

#### Información del Plan Docente

Academic Year 2016/17

Academic center 175 - Escuela Universitaria Politécnica de La Almunia

179 - Centro Universitario de la Defensa - Zaragoza

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

457 - Bachelor's Degree in Industrial Organisational Engineering

**ECTS** 6.0

Course 3

Period Half-yearly

Subject Type Compulsory

Module ---

1.Basic info

1.1.Recommendations to take this course

1.2. Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2. Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5. Activities and resources

5.1.General methodological presentation

Presentation general methodology

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



#### **SPECIALIZATION IN BUSINESS:**

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:

— **Theory Classes**: Theoretical activities carried out mainly through exposition by the teacher, where the theoretical supports of the subject are displayed, highlighting the fundamental, structuring them in topics and or sections, interrelating them.

— **Practical Classes**: 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.

#### Defense profile

Methodology of the course is based on promoting the active learning of the student, applying the theoretical contents in the different activities.

Lectures allow the transmission of knowledge to the students, promoting participation of them, in which, case studies will be resolved as well as theory will be taught without having an explicit separation between them.

In the practical sessions, based on cases and work groups, students should internalize the concepts explained in the lectures and aware both of the difficulties involved in logistic tasks and its impact on any company or organization.



## 5.2.Learning activities

**Programmed learning activities** 

#### **SPECIALIZATION IN BUSINESS:**

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

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 :

● **Theory Classes**: The theoretical concepts of the subject are explained and illustrative examples are developed as support to the theory when necessary.

● **Practical Classes**: Problems and practical cases are carried out, complementary to the theoretical concepts studied.

● 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 into 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 2 nd semester.

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

#### Defense profile

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

- 1. Classroom learning activities: (60 hours)
- 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 in topics and or sections, interrelating them. (30 hours)
- Practical classes and group work: Students will study examples and case studies carried out in small groups concerning the theoretical concepts. (30 hours)
- 2. Realization of tutored works. Students will work in groups under the supervision of their teachers. An oral presentation of the work may be also required. (35 hours)
- 3. Study and personal work: continued by students from the beginning of the course. (50 hours)
- 4. Assessment tasks. (5 hours)



Teachers of the subject make public to the students the program with the specific dates of the activities through the Moodle platform that can be consulted by logging with their username and password at the address <a href="http://moodle.unizar.es">http://moodle.unizar.es</a>.

## 5.3.Program

The contents of the essential subject for obtaining learning outcomes

#### **SPECIALIZATION IN BUSINESS:**

- -block 0: Introduction to management of the supply chain
- -block I: Procurements Logistics.
  - ABC classification
  - Evaluation Provider.
- -Block II: Logistics Storage
  - Warehouses configuration.
  - · Management and control system.
  - Inventory management.
  - Handling and order processing.
- -block III: Distribution Logistics
  - · Nodes of a distribution network
  - Transportation
  - · Routs and Fleets management
- -block IV: Reverse Logistics logistics processes.
  - · Logistics reverse models.
- -block V: Systems capture and transmission of information.
  - · Identification systems
  - · Encodings and simbolog
  - · Smartcards for traceability
  - Systems capture and transmission of information.

#### Defense profile

- -Block 0: Introduction to management of the supply chain
- -Block I: Procurements Logistics.



- · ABC classification
- Evaluation Provider.

## -Block II: Logistics Storage

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

## -Block III: Distribution Logistics

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

## -Block IV: Reverse Logistics logistics processes.

- · Logistics reverse models.
- -Block V: Systems capture and transmission of information.
  - · Identification systems
  - Encodings and simbolog
  - · Smartcards for traceability
  - Systems capture and transmission of information.

## 5.4. Planning and scheduling

#### **SPECIALIZATION IN BUSINESS:**

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 dates of the final exams will be those that are officially published at http://www.eupla.es/secretaria/academica/examenes.html.

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

— Test 1: Topic 1, 2 & 3.

— Test 2: Topic 3 (bis), 4 & 5.

## Defense profile

Calendar of the sessions is available on the web site of the institution. The submission of papers is notified to the students either during the development of the class itself, our through the Moodle platform: <a href="http://moodle.unizar.es">http://moodle.unizar.es</a> .

| Week | Topics                          |
|------|---------------------------------|
| 1    | Block 0: Introduction           |
| 2    | Block 0: Introduction           |
| 3    | Block 0: Introduction           |
| 4    | Block I: Procurements logistics |
| 5    | Block I: Procurements logistics |
| 6    | Block I: Procurements logistics |
| 7    | Block I: Procurements logistics |
| 8    | B lock II: Logistics Storage    |



| 9  | B lock II: Logistics Storage                             |
|----|--|
| 10 | B lock II: Logistics Storage                             |
| 11 | B lock III: Distribution Logistics                       |
| 12 | B lock III: Distribution Logistics                       |
| 13 | B lock IV: Reverse Logistics logistics processes.        |
| 14 | Block V: Systems capture and transmission of information |
| 15 | Block V: Systems capture and transmission of information |
|    | Assessment   |

# 5.5.Bibliography and recomended resources

## Resources

| Material             | Format         |
|----------------------|----------------|
| Topic theory notes   | Digital/Moodle |
| Topic problems       |                |
| Topic theory notes   | Digital/Moodle |
| Topic presentations  | E-Mail         |
| Topic problems       |                |
| Related links        |                |
| Educational software | Web page       |



#### **Bibliography SPECIALIZATION IN BUSINESS:**

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- Mauleón Torres, Mikel. Logística y costos / Mauleón Torres, Mikel. 1ªedición Madrid: Ediciones Díaz de Santos, 2006
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## Defense profile

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| ВВ | administración de la cadena de suministro / Ronald H. Ballou; traducción, Carlos Mendoza Barraza, María Jesús Herrero Díaz 5ª ed. México [etc.] : Pearson   |
| вс | Educación, 2004<br>Anaya Tejero, Julio Juan. Almacenes,<br>análisis, diseño y organización. Esic<br>Anaya Tejero, Julio Juan. El transporte de  |
| ВС | mercancías : (enfoque logístico de la<br>distribución) / Julio Juan Anaya Tejero .<br>Madrid : ESIC, 2009   |
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| ВС | integral / Jordu Pau i Cos, Ricardo de<br>Navascués y Gasca ; Colaboradora Marta<br>Yubero Esteban Madrid : Diaz de Santos,<br>D.L. 2001  |