

Direction of Logistical Operations

2015/2016

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)

Teachers

Juan José Ramos González

External teachers

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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 (1) Learn about the different elements comprising a logistics system and the different tools to address problems that arise in different areas of logistics. (2) 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. (3) Know and understand the role of the aerospace sector. in global logistics (4) Get acknowledged of national and transnational 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, manage and resolve conflicts.
17. Identify the infrastructure that must be acquired to improve the performance parameters of each subsystem.
18. Identify the principal bottlenecks that hold back quality factors.
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

Contents

A Logistics: System & Operations

A-0 Introduction

A-1 Logistics & Supply Chain

A-2 Contemporary Supply Chain & Optimum Transportation Mode

A-3 Transportation Process Determination - CTQ Cases

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A-4 Transportation Systems, Multimodalism & Intermodalism

A-5 Warehousing Systems Outlook

B Strategic & Operational Logistics Management

B-1 Business Strategy / Product-Service Value Proposition / Innovation Categories

B-2 Business Operations / Driving the Product-Service into the Market / Value Proposition Fit Analysis

B-3 Competitiveness / Business Management

B-4 Competition / Risk Management

B-5 Competition & Mkt Share Management - Lanchester Laws / Proposition Benchmark Analysis

B-6 Market Share Targets / Market Intelligence / Market Share Robustness

B-7 Setting Mkt Share Goals /Shooting Range

B-8 Corporate Intelligence

B-9 Competition Strategy: Strategies for the Weak (Challengers) / Strategies for the Strong (Leaders)

B-10 Competition Strategies vs. Growth Strategies

C Globalization Context & Human Factor in Logistics

C-1 Logistics & Globalization Context: Impact on HR Policies

C-2 Logistics & Globalization Context: Emerging Countries & China

C-3 Logistics & Globalization: People Management - Risks & Opportunities - Compliance

C-4 Logistics & Globalization: Corporate Culture, Contractors, Outsourcing, Merges & Acquisitions

D Regional Transportation Policies & Infrastructure Outlook

D-1 European Policies on Transportation & Logistics Infrastructure

D-2 Worldwide Regional Policies on Transportation & Logistics Infrastructure

D-3 Global Supply Chain Future Outlook / The Physical Internet

D-4 Iberian Logistics Infrastructure: Rail & Road Networks

D-5 Iberian Logistics Infrastructure: Sea & Air Ports.

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
- Conferences
- Practices and exercises and problems
- Project

Activities

| Title | Hours | ECTS | Learning outcomes |
|-----------------------------------|-------|------|--|
| Type: Directed | | | |
| Case studies | 30 | 1.2 | 11, 9, 12, 8, 7, 14, 15, 18, 17, 28 |
| Conferences | 9 | 0.36 | 11, 12, 8, 7, 19 |
| Lectures | 38 | 1.52 | 3, 13, 6, 10, 7, 14, 18, 17, 19 |
| Type: Supervised | | | |
| Practices, exercises and problems | 33 | 1.32 | 1, 3, 13, 4, 11, 12, 10, 7, 14, 15, 21, 18, 16, 17, 19, 20, 22, 23, 27, 28, 29, 25, 24, 26 |
| Type: Autonomous | | | |
| Project | 40 | 1.6 | 1, 5, 3, 13, 4, 11, 10, 7, 14, 15, 21, 18, 16, 17, 19, 20, 22, 23, 27, 28 |

Evaluation

Evaluation

- Exams (30% + 25% + 25%)

The score will be the average of three exams, should pass at least two of three with score greater than 5. The subject shall be automatically suspended in the case of failing 2 or more exams.

There is the option to replace an exam by the average rating of the exercises and problems with weight stated below.

If the exercises and problems are approved, there is the option of replacing the second qualifying exam by the Logistics Project with the weight stated below.

- Practices (20%)

The score will be the simple average of all practices.

Practices that are not submitted will be graded with zero.

- Exercises and Problems (25%)

The score will be the simple average of all exercises and problems.

Exercises and problems that are not submitted will be graded with zero.

- Project: (30%)

The score will be the simple average of all parts of the proposed project.

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 |
|------------------------|---|-------|------|---|
| exams | 80%(30% + 25% + 25%) The score will be the average of three exams, should pass at least two of three with score greater than 5. | 0 | 0 | 2, 3, 13, 4, 11, 12, 7, 15, 21, 18, 17, 19, 20, 22, 28, 29 |
| Exercises and Problems | 25% | 0 | 0 | 3, 13, 4, 6, 11, 12, 8, 10, 14, 15, 18, 16, 17, 22, 27, 29, 25, 24, 26 |
| practices | 20% | 0 | 0 | 13, 18, 25 |
| Project | 30% | 0 | 0 | 1, 5, 3, 13, 4, 6, 11, 9, 12, 10, 7, 14, 15, 21, 18, 16, 17, 19, 20, 22, 23, 27, 28, 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

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The Six Sigma Handbook, Thomas Pyzdek, McGrawHill 2003.

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