



Course Syllabus

Course Title: **Supply Chain Management**

Teaching hours: 2 hours of lectures + 2 hours of seminars

General objective: The objective of the course is to acquaint students with the concept of supply chain management and enable them to understand the functioning of individual processes in supply chains and especially the associated logistics systems. Also, the aim of the course is to acquire basic knowledge about the coordination of several members of the supply chain as a basis for optimizing the processes of supply chain management in practice.

Topics:

- 1 **Introduction to SCM** – definition of supply chain management, difference between SCM and logistics, areas of SCM
- 2 **Supply Chains and Networks** – elements, flows and members of supply chains, supply networks,
- 3 **Process Management** – different approaches to supply chain management processes
- 4 **Supply Chain Network Design** – decisions, factors and costs of supply chain network design, most often types of supply chain networks
- 5 **Demand Management 1** – elements of demand management, basics of demand forecasting, role and costs of demand forecasting,
- 6 **Demand Management 2** – basic forecasting methods, CPFR, S&OP
- 7 **Coordination and Integration in Supply Chain** - effects of lack of coordination in the supply chain, bullwhip effect: appearance, reasons, effects, obstacles and solutions, dimensions of integration in SCM.
- 8 **Inventory management 1** – key inventory costs, cycle inventory, EOQ
- 9 **Inventory management 2** – safety stocks, multiechelon inventory management, inventory fulfilment strategies
- 10 **Transportation and Warehousing in Supply Chain** - transport network design, forms of cooperation in transport in the supply chain: pallet networks, telematics, synergy effects of warehousing in SCM, cross docking.
- 11 **ICT in SCM** - objective and division of ICT in supply chain management. Levels and ICT support of SCM processes, integrated information systems.
- 12 **Metrics in SCM** - defining and role of metrics in SCM, advantages and potential problems of metrics implementation, measurement tips, SCOR model.
- 13 **Lean and Mapping for Supply Chain**
- 14 **Strategic sourcing** - insourcing or outsourcing decisions, benefits and risks of outsourcing, sourcing processes, basic sourcing contracts in SCM