

## **Operational Research**

5 credits

llsmg2003

2017

30.0 h + 10.0 h

Q1

Teacher(s)	Agrell Per Joakim ;				
Language :	French				
Place of the course	Louvain-la-Neuve				
Main themes	This course is an introductory course in Operations Management. Problems occurring in an operations management setting are studied using mathematical models and techniques, or more generally a formal approach.				
Aims	At the end of the class, students should be able o to specify the reference framework and the elements playing a part in the decision making process in the field of operations and production management ; to analyze these elements, in particular using mathematical models and techniques (without neglecting human factors), in order to help in the decision-making process.				
	The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".				
Evaluation methods	Closed book written exam composed of problems to solve using the techniques studied in the course; group work.				
Teaching methods	The lectures are illustrated by examples and provide an overview of the concepts and basic techniques. Exercise sessions emphasize the assimilation of the techniques and provide additional information where applicable, depending on the case studies at hand.				
Content	The course starts with an introduction to the basics of operations management and production of goods and services. Next, two topics are studied: the design of a production system and the mid to short-term planning of operations.				
	<ol> <li>Elementary decision making under uncertainty or risk</li> <li>Elementary demand forecast methods</li> <li>Inventory management</li> <li>Introduction to linear programming</li> <li>Planning Capacity</li> <li>Planning and scheduling operations</li> <li>Planning resources</li> </ol>				
Bibliography	Lee J. Krajewski, Manoj K. Malhotra, Larry P. Ritzman, Operations Management: Processes and Supply Chains, Global Edition, Pearson, 2015				
	Dilip Chhajed and Timothy J. Lowe (editors), Building Intuition: Insights from Basic Operations Management Models and Principles, Springer, 2010				
Faculty or entity in charge	CLSM				

Programmes containing this learning unit (UE)						
Program title	Acronym	Credits	Prerequisite	Aims		
Master [60] in Management	GEST2M1	5		٩		