

Materia 4_12: Optimisation and Simulation in Transport and Logistics

Materia:	Operations management	ECTS:	10
Descriptores	<ul style="list-style-type: none">• Queueing Theory, Mathematical Programming (Linear, Integer, Mixed), Combinatorial Optimization (Heuristics & Metaheuristics)• Big data sources. Travel surveys. Four steps travel model. Discrete choice models. Activity-based models. Agent-based models. MATSim.		
Objetivos generales	This subject has the objective of recognizing problems in their environment, model it, selecting the most appropriate tool to represent it, solve it and thus draw conclusions from the modelling, and more specifically in Operations Management and Supply chain problems. To introduce transport modelling based on big data in order to improve urban mobility planning.		
Competencia específica	CE [4-12] Apply models based on big data for transport planning and management.		
Resultados de aprendizaje	<ul style="list-style-type: none">• Design mathematical models as well as heuristics to solve problems of supply chain and operations management.• Calibrate transport models based on big data.		
Métodos de evaluación	<ul style="list-style-type: none">• Evaluation: Student participation, project, written test and academic work.• Assessment instruments: rubrics, checklists and assessment scales.		