llsms2032
2021

Advanced Operations Management : Models and Applications (in English)

5.00 credits	30.0 h	Q2

Teacher(s)	Chevalier Philippe ;
Language :	English
Place of the course	Louvain-la-Neuve
Prerequisites	• An introductory course in operations management • A probability course In addition, this course is reserved for students with a bachelor's degree in business engineering or students with equivalent quantitative method skills
Main themes	This course presents the key underlying principles that drive operations efficiency in a factory, in services or in a supply chain. These principles can be used to gain valuable insight for complex real-life problems.
Learning outcomes	**At the end of this learning unit, the student is able to :** **Having regard to the LO of the programme, this activity contributes to the development and acquisition of the following LO:** • 2. Knowledge and reasoning • 2.1. Master the core knowledge of each area of management. • 2.2. Master highly specific knowledge • 2.4. Activate and apply the acquired knowledge • 3. A scientific and systematif approach • 3.1. Conduct a clear, structured, analytical reasoning • 3.2. Collect, select and analyze relevant information • 3.3.Consider problems using a systemic and holistic approach • 3.4. Perceptively synthesize emonstrating a certain conceptual distance • 3.5.Produce, through analysis and diagnosis, implementable solutions • 7. Project management • 7.1.Analyse a project within its environment and define the expected outcomes • 7.2. Organize, manage and control the process • 7.3.Make decisions and take responsibility for them in an uncertain world **At the end of this course, the student will be able to :** 1. Model operations management decisions 2. Understand the influence of variability and uncertainty for operations management 3. Analyze and solve real life operations management problems 4. Model congestion for operations and supply chain management
Evaluation methods	**Continuous evaluation** • Type of evaluation: *Group work on a real case (groups of 4) + homeworks (groups of 2)* • Comments: *participation in the course and presentation of the progress of the work* **Evaluation week** • Oral: *Yes* • Written: *No* • comments: *Presentation of group work.* **Examination session** • Oral: *No* • Written: *3 hours* • comments: *Individual Open Book Examination* • Unavailability or comments: *September examination: written 3h, replaces only the written exam. The part of the evaluation related to the continuous evaluation will that of the semester.*

Teaching methods	Lectures Exercices Problem based learning Company visit Real life case study in a company
Content	ANALYZING AND UNDERSTANDING THE EFFECT OF VARIABILITY FOR OPERATIONS MANAGEMENT • Variability basics • Push and Pull production systems • Total quality • Development of simulation models for production systems MANAGING OPERATIONS IN A PLANT • Pull models • Shop floor controls and scheduling MANAGING OPERATIONS FOR SERVICES • Queueing models • Non-stationary systems MANAGING OPERATIONS IN A SUPPLY CHAIN • Managing inventory • Managing capacity Managing time
Faculty or entity in charge	CLSM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] : Business Engineering	INGM2M	5		🔍
Master [120] : Business Engineering	INGE2M	5		🔍