

## Materia 4\_11: Operations management

<b>Materia:</b>	Operations management	<b>ECTS:</b>	15
<b>Descriptor</b>	<ul style="list-style-type: none"> <li>Supply Chain Planning Matrix. Aggregate planning &amp; S&amp;OP. Master Production Schedule. Material Requirement Planning and Capacity requirement planning. Scheduling.</li> <li>Operations &amp; Productivity. Operations Strategy. Product, packaging, unit load, SKU and codification. Supply planning. Routing and Transportation planning. Closed-loop Supply Chain. Queuing theory.</li> <li>Time Series Forecasting: Smoothing Methods, Factor Decomposition. Causal Forecasting: Regression Analysis, Machine learning. Pegel's framework. ABC &amp; XYZ Analysis. EOQ. Continuous and Periodic Review models. Deterministic and stochastic inventory models.</li> </ul>		
<b>Objetivos generales</b>	<p>This subject has the objective of introducing the supply chain planning matrix framework and its different components in order to align the operations within a supply chain. To introduce the role of the operations and the impact of the product in a supply chain to optimize the material flow and enhance the supply chain efficiency. To introduce the quantitative methods to forecast demand through time series models and to manage inventories with a supply chain.</p>		
<b>Competencia específica</b>	<p>CE [4-11] Design and implement advanced systems for forecasting, planning and control of operations in supply chains using optimization approaches.</p>		
<b>Resultados de aprendizaje</b>	<ul style="list-style-type: none"> <li>Design and use operations planning and scheduling models to optimise the operations to carry out within a supply chain.</li> <li>Analyse and design a supply chain and its main components.</li> <li>Design and use tools with quantitative methods to forecast demand through time series forecasting and causal forecasting methods and to manage inventories with a supply chain</li> </ul>		
<b>Métodos de evaluación</b>	<ul style="list-style-type: none"> <li>Evaluation: Student participation, project, written test and academic work.</li> <li>Assessment instruments: rubrics, checklists and assessment scales.</li> </ul>		