COURSE DATA

DATA SUBJECT

Code: 36385
Name: Production and logistics systems
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1212 - Degree in Gastronomic Sciences	Facultat de Farmácia i Ciències de L'alimentació	3	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1212 - Degree in Gastronomic Sciences	Sistemas de producción y logística	COMPULSORY

COORDINATION

JULIAN RUBIO FRANCISCO JAVIER

SUMMARY

The area of Operations, or production as it has always been known, such as Logistics, both included and involved in the well-known, and called, Supply Chain Management (SCM), are the areas that currently capitalize the Higher level of interest on the part of the business sector.

The production systems refer to the means and procedures for obtaining the goods and services necessary for society, while logistics includes all those activities necessary to facilitate the flow of products and information along the supply chains, which, in certain situations, become complex networks.

Increasingly demanding consumers demand an increase in the quality of products at a lower price, and hence the importance and challenge of knowing and mastering a series of increasingly complex production and logistics operations and oriented towards competitiveness. A global approach is adopted, emphasizing its strategic nature, necessary in a business environment such as the present one.

Indeed, in an increasingly globalized world, where customers, suppliers and consumers in a country are different from those in other countries, as well as transport, inventory, storage, distribution and communication systems, with connotations or differences between countries to address their specific business environments, this global context raises additional complexity in the form of large supply chains, where, for example, a company develops a new product in Europe, production is located in Asia, and

Marketing is done in Europe and the United States.

However, without losing that global perspective, this subject focus on activities in a domestic or local area, as in Spain, and tries to focus even more on production and logistics activities related to the management of the chain Supply in the gastronomic or food industry. Therefore, and following the Verifies for this subject, the contents of the same is summarized in:

• Introduction to logistics systems.
• Supply chain management and objectives.
• Supply management.
• Order and distribution management.
• Inventory management.
• Production planning.
• Design and management of warehouses.
• Distribution in plant and design of distribution routes.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

1212 - Degree in Gastronomic Sciences

Adquirir la formación básica para formular hipótesis, recoger e interpretar la información para la resolución de problemas siguiendo el método científico y comprendiendo la importancia y las limitaciones del pensamiento científico.

Be able to distribute time appropriately for carrying out individual or group tasks.

Diseñar, implantar e interpretar las actuaciones y los proyectos de logística y de producción a los efectos de ayudar a la gerencia en los procesos de toma de decisiones.

Elaborar y manejar los escritos, informes y procedimientos de actuación más idóneos para los problemas suscitados y utilizando un lenguaje no sexista.

Have knowledge and understanding in the field of gastronomic sciences.

Plan, order and channel activities in such a way that unforeseen events are avoided as much as possible, possible problems are foreseen and minimised, and solutions are anticipated.

Resolver tareas o realizar trabajos en el tiempo asignado para ello manteniendo la calidad del resultado.

Saber aplicar esos conocimientos 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 con perspectiva de género.

Ser capaz de construir un texto escrito comprensible y organizado.

Ser capaz de trabajar en equipo y de organizar y planificar actividades, teniendo en cuenta, siempre, una perspectiva de género.

Students must have the ability to gather and interpret relevant data (usually in their field of study) to make judgements that take relevant social, scientific or ethical issues into consideration.

DESCRIPTION OF CONTENTS

1. INTRODUCTION TO LOGISTICS AND THE SUPPLY CHAIN

1.1. Introduction. Basic concepts.
1.2. Types of Logistics. Evolution of logistics towards the Supply Chain.
1.3. Subsystems of the supply chain. Tasks, functions and processes.

2. MANAGEMENT AND OBJECTIVES OF THE SUPPLY CHAIN

2.1. Supply chain management.
2.2. Planning activities and relationship with other operational functions.
2.3. Process management in the supply chain.
2.4. Guidelines and metrics for logistics and supply chain.

3. SUBSYSTEM OF SUPPLY AND MANAGEMENT OF SUPPLIERS

3.1. The purchasing and procurement function. Goals.
3.2. The purchasing department, basic activities and purchasing processes.
3.3. Evaluation of suppliers and procurement strategies.
3.4. Management indicators in procurement and procurement management.

4. STOCK AND INVENTORY MANAGEMENT SUBSYSTEM

4.1. Inventories, concept and types. Factors that influence the creation of inventories.
4.2. Stock control and management. Stock management systems with independent demand.
4.3. Design and organization of warehouses. Distribution in warehouse plant (layout). Storage systems.
4.4. Goods handling and handling. Picking and order preparation. Packing and shipping.
4.5. Decisions on storage and its relationship with logistics

5. PRODUCTION SUBSYSTEM

5.1. Systems and production processes. The product-process matrix. Distribution of the Productive plant.
5.2. Production systems in the gastronomic industry.
5.3. Systems of planning of the production according to the temporary terms. Dependent demand systems: MRP (Material Requirement Planning).
5.4. Production systems and their relationship with logistics and supply: Just in time, Kanban, and lean production.
5.5. Quality in the production subsystem and in the rest of the logistics chain.

6. TRANSPORT AND DISTRIBUTION SUBSYSTEM

6.1. Fundamentals of transport. Types and modalities of transport, characteristics and costs.
6.2. The distribution process. Conventional commercial distribution systems.
6.3. Commercial distribution and electronic commerce.
6.4. Systems of planning of the commercial distribution according to term: the systems DRP (Distribution Resource Planning).
6.5. Models of transport, distribution and route planning

7. INFORMATION SYSTEMS AND TECHNOLOGIES IN LOGISTICS

7.1. Logistic information and its computer processing. Coding systems for products and materials. Radio Frequency Identification (RFID). Traceability.
7.2. Logistics information systems and technologies and the supply chain. ERP systems (Enterprise Resource Planning).
7.3. Specialized systems and information technologies (Best of Bread systems) for logistics and supply chain.
7.4. Digitization and development in the cloud. Industry 4.0 and logistics 4.0.
7.5. Sustainable logistics and the sustainable development goals (O.D.S. 2030)

8. QUALITY AND INNOVATION

8.1. Quality systems. Quality management in gastronomic activities.
8.2. Types of innovation. Management of innovation in gastronomic activities.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	60,00
Total hours	**60,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	30,00
Independent study and work	30,00
Preparation of lessons	30,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**90,00**

TEACHING METHODOLOGY

The time of theory sessions will be distributed in the following sections:

a) An expository part by the teacher, who will develop the theoretical concepts included in the course program (80% of the time)

b) An expository part in charge of the students who have investigated and extended some relevant aspect within the theory agenda, at the teacher's proposal (10% of the time)

c) Discussion and participation in class on concepts of theory seen in that session, both those given by the teacher and those exposed by the students (10% of the time).

In the practical sessions, the student will develop and present the analysis and resolution (individual and group as appropriate) of the exercises, cases and readings that have been proposed.

Teaching and support materials: in the VIRTUAL CLASS will be published all the necessary materials, as well as transparencies in support of theoretical sessions as well as practical materials that are accurate.

EVALUATION

70% of the total evaluation corresponds to the theory, and the remaining 30% to the practical part. The practical part is assessed by continuous assessment system, considering the attendance, participation and case resolution and exercises.
In accordance with the regulation approved by the Governing Council on May 30, 2017 (ACGUV 108/2017), in its article 6, sections 5 and 6, the condition of non-recoverable activity is expressly stated, the part dedicated to assistance (10%), being able to recover in the second call the recoverable activities (20%) of continuous assessment.
The use of Artificial Intelligence, and any other similar type of tool, will be permitted to be applied, both to classroom work and to independent work, as long as the student incorporates into these tasks a declaration of responsible use, indicating, in each case, the source and the parts of the work affected.
Pursuant to article 28 of the Regulations on Language Use of the University of Valencia (*ACGUV 167/2014, of September 30, modified by *ACGUV 146/2023), the statements of the exams and exercises will be presented in the language in which the subject has been officially offered.

REFERENCES

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- Heizer, J.; Render, B. (2015): Dirección de la Producción y de Operaciones. Decisiones tácticas. Ed. Pearson. 11ª Edición.
- Hult, T.; Closs, D.; Frayer, D. (2014): Global Suply Chain Management. Leveraging processes, meausurements, and tools for strategic corporate advantage. McGraw Hill.
- Soret de los Santos, I. (2006) Logística y Marketing para la distribución comercial. ESIC