

**Direction of Logistical Operations**

Code: 101744  
ECTS Credits: 6

Degree	Type	Year	Semester
2501233 Aeronautical Management	OT	4	0

**Contact**

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**Use of languages**

Principal working language: english (eng)  
Some groups entirely in English: Yes  
Some groups entirely in Catalan: No  
Some groups entirely in Spanish: No

**External teachers**

Domingo Jaumandreu

**Prerequisites**

- Basic knowledge of economics
- Basic computer skills
- Fluent in English (reading comprehension, writing and listening)
- Basic knowledge of calculus
- Digital simulation skills
- Basic knowledge of statistics

**Objectives and Contextualisation**

The objectives are that students (A) Learn about the different elements comprising a logistics system and the different strategies and tools to address problems that arise in different areas of logistics. (B) Learn and understand the importance of logistics in the company at large and in particular the problems of enterprises and the impact of the proper administration of the logistics system and its components in corporate competitiveness. (C) Know and understand the role of the aerospace sector in global logistics and the elements of diversity and risk appearing in transnational logistics systems. (D) Get acknowledged of the national and regional regulations and political trends that directly impact on the logistic systems operations.

**Skills**

- Allocate and manage aircraft turnaround resources efficiently.
- Apply specific software for solving problems in the aeronautical sector.
- Communication.

- Identify, develop and maintain the necessary resources to meet the tactical and operative needs inherent to air transport activities.
- Personal attitude.
- Personal work habits.
- Thinking skills.
- Use knowledge of the fundamental principles of mathematics, economics, information technologies and psychology of organisations and work to understand, develop and evaluate the management processes of the different systems in the aeronautical sector.
- Work in teams.

## Learning outcomes

1. Accept and respect the role of the various team members and the different levels of dependence within the team.
2. Adapt to unexpected circumstances.
3. Assess and propose different maintenance policies to minimise impact on system performance.
4. Communicate knowledge and findings efficiently, both orally and in writing, both in professional situations and with a non-expert audience.
5. Critically assess the work done.
6. Define advanced concepts in air transport logistics.
7. Develop critical thought and reasoning.
8. Develop curiosity and creativity.
9. Develop independent learning strategies.
10. Develop models for comparative analysis of strategic decisions.
11. Develop systemic thinking.
12. Develop the ability to analyse, synthesise and plan ahead.
13. Evaluate requirements to ensure quality in air transport operations.
14. Formulate strategic problems in transport and multimode transport.
15. Generate innovative and competitive proposals in professional practice.
16. Identify the infrastructure that must be acquired to improve the performance parameters of each subsystem.
17. Identify the principal bottlenecks that hold back quality factors.
18. Identify, manage and resolve conflicts.
19. Maintain a proactive and dynamic attitude towards career progression, personal growth and continuous professional development. Have the will to succeed.
20. Make decisions.
21. Manage time and available resources. Work in an organised manner.
22. Prevent and solve problems.
23. Select tools to help in decision making that are suited to the types of problems to be solved.
24. Use commercial discrete-event simulation environments to conduct experiments.
25. Use statistical analysis tools to model temporal activities and analyse the results.
26. Use virtual environments to verify critical aspects.
27. Work cooperatively.
28. Work independently.
29. Working in complex or uncertain environments and with limited resources.

## Content

### A Logistics: Systems & Operations

A10 Introduction to Global Logistics & Supply Chain Logistics Management

A20 Materials Packaging & Handling

A30 Warehousing Systems Outlook

A40 Transportation Systems & Infrastructures

A50 Optimum Transportation Mode Selection

## **B Logistics Management: Competitiveness & Competition**

B10 Logistics Business Strategy,

Product-Service Value Proposition, Innovation & Intelligence

B20 Logistics Business Systems and Operations.

Transactional Value Chains, Internal & External Customers

B30 Business Competitiveness, CTQ Factors and Capabilities.

Strategic versus Operational Business and Business Risk Management.

B40 Business Competition, Market Sector, Market Segments and Market Share.

Strategic versus Operational Competition and Competition Risk Management.

B50 Superiority in Competition: Competitive Distance & Shooting Range.

Business Effort in Market Share Improvement Projects.

B60 Competition Principles: Market Share Target Levels and Robustness

Competition Scenario Assessment.

B70 Competition & Market Share Management Strategies. Challengers and Leaders.

B80 Market Intelligence and Market Insights

## **C Globalization Context & Human Factor in Logistics**

C10 The Global Socioeconomic Context of the Route to The Market

C20 Global Logistics Context: Cultures and Organizations

C40 Global Logistics Management Risks & Opportunities: Compliance

C50 Global Logistics Management: Corporate Culture, Contractors & Outsourcing

## **D Regional Transportation Policies & Infrastructure**

D10 European Policies on Logistics Infrastructure

D20 Globe Regions Policies on Transportation & Logistics

## **E - Practices**

Practice 1: Introduction to Six Sigma transactional

Practice 2: Voice of Customer analysis (voc)

Practice 3: Cause & Effect analysis

Practice 4: Pareto analysis

Practice 5: Six Sigma projects

## **Methodology**

- Lectures
- Case studies
- Practices and exercises and problems

## Activities

Title	Hours	ECTS	Learning outcomes
<b>Type: Directed</b>			
Case studies Individual	25	1	6, 11, 9, 8, 10, 14, 15, 17, 16, 18, 24
Lectures	36	1.44	5, 4, 6, 12, 7, 14, 17, 16, 18
<b>Type: Supervised</b>			
Individual Exercises and problems	35	1.4	2, 5, 3, 6, 12, 8, 10, 7, 14, 15, 21, 17, 16, 19, 22, 23, 27, 28, 29, 25, 24, 26
Practices	34	1.36	2, 5, 3, 6, 12, 8, 10, 7, 14, 15, 21, 17, 16, 19, 22, 23, 27, 28, 29, 25, 24, 26
<b>Type: Autonomous</b>			
Case studies Groupal	20	0.8	2, 5, 3, 13, 6, 12, 8, 14, 15, 21, 17, 16, 18, 19, 20, 22, 23, 25, 24

## Evaluation

### 30% - Individual Cases, Exercises and Problems

The score will be the simple average of all graded proposals

Cases, Exercises and Problems not submitted will be graded with zero

### 15% - Group Cases and Exercises

The score will be the simple average of all graded proposals

Cases, Exercises and Problems not submitted will be graded with zero

### 22% - Practices

The score will be the simple average of all practices

Practices that are not submitted will be graded with zero

### 33% - Examination

There will be two opportunities to perform the examination and the student can submit to one or both without any other requirement

The score obtained in this evaluation section will be the one of the best exam

The student will be suspended automatically if none of the two scores obtained in the two examination opportunities exceeds 3,50/10

**100% - The student will be suspended either if the weighted average of the four evaluations does not**

exceed 4,95/10 or if the best score obtained in the two examination opportunities does not exceed 3,50/10. In this circumstance the maximum final qualification will be either the weighted average of the four evaluations or 4,50/10 (Insufficient)

The student will receive a "Not evaluable" grade

- in case of force majeure, firmly certified
- If request it in writing to the lecturer before November 1

### Very important!

Without prejudice to other disciplinary action as deemed appropriate, in accordance with the academic regulations, irregularities committed by the student will be graded with a zero that can lead to a change in the rating of an act of evaluation. Therefore copy or permit copying a practice or any other evaluation activity will involve suspending with a zero, and if approval of this activity is necessary, the whole subject is suspended. Not be recoverable assessment activities classified in this way and by this process, and therefore the subject will be suspended directly without opportunity to recover in the same academic year.

Continuous assessment dates and deliveries will be published in the virtual campus and may be subject to program changes in response to any incidents. Always be informed through the virtual campus about these changes as it believes that this is the standard platform for information exchange between teachers and students.

### Evaluation activities

Title	Weighting	Hours	ECTS	Learning outcomes
Exam	33%	0	0	1, 5, 3, 4, 6, 8, 10, 7, 15, 17, 16, 18, 19, 20, 22, 24, 26
Exercises, Cases and Problems	45%	0	0	2, 5, 3, 13, 6, 11, 9, 12, 8, 10, 7, 14, 15, 21, 17, 16, 18, 19, 20, 22, 23, 27, 28, 29, 25, 24, 26
Practices	22%	0	0	2, 5, 3, 13, 6, 12, 8, 10, 7, 14, 15, 21, 17, 16, 19, 22, 23, 27, 28, 29, 25, 24, 26

### Bibliography

Gourdin Kent, "Global Logistics Management", Blackwell Publishing

Operations Management, design, planning and control for Manufacturing services. James B.Dilworth. McGraw-Hill

Logística de almacenaje: Diseño y gestión de almacenes y plataformas logísticas world class warehousing. Ander Errasti. Ediciones Pirámide.

Países Emergentes, En busca del Milagro Económico. Ruchir Sharma. AGUILAR / Breakout Nations: In Pursuit of the Next Economic Miracles. Ruchir Sharma Norton, W. W. & Company, Inc.

Lanchester Strategy. Shinichi Yano. Lanchester Press Inc.

Handbook of Industrial Engineering. Salvendy. WILEY-INTERSCIENCE

A sustainable future for transport. TOWARDS AN INTEGRATED, TECHNOLOGY-LED AND USER-FRIENDLY SYSTEM. Luxembourg: Publications Office of the European Union, 2009 - ISBN 978-92-79-13114-1 - doi: 10.2768/13118

White Paper on transport. ROADMAP TO A SINGLE EUROPEAN TRANSPORT AREA - TOWARDS A COMPETITIVE AND RESOURCE-EFFICIENT TRANSPORT SYSTEM. Luxembourg: Publications Office of the European Union, 2011 - ISBN 978-92-79-18270-9 -doi:10.2832/30955

The Six Sigma Handbook, Thomas Pyzdek, McGrawHill 2003.

As complementary material for each subject additional links to info and papers will be provided.