Operations management

ECTS credits
2 credits

In brief

Course langage: French

Presentation

Prerequisites

Management control
Project management
Knowledge of the company and its organization

Learning objectives

Understand the issues, logic and basic concepts of operations, production and flow management.
Learn about the mechanisms and constraints of an ERP (Enterprise Resource Planning).
Master the methods and tools necessary for the analysis, management and continuous improvement of any logistics or production system.
Understand the main principles of Lean Management.
Become familiar with the essential areas that revolve around production: quality and safety management at the workstation and risk prevention.

Description of the programme

This UE includes :

- a module on industrial organization
The different functions within the company and the technical data defined therein.
The implementation of the operations - production system (location, layout, determination of capacity, management of facilities).
Inventory and supply management (concepts of cost and economic quantity).

MRP, Management Resource Planning (master production program, needs calculation, staking, scheduling)
Global approaches (Just In Time, lean management, OPT, Kanban, 6σ, 5S...).
- a module on quality control
statistical data processing, statistical process control, efficiency curves and sampling plan.

- a module on ERP
With the help of a software (ERP Prelude) approach the different items :
- articles,
- bill of materials management
- workstations and production lines
- storage and stock movements
- customer orders
- net requirements calculation
- purchase processing
- scheduling
- production launch and follow-up
- cost calculation
- a module on operational excellence
Introduction to lean management (variability, waste, auto-quality, standards...)
Optimization of technical resources (TRS, flow, batch size, SMED...)
These concepts are addressed in real-life situations at the Dyneo factory school.

Generic central skills and knowledge targeted in the discipline

Scientific and technical innovation: identification of production innovations, their usefulness, points of vigilance and choice of innovations for optimization
Control of complexity and systems: complexity arising from multi-actor industrial systems, identification of problems and commitment to their resolution
Management of people: all aspects of team management (role of production actors, conflict management and coordination of actors)
Strategic vision: definition of a localized strategy and control of its operational implementation.

How knowledge is tested

Industrial organization DS1 2h - 40% of the time
Quality control DS2 1h30 - 20% of the time
ERP CC1 - 20
Factory School CC2 - 20% of the time

Bibliography

Course handouts, ERP software e-Prélude, Dynéo school plant (ENSAM - Aix en Provence)

Operations management

Teaching team

- Florian Magnani
- Cécile Loubet

Sustainable Development Goal



Descent work and economic growth



Responsible consumption and production

Total des heures		**39h**
CM	Master class	11h
TD	Directed work	12h
TP	Practical work	16h

Useful info

Name responsible for EU

Lead Instructor

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