

Culinary Technology

Academic Year 2019-2020

(Fecha última actualización: 17/05/2019)

Apobada en Consejo de Departamento : 05/06/2019

MODULE	CONTENT	YEAR	TERM	CREDITS	TYPE
Food Science	Culinary Technology	2º	1º	6	Coresubject
LECTURER(S)			Postal address, telephone nº, e-mail address		
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DEPARTAMENTO DE NUTRICION Y BROMATOLOGIA Facultad de Farmacia. Campus Cartuja					
DEGREE WITHIN WHICH THE SUBJECT IS TAUGHT					
Human Nutrition and Dietetics					
PREREQUISITES and/or RECOMMENDATIONS (if necessary)					
“Fundamentals of food composition” and “General chemistry”					
BRIEF ACCOUNT OF THE SUBJECT PROGRAMME (ACCORDING TO THE DEGREE)					
Appropriate cooking techniques to optimize the organoleptic and nutritional characteristics in dietetics and diet therapy. Nutritional changes in food suffered as a result of technological and culinary processes. Basic processes in the production, processing and preservation of the food. Application of new cooking techniques in preparing dishes.					
GENERAL AND PARTICULAR ABILITIES					
General					



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- CG8: To identify and classify foods and food products. Knowing how to analyze and determine their composition, properties, nutritional value, the bioavailability of nutrients, organoleptic characteristics and the modifications suffered as a result of technological and culinary processes.
- CG9: To understand the basic processes in the production, processing and conservation of animal foods and plant.
- CG25: To participate in management, organization and development of food services.
- CG26: To develop, monitor and cooperate in the planning of menus and diets tailored to the characteristics of the group to which they are intended.

Particular

- CE10: To identify and classify foods, food products and food ingredients.
- CE12: To improve the knowledge of production systems and the basic processes in the production, processing and preservation of the main food.
- CE16: To learn the culinary techniques to optimize the organoleptic and nutritional food, with respect for traditional cuisine.

OBJECTIVES (EXPRESSED IN TERMS OF EXPECTED RESULTS OF THE TEACHING PROGRAMME)

- Knowing that technological processes are used in the preparation and food processing.
- Knowing the different cooking techniques that allow for more varied diets and adapted to the circumstances of each person.
- Learn the culinary techniques to optimize the organoleptic and nutritional food, with respect to the traditional cuisine.

DETAILED SUBJECT SYLLABUS

THEORETICAL PROGRAM

1. Concept and objectives of the culinary technology. Concept. Objectives. Home and kitchen business
2. The current restoration: food sources. Current restoration objectives: the menus. Historical development of eating habits. Food sources in the restoration of today.
3. Current systems of catering. Cooking-cooling; freezing cooked; Cooking under vacuum. Application in catering.
4. The quality in culinary technology. The quality of the dishes. Sheets preparation of dishes. Integrated aspects of quality.
5. Operations and culinary processes at room temperature. Operations prior to the culinary processes. Sorting, cleaning and division. Bonding operations ingredients.
6. Processes with heat cooking: cooking processes. Cooking concept. Generating heat or cooking equipment. Heat transfer to the food.
7. The types of cooking. Classification of cooking according to the transfer means of heat. In non- liquid cooking: general types and description.
8. Firings in aqueous media. General types and description. Equipment and conditions job. Effects on food.
9. Cooking in fatty medium. General types and description. Equipment and conditions of the job. Properties of the frying fats effects on food.
10. Cooking in mixed medium. General types and description. Specific considerations to stews, braised



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and stewed. Effects on food.

11. Cooking in dry heat. General types and description. The baking process. Acid mass.
12. Special cookings. Cooking with microwaves. Molecular gastronomy. Cryogenic cooking or cooking with liquid nitrogen. Deconstruction. The internal cooking. Gelatin foam and hot.
13. Molecular gastronomy. Knowing how to apply science to culinary practice. To study the effect of physicochemical properties and technological processed ingredients for innovative new food structures such as foams, emulsions or gels.

PRACTICAL PROGRAM

1. Formation of foam when cooking rice.
2. Loss of phenolic compounds during cooking. Influence of pH.
3. Influence of water hardness on cooking time.
4. Loss of mineral salts according to the procedure used in cooking.
5. Molecular gastronomy practices.

READING

- Bello, J. Ciencia y Tecnología Culinaria. 1998. Ed. Diaz de Santos. Madrid.
- Candela, M. Astiasaran, I. Alimentos: composición y propiedades. 1999. Ed. Eurograf. Pamplona.
- Ceserani V, Kinton R, Foskett D. Practical cookery. 8ª ed. 1995. Hodder & Stoughton. London.
- Coenders, A. Química Culinaria. 1996. Ed. Acribia. Zaragoza.
- Malo M. Comedores colectivos. Código de buenas prácticas. 1997. Ed. Consejería de Sanidad, Consumo y Bienestar Social. Gobierno de Cantabria.
- Sala, Y. Montañes, J. Restauración colectiva. Planificación de instalaciones, locales y equipamientos. Ed. Masson.
- Gerog Schwedt. Experimentos en la cocina: la cocción, el asado y el horneado. Editorial Acribia S.A. (2006) Zaragoza.

RECOMMENDED INTERNET LINKS

European Food Safety Authority: www.efsa.europa.eu

Agencia Española de Seguridad alimentaria y Nutrición: www.aesan.msc.es

Calidad Alimentaria.net: www.calidadalimentaria.com

Codex Alimentarius: www.codexalimentarius.net/web/index_es.jsp

FDA's Center for Food Safety and Applied Nutrition: www.cfsan.fda.gov

Federación Española de Hostelería: www.fehr.es

Federación Española de Industrias de Alimentación y Bebidas (FIAB): www.fiab.es

International Portal on Food Safety, Animal and Plant Health: www.ipfsaph.org

Organización Mundial de la Salud: www.who.int/foodsafety/fs_management/infosan/en/

Portal de Tecnologías y Mercados del sector alimentario: www.alimentatec.com



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Seguridad Alimentaria (CONSUMER EROSKI): www.consumaseguridad.com

Seguridad Alimentaria: www.seguridadalimentaria.com



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