrias agroalimentarias. Ediciones Mundi-Prensa.

Module II:

• Miquel Casals Casanova, M. Dolors Calvet Puig, Xavier Roca Ramon (2001). Complejos industriales.Ediciones UPC. Universidad Politécnica de Cataluña.
• Ana CaspVanaclocha (2005). Diseño de industrias agroalimentarias. Editorial Mundi-Prensa.
• J.A. Ordoñez y col. (1998). Tecnología de los alimentos. Vol. 2: Alimentos de origen animal. Editorial Síntesis.
• A.H. Varnam y J.P. Sutherland (1996). Bebidas: Tecnología, química y microbiología. Editorial Acribia.
• J.R.D. Manley (1989). Tecnología de la industria galletera: Galletas, crackers y otros horneados: un tratado extenso, orientado principalmente hacia las técnicas de control de procesos. Editorial Acribia
• R. Aparicio, J. Hardwood. (2003). Manual del aceite de oliva. A.M.V. Ediciones y Mundi-Prensa S.A.

RECOMMENDED INTERNET LINKS
http://www.fiab.es