LLSMS2033

2014-2015

Transportation and Logistics (in English)

5.0 credits	30.0 h	2q

Teacher(s) :	Agrell Per Joakim ;
Language :	Anglais
Place of the course	Louvain-la-Neuve
Main themes :	This advanced course describes the logistics systems, their managerial objectives and the current trends in the development of advanced decision support systems. In particular, emphasis is put on modeling and solving logistics problems using state-of-the-art approaches. The transportation, distribution and warehousing functions will be studied indetails through lectures and case studies.
Aims :	At the end of the class, students should be able to - understand and master the strategic role, structure and functions of logistics systems (aiming at designing, operating and controlling the transportation, distribution and warehousing activities) ; - design the planning and control tasks of logistics systems; - formulate, analyze and design solutions - using state-of-the-art and adequate methods - for some strategic or operational logistics problems: transportation, distribution, warehouse management. *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".*
Content :	The class mixes - lectures with additional individual readings and exercises, - solution of cases in groups: design and implementation of solutions . Content : 1. Introduction to logistics systems: - Logistics systems - Managerial issues and trends - Decision support systems 2. Models and methods - Network Optimisation models and methods, - Mixed Integer Programming and decomposition methods, - Heuristic optimisation methods. 3. Design of Logistics Network 4. Design and Operation of Warehouses 5. Planning and Scheduling for Long-Haul Freight Transportation 6. Planning and Scheduling for Short-Haul Freight Transportation Methods : In-class activities 1 Lectures 1 Exercices/PT 1 Project based learning At home activities 1 Readings to prepare the lecture 1 Exercices to prepare the lecture 1 Paper work 1 Students presentation

Other infos :	Evaluation : - Case solutions including class presentations, - Written exam (open book) with open questions and exercises. Support : Introduction to Logistics Systems Planning & Control, Ghiani, Laporte, Musmanne, Wiley 2004. + slides provided through iCampus References : - Stadtler H., C. Kilger (Eds), "Supply chain management and advanced planning : concepts, models, software and case studies", 2d edition, Springer, 2002. - Y. Pochet, L.A.Wolsey: "Production Planning by Mixed Integer Programming", Springer, 2006. - Introduction to Logistics Systems Planning & Control, Ghiani, Laporte, Musmanne, Wiley 2004. Additional and more specialized references will be provided during the class Internationalisation : 1 international content (does the course tackle international issues related to the course content ?) 1 international case study Corporate features : 1 case study 1 corporate guest Skills : 1 presentation skills 1 writing skills 1 team work 1 problem solving 1 decision making 1 critical thinking Techniques and tools for teaching and learning : 1 IT tools 1 modelling 1 quantitative methods 1 mathematics
Cycle and year of study :	> Master [120] in Business Engineering > Master [120] in Business engineering
Faculty or entity in charge:	CLSM