

Introduction to Logistics and Cost-Benefit Analysis

Programme course

6 credits

Grunder i logistik och lönsamhetsanalys

TNG018

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, Logistics, Transportation Systems Engineering

Course level

First cycle

Advancement level

G2X

Course offered for

- Communications, Transport and Infrastructure, M Sc in Engineering
- Air Transportation and Logistics, Bachelor's Programme
- Civic Logistics, Bachelor's Programme

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

Industrial Economics

Intended learning outcomes

After having completed the course the student shall be able to:

1. Master and apply basic theoretical concepts, models and tools to observe, chart, and describe a logistics system, on a general level.
2. Master basic principles and models of how the function of a logistics system interacts with the profitability of the individual goods producing enterprise, on a general level.
3. Be able to critically evaluate context and situation dependencies that are present in the logistics system, and be able to adapt the basic theoretical concepts, models and tools in accordance.
4. Compile and communicate a charting of a specific logistics system.
5. Assess the situation specific complexity and uncertainty in a given situation in a specific logistics system, in order to analyse the studied system.
6. Apply the basic principles, models and tools on a specific logistics system.
7. Communicate the above in writing.

Course content

- The prime unit of analysis is the single goods producing enterprise, viewed from a systems perspective.
- Basic concepts to describe logistics systems.
- Basic principles for creating profitability by means of efficient logistics.
- In order to create conditions for efficient logistics, it is necessary to apply a structured method of working when conducting studies of logistics systems. This includes:
 - Charting, description, and analysis of logistics systems.
 - Formulation and evaluation of different alternatives, i.e. possible changes to the logistics system.
 - Evaluation and comparison of alternatives.
 - Communication of the study in its entirety, from task to recommended path of action, including implementation.

Teaching and working methods

Instruction is mainly in the form of lectures and classes, as well as independent work with case studies. The first half of the course introduces the basic concepts, tools and methods in lectures and lessons. In the second half, these are applied on a case assignments.

The course runs throughout the fall semester.

Examination

UPG3	Assignment	2 credits	U, G
KTR2	Voluntary test	0 credits	D
TEN2	Written examination	4 credits	U, 3, 4, 5

The examination will partly be individual, partly in groups.

Pass (G) on the case assignment (UPG₁) and the written test (KTR₁) and grade 3 on the written examination (TEN₁) means that the complete course is passed with the grade 3. To obtain a higher grade (4,5), a corresponding result is required on the written examination (TEN₁) in addition to the requirements above.

Grades

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

Department

Institutionen för teknik och naturvetenskap

Director of Studies or equivalent

Erik Bergfeldt

Examiner

Anna Fredriksson

Education components

Preliminary scheduled hours: 34 h

Recommended self-study hours: 126 h

Course literature

Additional literature

Books

Oskarsson, Björn, Ekdahl, Bengt, Aronsson, Håkan, (2013) *Modern logistik : för ökad lönsamhet*

ISBN: 9789147111268

Stockholm : Liber, 2013

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://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.