CU 8.4: LOGISTICS AND MANAGEMENT OF INDUSTRIAL SYSTEMS

Director of studies: **Patrick CHARPENTIER**

General CU objectives:

Provide the capacity to analyse, model, propose and validate decision support systems for all dimensions related to logistics and the management of industrial systems

Consists of:

- Module 1: General logistics
- Module 2: Steering of industrial systems
- Module 3: Not applicable
- Module 4: Not applicable

Hourly volume

In-person	*Self-directed study*
29.75 H Lectures	**30.00 H**
8.00 H Tutorials	
40.00 H Practicals	

Positioning of the CU in the School reference system:

after CU 7.3

Units of skills

In accordance with the RNCP sheet

Updated on 23 March 2022

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Module 1: General logistics	**Coefficient 3**
Session leaders: Hind BRIL EL HAOUZI, Patrick CHARPENTIER, Guillaume DEMESURE	
Teaching assistants: Julien LALLEMAND	
Prerequisites: none	
Teaching materials: Course notes – Reading list	
Assessment methods: individual Class assignment– Practical examination	

Learning outcomes	**Description**	**Number of student hours (in-person)**		
		Lectures	**Tutorials**	**Practicals**
Know how to define and formulate a decision support system for internal and external logistics. Know how to diagnose the advantages and disadvantages of such a system. Know how to plan industrial activities over different time frames. Know how to estimate the capacity of the resources needed to carry out these activities. Know how to analyse and draw conclusions about such systems.	Introduction to general logistics Presentation of MRP principles Strategic plan Industrial and sales plan Production master plan Calculation of net needs Purchase-forecast Inventory management Distribution management Site management Implement a collaborative BIM method (BIM multi-stakeholder organisation, process of traceability of the information produced on the BIM digital model).	**15.75**	**8.00**	**20.00**
		15.75	**8.00**	**20.00**

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Module 2: Steering of industrial systems	Coefficient 2
Session leaders: Patrick CHARPENTIER	
Teaching assistants:	
Prerequisites: none	
Teaching materials: Course notes – Reading list	
Assessment methods: individual Report - Practical examination	

Learning outcomes	Description	Number of student hours (in-person)		
		Lectures	Tutorials	Practicals
Analyse the management problems of industrial systems, critique the solutions put in place. Propose one or more improvement solutions, compare them, test them and make a choice. Define the metrics and indicators related to the objectives targeted by the companies.	Workshop management: introduction to scheduling Performance measures and indicators Scheduling by heuristics Project scheduling PL models for scheduling Scheduling by metaheuristics Location of production means Sizing and balancing The company's information systems. Steering of industrial facilities	14.00		20.00
		14.00	**0.00**	**20.00**

Updated on 23 March 2022