

Course guide

220272 - 220272 - Supply Chain Management

Last modified: 19/04/2023

Unit in charge: Terrassa School of Industrial, Aerospace and Audiovisual Engineering
Teaching unit: 732 - OE - Department of Management.

Degree: MASTER'S DEGREE IN INDUSTRIAL ENGINEERING (Syllabus 2013). (Optional subject).

Academic year: 2023 **ECTS Credits:** 5.0 **Languages:** Catalan

LECTURER

Coordinating lecturer: Torres Soto, Josep Lluís
Fernandez Alarcon, Vicenç

Others:

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:

1. Ability to exercise direction in organizations and departments.
2. Ability to design, develop and apply analytical methods (quantitative methods, statistical models and decision tools) for making strategic, tactical and operational decisions in organizations.
3. Ability to analyze, diagnose, design solutions and manage complex systems that integrate various resources of an organization keeping in mind the business environment.
4. Ability to apply theories and inherent principles of the organization in order to analyze complex and uncertainty situations, and make decisions using engineering tools.

TEACHING METHODOLOGY

The teaching methodology is divided into three parts:

- * Face sessions to present content.
- * Face sessions of practical work (exercises and problems).
- * Self study and exercises and activities.

At its exhibition content, teachers will introduce the theoretical foundations of the subject, concepts, methods and results and illustrate them with examples appropriate to facilitate understanding.

In practical sessions in the classroom, teachers guide students in applying theoretical concepts to solve problems, always basing critical reasoning. We propose that students solve exercises in the classroom and outside the classroom, to encourage contact and use the basic tools needed to solve problems.

Students, individually, must work the material provided by the teachers and the results of the working sessions-problems to fix and assimilate concepts. Teachers provide a curriculum and monitoring activities (ATENEA).

LEARNING OBJECTIVES OF THE SUBJECT



STUDY LOAD

Type	Hours	Percentage
Self study	80,0	64.00
Hours small group	15,0	12.00
Hours large group	30,0	24.00

Total learning time: 125 h

CONTENTS

(ENG) Module 1: The logistic system

Description:

Introduction to Logistics
Localization strategy
Warehouse Management
Evaluation of costs and investments

Full-or-part-time: 62h

Theory classes: 15h

Practical classes: 7h

Self study : 40h

(ENG) Module 2: Supply Chain Management

Description:

Principles of design and supply chain management
The information technology in the supply chain
Concepts applicable to international trade supply chain
Sustainability principles applicable to the supply chain
Application of Lean tools for supply chain

Full-or-part-time: 63h

Theory classes: 15h

Practical classes: 8h

Self study : 40h

GRADING SYSTEM

The final grade depends on the following activities:

- 3rd Activity (Problems), weight: 25%
- 4th and 5th Activities (Project), weight: 50%
- Exam (considering topics on Modules 1 and 2): 25%

In the event of unsatisfactory results on any of the Mid-Semester exams (3rd and 4th Activities), students will have another chance to address the unsatisfactory results, with another exam, that will be scheduled for the final exams date. The exam mark will be evaluated between 0 and 10, and the mark will update the previous mark, only if it's higher than the one obtained in the Mid-Semester exam.

For those students who meet the requirements and submit to the reevaluation examination, the grade of the reevaluation exam will replace the grades of all the on-site written evaluation acts (tests, midterm and final exams) and the grades obtained during the course for lab practices, works, projects and presentations will be kept.

If the final grade after reevaluation is lower than 5.0, it will replace the initial one only if it is higher. If the final grade after reevaluation is greater or equal to 5.0, the final grade of the subject will be pass 5.0.

BIBLIOGRAPHY

Basic:

- Crandall, R.E.; Crandall, W.R.; Chen, C.C. Principles of supply chain management [on line]. 2nd ed. Boca Raton: CRC Press, 2014 [Consultation: 26/09/2022]. Available on: <https://ebookcentral-proquest-com.recursos.biblioteca.upc.edu/lib/upcatalunya-ebooks/detail.action?pg-origsite=primo&docID=1758185>.
- Baudin, Michael. Logística lean: desarrollo de la logística lean en diversos tipos de industria. Madrid: TGP Hoshin, 2008. ISBN 9788495605139.
- Heizer, Jay H.; Render, Barry. Dirección de la producción y de operaciones: decisiones estratégicas [on line]. 11ª ed. Madrid: Prentice Hall, 2015 [Consultation: 15/06/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=5779. ISBN 9788490352878.
- Heizer, Jay H.; Render, B. Dirección de la producción y de operaciones: decisiones tácticas. 8ª ed. Madrid: Prentice Hall, 2007. ISBN 9788483223611.
- Slone, R.E.; Dittmann, J.P.; Mentzer, J.T. Transformando la cadena de suministro: innovando para la creación de valor en todos los procesos críticos. Barcelona: Profit, 2011. ISBN 9788492956524.
- Womack, J.P.; Jones, D.T. Soluciones lean: cómo pueden las empresas y los consumidores crear valor y riqueza conjuntamente. Barcelona: Gestión 2000, 2007. ISBN 9788496612327.
- Womack, J.P.; Jones, D.T. Lean thinking: cómo utilizar el pensamiento Lean para eliminar los despilfarros y crear valor en la empresa. Madrid: Gestión 2000, 2005. ISBN 8480886897.

Complementary:

- Gwynne, Richards. Warehouse management: a complete guide to improving efficiency and minimizing costs in the modern warehouse. 3rd ed. Kogan Page, 2017. ISBN 9780749479770.
- Ballou, Ronald H. Logística administración de la cadena de suministro [on line]. 5ª ed. México: Pearson Educación, 2004 [Consultation: 20/09/2022]. Available on: https://www-ingebook-com.recursos.biblioteca.upc.edu/ib/NPcd/IB_BooksVis?cod_primaria=1000187&codigo_libro=5988. ISBN 9702605407.