TecnoCampus
Escola Superior
de Ciències Socials i de l'Empresa

Centre adscrit a la
upf. Universitat Pompeu Fabra Barcelona

LOGISTICS, SUPPLY CHAIN & MARITIME BUSINESS

35002 - INVENTORY MANAGEMENT

General information

- Academic year 2023/24
- Course: First
- Trimester: First
- Number of credits: 3
- Teachers:
  - Cristian Castillo Gutiérrez <ccastillog@tecnocampus.cat>
  - Luis Antonio Conde Bilbao <lconde@tecnocampus.cat>

Teaching languages

- Spanish

Presentation of the subject

This course provides a comprehensive overview of the principles and techniques involved in efficient inventory management in business environments. Inventories, which encompass raw materials, work-in-progress, and finished products, are a strategic resource that influences profitability, customer satisfaction, and a company's competitiveness. The course covers essential concepts such as warehouse management and design, inventory level optimization, cost control, and data-driven decision-making.

The primary objective of the course is to equip students with the tools necessary to excel in warehouse operations and make informed decisions regarding the procurement and management of the company's final inventory. Upon completion of the course, students will be prepared to tackle logistical challenges innovatively and develop solutions that add value to organizations.

Important Notes:

It should be noted that TecnoCampus will provide faculty and students with the digital tools necessary to conduct the course, along with guides and recommendations to facilitate remote work when needed.

The classroom (whether physical or virtual) is a safe space free from sexist, racist, homophobic, transphobic, and discriminatory attitudes, whether directed towards students or faculty. We trust that together, we can create a safe environment where we can make mistakes and learn without being subject to prejudice from others.

Competences/learning outcomes

Basic

- CB6 - Possess and understand knowledge that provides a basis or opportunity to be original in the development and / or application of ideas, often in a research context
- CB7 How to apply the knowledge acquired and the ability to solve problems in new or little-known environments within broader (or multidisciplinary) contexts related to the area of study.

Specific

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CE3. Plan the analysis in the business environments, local and global, in order to move ahead to the new market opportunities that can be transformed into commercial products

- CE5. Design and implement logistics systems, evaluating the different possible alternatives, technical and resource constraints and taking into account coordinated management and management throughout the supply chain.
- CE6. Evaluate the performance of the entire logistics system, taking into account the fulfillment / no of the planned quality, cost and service objectives to detect and prioritize areas of improvement.
- CE7. Manage (plan, program and control) the flow of materials and information (flow of the supply chain) through the direction and coordinated management of the areas of purchases, production and physical distribution of the company.

Transversal

- CT1. Show willingness to learn about new cultures, experience new methodologies and foster international exchange in the context of logistics, the supply chain and maritime businesses.
- CT2. Show entrepreneurial leadership and management skills that strengthen personal confidence and reduce risk aversion.
- CT3. Develop tasks by applying the acquired knowledge with flexibility and creativity and adapting them to new contexts and situations.

No data

Contents

Topic 1. Warehouse Management and Design: This covers the efficient administration of warehouses, including physical design, technology, processes, security, and sustainability. Students will learn how to optimize warehouse management and apply this knowledge in real-world situations in the logistics and supply chain field.

Topic 2. Inventory Management: This addresses the principles, models, and techniques for planning, analyzing, and controlling inventory systems as a means to manage economies of scale and environmental uncertainties. It includes the analysis of deterministic and stochastic inventory models and their applications in manufacturing and retail industries. In-depth topics such as demand types, the role of inventory, decision levels regarding inventory policy, different inventory classifications, and total costs will be studied.

Topic 3. KPIs in Inventory Management: This focuses on learning and applying Key Performance Indicators (KPIs) to evaluate and optimize efficiency in a company's inventory management. Topics covered include indicator selection, data collection, and how to use these metrics to make informed decisions that maximize supply chain effectiveness while minimizing costs.

Sustainable Development Goals

- 12 - Responsible consumption and production
- 09 - Industry, innovation and infraestructure

Evaluation system

The grading for this course will be based on various individual continuous assessment activities in the classroom, accounting for 50% of the final grade, and a Final Assignment conducted individually, carrying a total weight of 50%. These activities will assess the degree of achievement of the competencies worked on during the course.

To pass the course, a minimum overall grade of 5 in the continuous assessment of the course (individual activities + Final Assignment) is required. Failure to meet the previously established requirements will result in a failing grade for the course, and the assigned grade will be the minimum obtained in the evaluated sections.

Additionally, the completion of the Final Assignment is a necessary condition to pass the course, and a minimum grade of 5 is required. If the grade for the Final Assignment is lower than 5, the course grade will coincide with the grade achieved in the Final Assignment. In the event of not submitting the Final Assignment on time, the student will receive the grade of "Not Presented."

Lack of authenticity and academic originality:

The evaluation process is based on the personal work of the students and presupposes the authenticity of authorship and the originality of the exercises carried out.

Lack of authenticity and authorship occurs through plagiarism or copying:

- Plagiarism: the use of written sources (books and articles, including classroom instructional modules) or online documentation without proper attribution and presenting them as one's own work. This includes verbatim copying of text even if the source is cited.
- Copying: the total or partial use of identical texts taken from the work of others or from the student's own work (self-plagiarism) without proper referencing of sources. This includes the use of material fraudulently obtained from websites such as Studocu.

In the event of detecting plagiarism or copying in the submissions of continuous assessment activities, the consequences for all individuals involved will be as follows:

- The activity submitted for continuous assessment will be failed in the case of continuous assessment activities, and the course will be failed in the case of recidivism during continuous assessment.

- Regardless of the student responsible for the copy/plagiarism, the failure due to misuse of the continuous assessment system will apply equally to all students involved, regardless of their connection.

The responsible course instructor will inform the students involved of the consequences of plagiarism/copying through a message sent to their personal inbox and the same classroom in case of detection during in-person assessment.

Use of generative artificial intelligence (AI) tools:

Generally, the use of generative AI tools such as ChatGPT, Bing Chat, GitHub Copilot, and others is allowed for study and practice. However, it is strictly prohibited to use them to craft responses for assessment activities.

Ethics and academic integrity are paramount when using generative AI tools. The university urges you to exercise ethical and responsible decision-making when interacting with these technologies. The academic reputation of your degree is based on your own effort and genuine learning. These tools should not substitute your commitment to authentic work.

In case the authorship is unclear in an assessment, instructors may request clarifications. Moreover, when responses obtained through generative AI tools are detected, measures related to lack of authenticity and academic originality will be applied.