

26240 - Enrichment in the Fruit and Vegetable Sector

Información del Plan Docente

Academic Year	2017/18
Faculty / School	105 - Facultad de Veterinaria
Degree	294 - Degree in Food Science and Technology
ECTS	6.0
Year	4
Semester	Second semester
Subject Type	Optional
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

The course is structured into blocks of lectures by areas of knowledge that are taught as participatory workshops . These seminars will be organized in sessions of 3 hours, with a total of 30 hours .

Activities include practical laboratory sessions and visits to fruit and vegetable plants, factories and logistics expedition points .

The student should also conduct a tutored work. The assignment to students of different topics will be held at the beginning of the semester. Students will develop the project in groups of 2 people on a given product , deepening and

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globalizing all aspects covered in the various blocks of intensification. Once developed, the project will be delivered in writing to the teacher coordinator of the subject to evaluate them and present and defend in an oral session. Total practical activities involves 30 hours.

5.2.Learning tasks

PART I

- FRUITS AND VEGETABLES IN FOOD AND CULTURE (3 hours)

1. Technology, culture, society, food basic concepts. culinary Order: staple food, complementary, seasoning. food categories: Fresh, raw, cooked.
2. Factors affecting consumption of fruits, vegetables: sociodemographic and sociocultural variables.
3. Cultures, religions, vegetarian diets. Euro-American exchange of plant products: potato, pepper, tomato.

BLOCK II

- POST-HARVEST TECHNOLOGIES BY PRODUCT GROUP:

(10 hours)

1. Pome fruits
2. Stone fruits
3. Small Fruits
4. Citrus fruits
5. Vegetables fruit
6. Vegetables, stem, leaf and flower
7. flowers, buds, and grasses
8. hypogean Vegetables and truffles

PART III

- SAFETY MANAGEMENT IN THE HORTICULTURAL SECTOR (8 hours)

1. Biotic Risks fresh produce.
2. decontaminating low-impact treatments versus traditional treatments
3. postharvest treatments for insect control and quarantine protocols
4. Food Security Protocols: BRC, IFS ...

SECTION IV

- HORTICULTURE AND ENVIRONMENT (3 hours)

1. Types of pollutants generated in the production, storage and processing of fruits and vegetables.
2. Techniques to reduce pollution in the production, storage and marketing of fruit and vegetables. zero waste: towards sustainable production.
3. Complete Lifecycle Management: carbon footprint, efficient water management, etc. Recycling containers. New methods of wastewater treatment.

BLOCK V

- ECONOMIC FIGURES IN THE FIELD OF FRUITS AND VEGETABLES (3 hours)

1. Market structure (production, consumption and trade at regional, national and international level). Common Market Organisation (CMO).
2. Distribution Channels. Imports and exports.

Practical activities: 30 hours teaching

a) Practical laboratory sessions: 12 teaching hours

b) Visits: 9 hours of class

c) Work supervised: 9 hours of class

a) Practical sessions: Each session is 3 hours

* The pigments in fruits and vegetables. Determination, changes, and technological importance in product quality.

* The enzymes in fruits and vegetables. Determination, activity measurement, changes, and technological importance in product quality.

* The functional compounds in fruits and vegetables: antioxidants and vitamins. Determination, modifications, nutritional and technological importance.

* New methods of control of postharvest disorders: ultraviolet light, catalytic ionization, electrolyzed water, edible coatings, etc.

b) VISITS

visits to fruit and vegetable plants at that time of the year will be operating at full capacity, with the aim of in situ know the process of collection, transportation, pre-cooling, sorting, washing, preparation and storage of stone fruit and pome be

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made .

c) tutored

It will consist of a theoretical and practical work in which the student has to perform the design and commissioning, and validation of a fruit and vegetable industrial process (new products, IV range, V range, ready meals or precooked frozen smoothies, etc.). At work it will be developed from the selection of the fruit or vegetable (variety, maturity, etc.), the flowchart and characterization of the product obtained on the basis of commercial quality. As far as possible the work will be practical.

5.3.Syllabus

The program that the student is offered to help you achieve the expected results includes the following activities ...

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5.4.Course planning and calendar

The dates of the activities of the subject are published along with the rest of subjects fourth year on the website of the Faculty of Veterinary Medicine (<http://veterinaria.unizar.es/gradocta/>) which is updated at the beginning of the course academic.

5.5.Bibliography and recommended resources

[BB: Bibliografía básica / BC: Bibliografía complementaria]

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- [BB] Rivera Medina, C. S. ?Caracterización, descontaminación y conservación de Tuber melanosporum (trufa negra) y Tuber aestivum (trufa de verano)?. Tesis doctoral. Universidad de Zaragoza, Facultad de Veterinaria, 2009
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- [BB] Tecnología postcosecha : calidad de la manzana golden producida en Aragón / [proyecto desarrollado por el Grupo de Investigación en Tecnología Postcosecha de la Universidad de Zaragoza coordinado por...[Rosa] Oria Almudí] . Zaragoza : Diputación General de Aragón, Dirección General de Tecnología Agraria, Servicio de Formación y Extensión Agraria, 2000

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- [BB] Tecnología postcosecha : Comportamiento de la cereza Burlat envasada en atmósferas modificadas / [proyecto desarrollado por el Grupo de Investigación en Tecnología Postcosecha de la Universidad de Zaragoza coordinado por...[Rosa] Oria Almudí] . Zaragoza : Diputación General de Aragón, Departamento de Agricultura y Medio Ambiente, 1999
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Listado de URL

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[<http://www.prtr-es.es/data/images/la%20industria%20de%20elaborados%20vegetales-ab08ebae53a6f06f.pdf>]
- Fundación Cajamar. Frutas y hortalizas en España
[http://www.eumedia.es/portales/files/documentos/Cajamar_Frutasyhortalizas-Espaa.pdf]
- Horticom. Poscosecha [<http://www.horticom.com/tematicas/poscosecha/>]
- Modified atmosphere packaging of fresh produce / Devon Zager and A. A. Kader
[<http://ucce.ucdavis.edu/files/datastore/234-400.pdf>]
- Perishables Handling Quaterly ; issue 108 [<http://ucanr.edu/datastoreFiles/234-94.pdf>]
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