

26243 - Innovation in the Food Industry

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 that is designed for this subject is based on the following:

The course is structured in 35 participatory lectures; 15 hours of laboratory / computer room organized in sessions of 2 or 3 hours each, plus the completion of the relevant reports of practices; 10 hours of problems and cases distributed in innovation seminars and visits; the rest will be hours of autonomous work of the student, requesting the corresponding mentoring when needed.

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5.2.Learning activities

Regarding participatory lectures, it is intended to facilitate the documentation of each topic with sufficient time for the student to review it before the corresponding class. In some cases sources of information, tables and graphs will be in English, so students will have a glossary of technical terms related to the subject and its corresponding equivalence to Spanish. During the classes the different learning activities will cover all lessons of the program. The labs / computer room sessions will cover the following aspects. Two sessions will be devoted to managing sources of information on innovation in the food sector and evaluation of nutrition and health claims on foods. Two other sessions will work with problems and cases of process control and optimization of equipment and facilities in the food industry in relation to innovation. Laboratory sessions will be devoted to the study of an innovative food and the assessment of a functional property of food. A written report of the practical sessions, consisting of the analysis and interpretation of the results, will be asked to each student. Seminars and visits will be organized in sessions of 2 hours, where concepts and experiences related to the food sector with a clear focus on the transfer of knowledge will be presented.

All teaching materials for the course (class notes, protocols of practices, dietary survey, support material, recommended bibliography, websites) will be available in advance on the Teaching Digital Ring (ADD) of the University of Zaragoza and reprographic service of the Veterinary Faculty of Zaragoza.

5.3.Program

The program offered to the student to achieve the expected results includes the following activities ...

Theoretical teaching:

1.1. Introduction to the course, the concept of innovation, phases of an innovation project, stages in the development of new products and processes in the food field, search for solutions, technology surveillance and intelligence (7 hours)

1.2. Innovation in functional foods, fortified food, supplements, novel foods and foods adapted to population groups with special needs. Design of food with nutrition and health claims based on scientific evidence. Regulations and patents (9 hours)

1.3. Innovations in online instrumentation and process control. Optimization strategies for equipment and facilities in the food industry. New strategies for energy use in the food industry (9 hours)

1.4. Technological innovations in food packaging (2 hours)

1.5. Methods and marketing strategies of new products, management of product life-cycle, development of marketing strategies, market test (4 hours)

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1.6. Environmental aspects of innovation in the food industry (4 hours)

Practical teaching:

2.1. Computer room: Management and application of information sources, evaluation of health claims and innovative products (3 hours)

2.2. Laboratory study of an innovative food and evaluation of the antioxidant capacity of food products (6 h)

2.3. Classroom: Problems and case studies of innovation in process control and optimization strategies for equipment and facilities in the food industry (6 hours)

2.4. Innovation seminars and visits: seminars and lectures given by professors, researchers and professionals from companies or institutions on success and failure cases in developing new products and the technological situation of the sector (10 hours)

5.4.Planning and scheduling

Schedule of sessions and presentation of works

The dates and key milestones of the course are described in detail, along with the other courses in the fourth year of Food Science & Technology Degree, on the website of the Veterinary Faculty (link: <http://veterinaria.unizar.es/gradocta/>). This link will be updated at the beginning of each academic year.

Theoretical classes begin the first school Friday of February and will continue for a total of 10 sessions from 9 am to 15 pm. They will be held in Hall No. 4 (Central Building).

Practical classes: groups and schedule will be coordinated by the Center. They will be taught in computer classroom as well as in the laboratories of the areas involved and in and other Rooms assigned by the Center.

Written final exam: will last 4.0 hours.

Mentoring will be conducted at any time agreed with the teachers of the course.

5.5.Bibliography and recommended resources

Typically, the literature of the academic year is kept updated and is consulted at the Library website (biblioteca.unizar.es)

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<http://psfunizar7.unizar.es/br13/egAsignaturas.php?codigo=26243&Identificador=12163>