



Course syllabus

Logistik i försörjningskedjor Supply Chain Management

MTTN80, 7,5 credits, A (Second Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED I

Date of Decision: 2023-04-14

General Information

Compulsory for: MLOG1

Elective for: E4, I4-If, M4-lp

Language of instruction: The course will be given in English

Aim

Supply chain management can be defined as “the systemic and strategic coordination of the business processes and functions within and between organisations across the supply chain for the purposes of improving the long term performance of the individual company as well as the supply chain as a whole.” Consequently the course provides advanced knowledge about logistics systems from a supply chain perspective. Principles and methods used to produce an effective and efficient flow of material and information, from the supplier of raw material, through companies to the ultimate consumers, are introduced. In addition, the course provides the student with skills in handling methods and tools for the analysis, design and development of supply chains. The course will also strengthen the students’ holistic view on supply chain operations, management and strategy, and discuss some current research areas in supply chain management.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to use theories, models and tools both to analyse and evaluate how logistics processes can be co-ordinated within and between companies along supply chains, and to independently plan and perform the design and changes of supply chains.

- be able to understand how the research processes within this field are carried out, and have had an overview of some on-going research projects.

This means e.g. to:

- independently describe and problematize different logistics processes and their connections, especially between the companies in the supply chains
- understand and comprehensively analyse how the materials flow interacts with the information flow and the finance flow along supply chains
- describe and compare different types of co-operation and integration along supply chains and how they are organised
- explain and compare different classic theories within supply chain management
- describe and independently analyse in detail logistics processes and how these have been integrated along the supply chains in the different cases and assignments
- understand different aspects of the globalizing of value-added chains, including the challenges concerning the environment, ethics and different regional, legal and fiscal systems
- comprehend the difference in supply chain management between different industry sectors
- understand and comprehensively identify and handle different types of risks along supply chains
- define measures of costs and performances and problematize measuring and analysing them
- understand how the logistics processes influence the competitiveness, economics and growth
- have knowledge of at least two on-going research projects

Competences and skills

For a passing grade the student must

independently be able to

- analyse and develop supply chain management processes by applying theoretical methods and practical tools
- start one's project work within the field of logistics and then master the challenges demanded by a position within this field

The student is also expected to be able to

- use technical terms, and clearly communicate logistics problems, analyses and solutions
- independently use reference literature, scientific publications, applied trade journals in logistics, consultant reports, and the Internet to analyse, evaluate and synthesise practical logistics problems
- orally and in writing explain and discuss both one's own and other's analyses

Judgement and approach

For a passing grade the student must

- use a scientific approach by seeking, critically judging and applying academic as well as professional knowledge.
- be able to apply creative thinking in order to take in, develop and spread innovations within the field of logistics.

Hopefully, the student will acquire a lifelong interest in contributing to developing the academic as well as the applied profession of logistics.

Contents

The course consists of five parts: Concepts, Structure & Processes, Management, Strategy & Collaboration, and Outlook. Initially processes and the supply chain concept are discussed and defined as well as their implications on structure and organization. Cross functional and interorganizational processes and how they could be identified and integrated are dealt with. Different issues on the management of supply chains are thoroughly analyzed, e.g. information requirements for efficient supply chain processes, incentives role to align functions and organizations in a supply chain, performance measurement. The fourth part of the course covers strategic implications from globalization and integrated management of supply chains, e.g. risk management. There will be an examination on the course literature. Students will practice the use of methods and tools in the analysis and design of different supply chain processes, e.g. by analyzing case studies and simulation games as well as presenting their analyses. All assignments are compulsory and carried out in teams.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: To qualify for a final grade, the student must have passed a written quiz/examination, passed all assigned case studies and completed the compulsory assignments satisfactorily. Compulsory attendance may occur in certain parts.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Supply Chain Management.

Credits: 3,5. **Grading scale:** UG. **Assessment:** Passed written examination. **Contents:** Covers literature and lectures.

Code: 0217. **Name:** Assignments.

Credits: 4. **Grading scale:** UG. **Assessment:** The assignments/cases are graded and constitute 50% of the final grade. The case grade and the written examination grade determine the final grade for the complete course. **Contents:** In the assignment/case studies, the students will work in groups to analyze and solve assignments (cases, simulation game) and to write and orally present the case analysis .

Admission

Admission requirements:

- MTTF01 Logistics or MTTF25 Fundamentals of Logistics and Operations Management

Assumed prior knowledge: MTTF10/MTTN25 Materials Handling, MTT045/MTTN70 International Physical Distribution, MIO022/MIOF20 Management Organization, MIOF10 Production and Inventory Control and MIO040/MIOF25 Managerial Economics, AC.

The number of participants is limited to: No

The course overlaps following course/s: MTT240, MTT016

Reading list

- Reference literature (scientific journal articles and cases) according to information given at the course start.

Contact and other information

Course coordinator: Professor Andreas Norrman, andreas.norrman@tlog.lth.se

Course homepage: <http://www.tlog.lth.se>

Further information: Participation is mandatory for the first session. Absence from the first class session may result in an automatic drop from the course.