



2EL6170 – Production and flow management

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Department: CAMPUS DE RENNES
Language of instruction: FRANCAIS
Campus: CAMPUS DE RENNES
Workload (HEE): 60
On-site hours (HPE): 35,00
Elective Category : Business Sciences
Advanced level : No

Description

The aim of this course is first of all to introduce students to the main concepts of production and flow management, in order to

- better understand current issues and the role of production management in organizations
- get the same language as business leaders

Its second objective is to familiarize students with the methods and tools applicable to production and flow management, mainly :

- flow and stock control methods
- methods for improving industrial performance (lean manufacturing, etc.).

Quarter number

SG8

Prerequisites (in terms of CS courses)

None

Syllabus

- Products and resources, flows and capacity in the company
 - Manage products and resources in the company
 - Managing products: flow decisions
 - Managing resources: capacity decisions
 - Ensure synchronization of flows and capacities over time
 - Data associated with products and resources
 - Technical data



- Activity data
- Flow and stock control
 - Inventory management
 - Inventory Management Models for Independent Demand
 - Choosing a model
 - Flow planning
 - Comprehensive planning: development of ICP
 - Detailed planning: developing the PDP
 - Flow programming
 - MRPO Logic
 - MRP1 logic: load-capacity matching
 - Flow scheduling
 - Centralized Scheduling
 - Decentralized Scheduling (Kanban...)
 - Demand Driven approaches - a credible synthesis?
- Improvement of industrial performance (lean logic)
 - Measuring industrial performance
 - Calculation criteria
 - SRTs and other indicators
 - The Just-A-Time (lean logic)
 - Actions at the product level
 - Resource actions
 - Actions at the level of relations with partners - link with Supply Chain Management and partnership methods (GPA, GMA, CPFR...) + new tools (Blockchain)

Class components (lecture, labs, etc.)

The course alternates between lectures and tutorials.

Grading

This module will be evaluated by a written exam.

Resources

The course (a mix of lectures and working classes) is given by a team of professors from the Institut de Gestion de Rennes.

Learning outcomes covered on the course

By the end of this course, students will be able to:

- Establish the links between the Production Management function and, in the broadest sense of the word, logistics with the different departments of the company.
- Identify the main problems of logistics (especially industrial logistics) in organizations.



- Use the main methods of stock management and flow control and analyse their consequences for the company.
- Identify the methods of stock management and flow control best suited to a given environment.
- Using some productivity indicators in industrial logistics (TRS...)

Description of the skills acquired at the end of the course

C1.1 Examine a problem in full breadth and depth, within and beyond its immediate parameters, thus understanding it as a whole. This whole weaves the scientific, economic and social dimensions of the problem

C2.5 Master the skillset of a core profession within the engineering sciences (at junior level)

C3.7 Make pragmatic and informed choices with the aim of producing tangible results.