

## **B2141EN Supply Chain Management**

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**5 ECTS**

### **Objectives – Course description**

- Understand what the supply chain (SC) is and the challenges associated with its proper functioning.
- Be able to describe the different SC processes
- Understand the link between business strategy and supply chain strategy.
- Acquire a flow vision of the SC.
- Understand the impact of lead times, information visibility, demand variability and process reliability on SC performance.
- the reliability of processes on the performance of the SC
- Be able to propose methods and techniques to improve SC performance
- Demonstrate the value added by collaborative models and 4.0 technology
- Develop knowledge of the vocabulary widely used in SC at international level

### **Learning content**

Chapter 0 - Introduction

\* Definitions: Supply Chain (SC), Supply Chain Management (SCM), SC processes and flow types

\* Link between business strategy, order qualifiers/winners, customer values and SC strategy

Chapter 1 - Defining the supply chain (SC design)

\* Definitions: types of logistics flows, stock and product flow management models (push, pull, production strategies)

\* SCOR method

Chapter 2 - Procurement

\* Development of the purchasing strategy: Purchasing levers and the Kraljic matrix

\* Supplier selection and management

\* KPIs & improving procurement performance

Chapter 3 - Purchasing

\* Procurement systems

\* Indirect purchasing management

Chapter 4 - Produce

\* Definitions: production organisation models and types of production, bill of materials and range, production capacity

\* Resource planning (S&OP, MRP,...)

- \* KPI and production performance improvement

- \* LEAN Manufacturing (TPS)

- \* The REACTIK case & lead-times

#### Chapter 5 - Maintain

- \* Types of maintenance and performance objectives: Reliability, Maintainability, Availability, TPM

#### Chapter 6 - Sales

- \* Demand forecasting

- \* Order fulfillment process and customer experience

- \* KPIs and order fulfillment performance improvement

#### Chapter 7 - Management of inventory and flows

- \* Beer Game and bullwhip effect. "The 3Vs of SC".

- \* Types of stocks and their management

- \* Collaborative models between customers and suppliers (DRP, QR, VMI,...)

- \* KPIs and performance improvement

#### Chapter 8 - Warehouse Management

- \* Processes and layout of the warehouse areas.

- \* Inventory management

- \* Logistics providers

- \* Digital technology in warehouses

- \* KPIs and improving warehouse performance

#### Chapter 9 - Transport

- \* Transport process and modes

- \* Transport documents and incoterms

- \* Innovation in transport

- \* KPIs and Transport Performance Improvement

#### Chapter 10 - Reverse logistics & last mile

- \* This chapter is limited to an introduction to these concepts as they are developed in detail in e-commerce logistics

### **Learning Outcome**

At the end of this unit, the student demonstrates the ability to ...

- describe a supply chain, its processes and the main concepts related to its management
- extract concepts and propose improvements based on concrete examples
- communicate in writing and orally
- produce summaries
- communicate and collaborate with peers

### **Methodology**

Interactive teaching based on company cases, company games, current events in supply chain management, practical examples in order to understand the theoretical concepts seen in the courses.

Personal research and synthesis with oral presentations in groups.

Company visits.

### **Learning material**

Recommended reference book for the English course: Supply Chain Management Demystified, John M McKeller, Mc Graw Hill, in English.

Additional materials (e.g. syllabi, books or larger materials distributed by CIACO)

- Slides
- Specialised articles

### **Evaluation**

100% Assessment at the end of the first term Written and/or oral test