CU 9.8: LOGISTICS FOR INDUSTRIAL AND CONSTRUCTION COMPANIES

Director of studies: Hind BRIL EL HAOUZI

General CU objectives:

Master the fundamental concepts of supply chain management, lean manufacturing, just-in-time, continuous improvement for all companies in the wood industry (furniture, construction, carpentry, panels, etc.).

Master the concepts, methods and tools for the management of operations in purchasing, production, construction and shipping.

Consists of:

- Part 1: Lean management/manufacturing/construction and other just-in-time approaches
- Part 2: Supply chain design and optimised management
- Part 3: Supply management, production and distribution for industrial systems
- Part 4: Management and monitoring of operations and products

Hourly volume

In-person	*Self-directed study*
28.00 H Lectures	**40.00 H**
64.00 H Tutorials	
0.00 H Practicals	

Positioning of the CU in the School reference system:

after semester 8

Units of skills

In accordance with the RNCP sheet

Updated on 20 April 2023

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Part 1: Lean management/manufacturing/construction and other just-in-time approaches	**Coefficient 1**
Session leaders: Hind BRIL EL HAOUZI	
Teaching assistants:	
Prerequisites: none	
Teaching materials: Course notes – Presentation slides – Reference book - Project	
Assessment methods: in groups Viva – Report– Project Review	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Master the fundamental principles of just-in-time and lean manufacturing, know how to implement them. Know and implement the six sigma and statistical tools for the production and control of product flows	Know the methods and tools of Just-in-Time, Lean Management, Lean Manufacturing and Lean Construction Site	**3.50**	**4.00**	
	Knowledge of performance measurement and diagnostic methods		**4.00**	
	Understand a methodology for implementing these concepts		**4.00**	
	Mastering lean tools	**3.50**	**4.00**	
		7.00	**16.00**	**0.00**

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Part 2: Supply chain design and optimised management	**Coefficient 1**
Session leaders: Laurent SCHATZ, manufacturer, Hind BRIL EL HAOUZI	
Teaching assistants:	
Prerequisites: CU 8.4	
Teaching materials: Course notes – Presentation slides – Reading list - Project	
Assessment methods: individual and in groups Report - Practical examination	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Know how to design and implement tactical and operational plans. Know how to design supply and shipping chains. Define and implement decision support systems	Master the methods and models for the management of internal flows	3.50		
	Master methods and models for the management of supply chains	3.50	8.00	
	Define and implement site management and transportation systems			
	Knowledge of decision-making support systems (public access building, APS, etc.): modelling and uses		8.00	
		7.00	**16.00**	**0.00**

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Part 3: Supply management, production and distribution for industrial systems	**Coefficient 1**
Session leaders: Hind BRIL EL HAOUZI	
Teaching assistants:	
Prerequisites: CU 8.4	
Teaching materials: Course notes – Presentation slides – Reference book	
Assessment methods: individual Class assignment	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Mastery of the fundamental principles of the management of industrial and logistics systems, their design and sizing. Define production or logistics parameters. Define and choose inventory management solutions. Develop production, purchasing and distribution programs.	• Design and characterise a supply or distribution system • Optimise supply and distribution management settings • Master methods and models for stock management • Master methods and models for the management of production management • Master methods for customer relationship optimisation The curriculum of this module corresponds to the preparation of the APICS “Basics” / CPIM part one certification	7.00	16.00	
		7.00	**16.00**	**0.00**

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Part 4: Management and monitoring of operations and products	**Coefficient 1**
Session leaders: Hind BRIL EL HAOUZI, Guillaume DEMESURE, Patrick BURLAT, manufacturer	
Teaching assistants:	
Prerequisites: none	
Teaching materials: Course notes – Presentation slides – Reference book - Project - Project review	
Assessment methods: in groups Viva – Report– Project Review	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Define and manage a very short-term operations management system. Design and implement a transportation system.	Define and implement operational management systems (MRP, Kanban, MPC, etc.)	1.75	2.00	
	Master methods and models for reactive business management and resource management (CONWIP)	3.50	4.00	
	Know the supporting information systems (MES, etc.)		4.00	
	Simulate and evaluate the performance of industrial and construction systems	1.75	6.00	
		7.00	**16.00**	**0.00**