

30129 - Logistics

Syllabus Information

Academic Year: 2021/22

Subject: 30129 - Logistics

Faculty / School: 175 - Escuela Universitaria Politécnica de La Almunia

Degree: 425 - Bachelor's Degree in Industrial Organisational Engineering

ECTS: 6.0

Year: 3

Semester: First semester

Subject Type: Compulsory

Module:

1. General information

1.1. Aims of the course

The subject and its expected results respond to the following approaches and objectives:

The degree in Industrial Organization Engineering provides a technological-business training widely accepted in the European and international environment. It enables the graduate to manage and direct industrial and service companies in all their functional areas.

The fundamental objective is to make known the bases of the function of the company in charge of the delivery of the products to the clients, when these demand it, in the agreed place and time, in the best possible conditions.

Alignment with the SDGs

These approaches and objectives are in line with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>), in such a way that the acquisition of the course learning outcomes provides training and competence to contribute to their achievement to some degree.

- Goal 12: Ensure sustainable consumption and production patterns
- Goal 17: Revitalize the global partnership for sustainable development

Specifically with the following goals:

- 12.CRationalize inefficient fossil-fuel subsidies that encourage wasteful consumption by removing market distortions, in accordance with national circumstances, including by restructuring taxation and phasing out those harmful subsidies, where they exist, to reflect their environmental impacts, taking fully into account the specific needs and conditions of developing countries and minimizing the possible adverse impacts on their development in a manner that protects the poor and the affected communities
- 17.12Realize timely implementation of duty-free and quota-free market access on a lasting basis for all least developed countries, consistent with World Trade Organization decisions, including by ensuring that preferential rules of origin applicable to imports from least developed countries are transparent and simple, and contribute to facilitating market access

1.2. Context and importance of this course in the degree

Logistics is one of the areas of business decision that in recent years have received greater attention from the point of view of management oriented to the international competitiveness of companies.

1.3. Recommendations to take this course

This subject does not have any normative prerequisite nor does it require specific complementary knowledge. However, for a better understanding of the subject, it is desirable that the student has acquired the competences and knowledge corresponding to the following subjects:

- Estadística

- Investigación Operativa.
- Fundamentos de Administración de Empresas
- Organización y Dirección de Empresa

2. Learning goals

2.1. Competences

By passing the course, the student will be more competent to...

Ability to plan, budget, organize, direct and control tasks, people and resources.
 Ability to solve problems and make decisions with initiative, creativity and critical thinking.
 Ability to apply information and communication technologies in engineering.
 Ability to communicate and transmit knowledge, skills and abilities in Spanish
 Ability to analyze and assess the social and environmental impact of technical solutions acting with ethics, professional responsibility and social commitment, always seeking quality and continuous improvement
 Ability to work in a multidisciplinary group and in a multilingual environment
 Ability to handle the legislation and technical specifications necessary for the practice of Engineering.
 Ability to learn continuously and develop autonomous learning strategies.
 Knowledge and skills for the design, management and organization of productive and logistic systems in the company

2.2. Learning goals

In order to pass this course, the student must demonstrate the following results...

Describes the different Areas of the Supply Chain and their interrelations.
 Identifies the key decisions in the purchasing and procurement process.
 Organizes the purchasing and procurement function of the company.
 Applies supplier evaluation techniques
 It classifies the company's products by their importance for logistics management.
 It distinguishes the most suitable type of warehouse for each company by its logistics process.
 Identifies the storage, handling and manipulation systems required in different logistic situations.
 Organises the basic principles of inventory management to optimise decisions on the purchase of materials.
 Plans a company's distribution of materials between its different production and logistics centres.
 Applies analysis techniques to manage the distribution routes and knows the different means with which to do it.
 Organizes processes of inverse logistics between the productive and logistic centers of the company
 He knows how to apply identification systems in different processes.
 Identifies the technologies required to carry out the traceability of materials in the company's logistics cycle.

2.3. Importance of learning goals

These are learning results that both in the company profile and in the defence profile of the degree form fundamental professional skills in the graduate, for whom logistics will count as one of the most likely areas of professional dedication in the company, the Army or defence.

3. Assessment (1st and 2nd call)

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

The learner must demonstrate that he/she has achieved the intended learning outcomes during the following assessment activities

1- Written tests

They will consist of theoretical, practical and application questions. It will be valued that the student has an adequate handling of the concepts of the subject and rigor to apply them in the resolution of problems.

2- Tutored works

Group work aimed at self-learning will be proposed. The use of adequate problem-solving strategies, the use of reliable information sources, a careful vocabulary, the presentation of results in a professional manner, both in writing and orally, the compliance with dates and times, as well as the capacity for teamwork will be valued.

Continuous evaluation

Regardless of the personal situation of each student, in order to be eligible for the Continuous Assessment system, at least 80% of the classroom activities (practices, technical visits, classes, etc.) must be attended. The continuous evaluation system will have the following group of qualifying activities:

- Collaborative work: The teacher will propose a series of group practices. Both the presentation and the solution adopted will

be valued; as well as the degree of participation of each student. The arithmetic average of the works will contribute with a 30% to the final mark of the subject.

- Written evaluation tests: These will be carried out in order to have a more individualized evaluation tool of the learning results. These tests will include theoretical and/or practical questions. It will contribute with 70% to the final mark.

Prior to the first call, the teacher of the subject will notify each student if they have passed or failed the subject according to the use of the continuous assessment system, based on the sum of the scores obtained in the different activities carried out during the course. If they do not pass in this way, the student will have two additional calls to do so.

Overall final assessment test.

The student must opt for this modality when, due to his/her personal situation, he/she cannot adapt to the rhythm of work required in the continuous assessment system or has not passed it.

In this case, the assessment of the learning results will be carried out by means of a single exam that will contain all the subject matter dealt with throughout the course, which will be divided into two thematic blocks. If any block has been passed in continuous assessment it will be respected, and it will not be necessary to take it unless you want to raise your grade. The number of announcements available to the student throughout the course is two.

Collaborative work must be submitted and approved by the teacher, and evaluated in the same way as in continuous assessment. The dates of the calls will be found on the web page:

<http://www.eupla.unizar.es/asuntos-academicos/examenes>

4. Methodology, learning tasks, syllabus and resources

4.1. Methodological overview

Presentation general methodology

The learning process designed for this subject is based on the following:

Strong interaction between the teacher/student. This interaction is brought into being through a division of work and responsibilities between the students and the teacher. Nevertheless, it must be taken into account that, to a certain degree, students can set their learning pace based on their own needs and availability, following the guidelines set by the teacher.

The current subject Logistics is conceived as a stand-alone combination of contents, yet organized into three fundamental and complementary forms, which are: the theoretical concepts of each teaching unit, the solving of problems or resolution of questions and laboratory work, at the same time supported by other activities

The organization of teaching will be carried out using the following steps:

- **Lectures:** Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them into topics and or sections, interrelating them.
- **Practice Sessions:** The teacher resolves practical problems or cases for demonstrative purposes. This type of teaching complements the theory shown in the lectures with practical aspects.
- **Laboratory Workshop:** The lecture group is divided up into various groups, according to the number of registered students, but never with more than 20 students, in order to make up smaller sized groups.
- **Individual Tutorials:** Those carried out giving individual, personalized attention with a teacher from the department. Said tutorials may be in person or online.

4.2. Learning tasks

Programmed learning activities

The programme offered to the student to help them achieve their target results is made up of the following activities:

It involves the active participation of the student, in a way that the results achieved in the learning process are developed, not taking away from those already set out, the activities are the following:

- **Face-to-face generic activities:**
 1. **Lectures:** The theoretical concepts of the subject are explained and illustrative examples are developed as a support to the theory when necessary.
 2. **Practice Sessions:** Problems and practical cases are carried out, complementary to the theoretical concepts studied.
 3. **Laboratory Workshop:** This work is tutored by a teacher, in groups of no more than 20 students.
- **Generic non-class activities:**

Study and understanding of the theory taught in the lectures.

Understanding and assimilation of the problems and practical cases solved in the practical classes.

Preparation of seminars, solutions to proposed problems, etc.

Preparation of laboratory workshops, preparation of summaries and reports.

Preparation of the written tests for continuous assessment and final exams.

The subject has 6 ECTS credits, which represents 150 hours of student work in the subject during the trimester, in other words, 10 hours per week for 15 weeks of class.

A summary of a weekly timetable guide can be seen in the following table. These figures are obtained from the subject file in the Accreditation Report of the degree, taking into account the level of experimentation considered for the said subject is moderate.

Activity	Weekly school hours
Lectures	3
Laboratory Workshop	1
Other Activities	6

Nevertheless, the previous table can be shown in greater detail, taking into account the following overall distribution:

- 50 hours of lectures, with 60% theoretical demonstration and 40% solving type problems.
- 10 hours of laboratory workshop, in 1 or 2-hour sessions.
- 6 hours of written assessment tests, one hour per test.
- 84 hours of personal study, divided up over the 15 weeks of the 2nd semester.

There is a tutorial calendar-timetable set by the teacher that can be requested by the students who want a tutorial.

4.3. Syllabus

The course will address the following topics:

-Topic 0: Introduction to management of the supply chain

-Topic I: Procurements Logistics.

- ABC classification
- Evaluation Provider.

-Topic II: Logistics Storage

- Warehouses configuration.
- Management and control system.
- Inventory management.
- Handling and order processing.

-Topic III: Distribution Logistics

- Nodes of a distribution network
- Transportation
- Routs and Fleets management

-Topic IV: Reverse Logistics logistics processes.

- Logistics reverse models.

-Topic V: Systems capture and transmission of information.

- Identification systems
- Encodings and symbology
- Smartcards for traceability
- Systems capture and transmission of information.

4.4. Course planning and calendar

In a generic way the calendar of the course is as follows:

Topics	Week
block 0: Introduction to management of the supply chain	1,2
block I: Procurements Logistics.	3,4
block II: Logistics Storage	5,6,7,8
block III: Distribution Logistics	9,10,11,12

block IV: Reverse Logistics logistics processes.	13
block V: Systems capture and transmission of information.	14,15

The weekly schedule of the subject will be published at <http://www.eupla.unizar.es/asuntos-academicos/calendario-y-horarios>

The dates of the global evaluation test (**official calls**) will be published at <http://www.eupla.unizar.es/asuntos-academicos/examenes>

The written assessment tests will be related to the following topics:

? **Test 1:** Topic 1, 2 & 3.

? **Test 2:** Topic 3 (bis), 4 & 5.

4.5. Bibliography and recommended resources

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=30129>