Supply Chain Logistics

Programme course

6 credits

Supply Chain Logistics

TETS27

Valid from: 2017 Spring semester

Determined by
Board of Studies for Industrial Engineering and Logistics

Date determined
2017-01-25

Main field of study
Industrial Engineering and Management

Course level
Second cycle

Advancement level
A1X

Course offered for
- Design and Product Development
- Industrial Engineering and Management - International, M Sc in Engineering
- Industrial Engineering and Management, M Sc in Engineering
- Mechanical Engineering, M Sc in Engineering
- Energy-Environment-Management

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Basic Logistics

Intended learning outcomes

The aim of the course is to contribute with theoretical knowledge concerning logistics in supply chains and to increase the ability to make a structural analysis of alternative logistics solutions. The analysis is inter-organisational, in terms of covering several actors´ perspective in a supply chain, as well as intra-organisational, in terms of the interplay between the logistics function and other functions in a company. After having completed the course the student should:

- Have knowledge about theoretical terms as e.g. supply chain management, centralisation, flexibility, uncertainties, coordination, integration and these terms´ relevance in logistics.
- Be able to understand how different contextual factors in a supply chain affect the logistics design, e.g. typ of industry, marketing channel, corporate strategies and logistics strategies.
- Be able to perform a qualitative and quantitative analysis of different logistics alternatives for a company and a supply chain respectively. The analysis concerns physical structure, division of roles, logistics activities, physical flows and information flows, and is evaluated in terms of their economic effects.
- Be able to make an analysis of logistics tasks by:
  - Assessing the tasks and make relevant delimitations
  - make relevant assumptions and simplifications of the tasks
  - evaluating different alternative solutions with regard to uncertainties
  - clearly communicate and motivate results

Course content

The course primarily covers inter-organizational issues concerning logistics between companies in a supply chain, e.g. the physical flow from suppliers to manufacturers, wholesalers, retailers and their industrial end customers. Also intra-organizational issues is an important part of the course, e.g. inbound and outbound logistics and the relations with functions such as purchasing, manufacturing, and marketing/sales.

An important part of the course is to learn how to make a structured analysis of alternative logistics solutions for different companies in a supply chain. The analysis concerns physical structure, the division of roles between actors, logistics activities, physical flows and information flows. Another important part of the course is coordination between companies in the supply chain and between functions in the companies. Issues like collaboration and division of roles are discussed, e.g. vendor managed inventory. The analysis concerns evaluation of costs, time, service, sales, competitiveness, and other intangible effects connected to logistics as a value creator.

Teaching and working methods

Lectures, seminars and laborations.

Examination

KTR1	Written test	2 credits	U, G
UPG1	Assignments	4 credits	U, G

Grades

Four-grade scale, LiU, U, 3, 4, 5

Other information

Supplementary courses:
Logistics Analysis - Tools and models, Logistics Strategies, Logistics Project, Purchasing, Sustainable Logistics Systems

Department

Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent

Björn Oskarsson

Examiner

Fredrik Stahre

Course website and other links

http://www.iei.liu.se/logistik/tets27

Education components

Preliminary scheduled hours: 56 h
Recommended self-study hours: 104 h

Course literature

Artiklar och kompendiematerial som hämtas i bibliotekets databaser och på kursens hemsida.

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.