COURSE DATA

DATA SUBJECT

Code: 34001
Name: Production of Prime Materials
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1103 - Degree in Food Science and Technology	Facultat de Farmácia i Ciències de L'alimentació	2	Second quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1103 - Degree in Food Science and Technology	Production of raw materials	COMPULSORY

COORDINATION

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SUMMARY

Raw material production:

is structured in 6 credits, taught in the second semester of the second year.

The course:

- aims impart basic knowledge and develop attitudes necessary for the student to know the materials us
- focuses on to know the basics systems and structures of production of foods of both plant and animal.
- Focuses on fundamental factors and processes related to the use, management and control of plants a

highlighting its importance in the features and quality of raw materials obtained.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

The subject PRODUCTION OF RAW MATERIALS need previous knowledge of Biology and Physiology

Recommended have a minimum knowledge of:
Soil resources,
food Botany and Zoology
plant and animal Physiology together with knowledge about the composition of food products

COMPETENCES / LEARNING OUTCOMES

1103 - Degree in Food Science and Technology

Acquire knowledge of physiology and optimal management of plants and animals used for food production.

Alcanzar experiencia en trabajar en equipo y utilizar un vocabulario científico que permita expresar con rigor las ideas propias sobre la materia.

Be able to identify the different agricultural production systems and understand how media, factors and processes combine.

Conseguir planificar y realizar un estudio hipotético en el que se apliquen los conocimientos adquiridos que resulte organizado, comprensible y preciso.

Have an in-depth knowledge of the natural resources used for the production of raw materials intended for obtaining food.

Know and understand the impact of fertilisation, farming techniques, operation of farms, physiology of the animal species used and other aspects that affect the final characteristics of raw materials of plant and animal origin.

Learn how to analyse those factors linked to production systems that can exert a greater influence on the yield and quality of food.

Saber aplicar los conocimientos en el área de Ciencia y Tecnología de los Alimentos al mundo profesional, contribuyendo al desarrollo de los Derechos Humanos, de los principios democráticos, de los principios de

igualdad entre mujeres y hombres, de solidaridad, de protección del medio ambiente y de fomento de la cultura de la paz.

Show good judgement to select the different species according to requirements, and to choose the most suitable production techniques to obtain final characteristics of raw materials suited to consumer preferences.

The ability to transmit ideas, problems and solutions within the study area of modern languages and their literatures.

DESCRIPTION OF CONTENTS

1. PRELIMINARY CONCEPTS

¿Topic 1: Introduction. Food and animal and plant production
¿Topic 2: Diagnosis of the agricultural situation.

2. PLANT PRODUCTION. ENVIRONMENTAL FACTORS AFFECTING THE PLANT PRODUCTION

¿Topic 3: Climatic factors: climate and land Bioclimatology.
¿Topic 4: The soil as a substrate for growing plants. Type of soil: importance in agricultural production and limit the production aspects. Soil Evaluation
¿Topic 5: Water. Water Management in cultivated soils. Irrigation water and salinity. Problems

3. CROPPING SYSTEMS

Resources and optimization techniques
¿Topic 6: Farming. Operating systems and general management. Plantings and plantations. Weather and soil modification techniques.

4. PRACTICES FOR CROP PRODUCTION

¿Topic 7: Nutrition of plants. Essential elements for plants. Fertilizers. Classification. Time and form of

employment.
¿8: Control of weeds, pests and diseases plant protection products. Concept and types. Mechanisms of action. The behavior of pesticide in the soil.

5. QUALITY OF PLANT PRODUCTS

¿Item 9: The soil as a means self-cleaning. Soil contamination
¿Item 10: Analysis of current agricultural production. Traditional farming and sustainable agriculture and alternative. Interactions and problems.

6. MAJOR GROUPS OF CROPS.AGRICULTURAL PRODUCTION.

GROUP 1: IRRIGATION crops
¿Item 11: Citrus. Soil and climate requirements. Patterns. Varietal types. Cultivation techniques. Tillage and fertilization. Irrigation, weed control, pests and diseases. Collection and preservation of citrus
GROUP 2: DRY crops
¿Item 12: Vid. Soil and climate requirements. Patterns. Varietal types. Cultivation techniques. Tillage and fertilization. Irrigation, weed control, pests and diseases. Collection and preservation
¿Item 13: Olive Soil and climate requirements. Patterns. Varietal types. Cultivation techniques. Tillage and fertilization. Irrigation, weed control, pests and diseases. Collection and preservation
GROUP 3 ARABLE crops
¿Item 14: Arable crops: Cereals. Tuberous crop. Horticultural crops

7. PRELIMINARY CONCEPTS OF ANIMAL PRODUCTION

Topic 15: Production of raw materials of animal origin
Animal production. Animal production in the European Union. Animal production in Spain. Animal production in Valencia. Appellations

8. PRODUCTION OF RAW MATERIALS OF ANIMAL ORIGIN

PRODUCTION OF RAW MATERIALS OF ANIMAL ORIGIN
Topic 16: Ruminants I (Bovine)
Introduction. Main breeds of cattle. Production systems. Transportation and sacrifice. The Canal and its

performance. The carcass composition of slaughter animals and their factors of variation
Topic 17: Ruminants II (Sheep - Goat)
Introduction. Main breeds of sheep and goats. He ordered. Fundamental principles of cheese. Types of cheese
Topic 18: Monogastric I (Porcine)
Introduction. Main breeds of pigs. Breeding and feeding. Production cycle. Iberian ham
Topic 19: Monogastric II (Aves)
Management chicks. Lighting program. Lighting stimulation program. Flashing light. Individual lighting programs. Management egg size.
Topic 20: Bees
Beekeeping. Classification of the honeybee. Hives. Auxiliary beekeeping equipment. Beekeeping management. Bee products. Nougat.

9. PRACTICES

¿Practice 1.- Vegetal Production. Plant / soil: Comparison of vegetative growth between different soil types. Analysis and salinity-induced phytotoxicity
¿Practice 2.- Analysis of soil properties determinants of plant production.
¿Practice 3-. Foreign plant / water / soil: study of the dynamics of water. Evaluation of the influence of water quality in the production of crops
¿Practice 4.- Visit to the UV's acuaculture pilot plant (ICBiBE)

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	2,00
Theory	38,00
Seminar	2,00
Laboratory	15,00
Total hours	**57,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	10,00
Independent study and work	33,00
Preparation of lessons	40,00
Preparation for assessment activities	2,00
Resolution of case studies	5,00
Total hours	**90,00**

TEACHING METHODOLOGY

For the teaching of the subject **PRODUCTION OF RAW MATERIALS** will be held classroom (theory, practical and problems) and seminars. This will be done in groups.

Other activities such as tutoring or monitoring of the course work will be carried out individually or in groups smaller than the previous activities.

It provides the student with teaching material and selected bibliography in the virtual classroom of matter

EVALUATION

During the development of the subject both theoretical and practical classes, there will be a:

A) **Continuous assessment** (5%) of each student, based on regular attendance at classes and classroom activities, participation and degree of involvement in the process of teaching and learning and skills and attitudes displayed during the development of activities.

Attendance at **tutorials** class activities is mandatory.

B) Evaluation of **laboratory work** (15%) by monitoring the work of the same, the ability to solve experimental problems encountered and the ability to perform a memory of the experimental results. Attendance at practices and delivery of memory is required.

Both sections shall account for more than 20% of the final evaluation

C) Evaluation of the performance presentation and discussion **seminars** and topics related to the contents explained in class. It assessed the level of understanding of the content and skills for presentation and discussion. Attendance at seminars is compulsory.

This section will contribute to the final with a rate of 10% (always you have attendance the seminars).

Details of seminars coordinated assessment be made public on the website of the Centre

D) **Evaluation of a written test** to ensure knowledge and understanding of the levels set for the subject **including theory lessons and laboratory (practice) sessions**.

The Laboratory sessions and the compulsory attendance to Tutorials and Seminars can be kept if they have been done in the previous year and if it is in the student's interest.

COMMENTS:

To pass the course you must obtain a grade of at least 5 out of 10 inEACH field (A+B and C) to effect a weighted average of the final grade.

If the student pass tutories and seminars, but he/she do not perform the theorical-practical exam, the mark will be **Non presented** (in the first call of the course) or **Fail** in the second and subsequent calls

REFERENCES

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- Barranco, D. (1998): El cultivo del olivo. Ed Mundi Prensa. Madrid
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- caprina. Ed. Mundi Prensa
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- Maroto,J. V. (2002): Horticultura herbácea especial. Ed Mundi-Prensa
- Porta J. et al.(2003): Edafología para la agricultura y el medio ambiente. Madrid, Ed. Mundi-

Prensa.

• Porta,J.; Lopez-Acevedo,M.; Poch, R.M. (2008). Introducción a la Edafología. Uso y Protección del suelo". Ed.Mundi Prensa. Madrid.

• Reynier, A (2005) .Manual de viticultura. Ed Mundi-Prensa

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• Web del Minsiterio de Agricultura, Pesca y alimentación. www.mapa.gob.es/es/