COURSE DATA

Data Subject	
Code	36385
Name	Production and logistics systems
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

Study (s)

Degree	Center	Acad. year	Period
1212 - Degree in Gastronomic Sciences	Faculty of Pharmacy and Food Sciences	3	First term

Subject-matter

Degree	Subject-matter	Character
1212 - Degree in Gastronomic Sciences	25 - Sistemas de producción y logística	Obligatory

Coordination

Name	Department
MONREAL GARRIDO, MANUEL	105 - Business Administration 'Juan José Renau Piqueras'

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

OUTCOMES

1212 - Degree in Gastronomic Sciences

- 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.
- 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.
- Acquire the basic training needed to formulate hypotheses, gather and interpret information for solving problems using the scientific method, and understand the importance and the limitations of scientific thinking.

- Be able to work in a team and to organise and plan activities, always taking account of gender perspective.
- Resolve tasks or carry out work in the time allotted while maintaining the quality of the result.
- Be able to construct an understandable and organised written text.
- Be able to distribute time appropriately for carrying out individual or group tasks.
- Prepare and handle the writings, reports and action procedures best suited to the problems raised, using non-sexist language.
- Be able to apply this knowledge to the professional world, contributing to the development of human rights, democratic principles, the principles of equality between women and men, solidarity, environmental protection and the promotion of a culture of peace from a gender perspective.
- Design, implement and interpret logistics and production actions and projects in order to assist managers in the decision-making process.

LEARNING OUTCOMES

The teaching-learning process of this course should achieve the following competencies:

- *Ability to define, solve and explain complex issues systemically*
- *Ability to apply and introduce procedures for continuous improvement in all areas of the organization.*
- *Ability to establish a system of corporate governance indicators*
- *Know how to approach objectives and strategies at different levels of the organization and to assess the implications and needs for achievement*
- *Ability to plan, organize, monitor and evaluate the implementation of business strategies in logistics and production in a globalized world*
- *Understand the purpose and operation of enterprises in the global economy as well as its systemic nature and implications and processes related to their development and growth*
- *Identify the key factors of business competitiveness and sustainability of economic activities*
- *Know the characteristics of different production systems or the provision of services and knowledge manage criteria of efficiency and effectiveness in close interrelation with other areas of the company and its environment*
- *Develop critical skills on the Spanish and international economy*

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

ACTIVITY	Hours	% To be attended
Theory classes	60,00	100
Development of group work	15,00	0
Development of individual work	15,00	0
Study and independent work	30,00	0
Preparing lectures	15,00	0
Preparation of practical classes and problem	15,00	0
TOTAL	**150,00**	

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.

The condition of non-recoverable activity of the continuous assessment is expressly stated, in accordance with the regulations approved in the Governing Council on 30 May 2017 (ACGUV 108/2017), Article 6, paragraphs 5 and 6, given the Nature, design and development of this subject in the classroom, which does not allow to establish an alternative test that values the acquisition of learning outcomes in the second call.

REFERENCES

Basic

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- Anaya, J.J. (2015): Logística integral. La gestión operativa de la empresa. ESIC. 5ª Edición.
- Chopra, S.; Meindl, P. (2008): Administración de la cadena de suministro. Estrategia, planeación y operación. Ed. Pearson-Prentice Hall. 3ª Edición.
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- Velasco, J. (2013): Gestión de la logística en la empresa. Ed. Pirámide.

Additional

- Abele, E.; Meyer, T.; Näher, U.; Strube, G.; Sykes, R. (2008): Global Production Ed. Springer.
- Ballou, R. (1991): Logística empresarial. Control y planificación. Ed. Díaz de Santos.
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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