



## Logistics - Tools and Methods

### Logistikens verktyg och metoder (LOG 1)

7.5 credits

7.5 högskolepoäng

---

**Ladok Code:** 41T07B

**Version:** 1.0

**Established by:** Board of the department 2010-11-22

**Valid from:** Autumn 2010

**Education Cycle:** First cycle

**Main Field of Study (Progressive Specialisation):** Industrial Economics (GIN)

**Disciplinary Domain:** Technology

**Prerequisites:** Meets requirements for acceptance to a graduate engineer programme (or equivalent).

**Subject Area:** Industrial Engineering and Management

**Grading Scale:** ECTS-credits

---

### Content

The course provides an introduction to logistics and the importance of logistics when it comes to planning, developing, coordinating, organising and controlling flows of material and information through the entire supply chain. It will provide a basic understanding of the subject of logistics and a set of tools and methods for streamlining logistics. The course also provides a foundation for advanced studies in the field. The following content is included in the course:

&#8195;

- The logistics system and component elements such as material supply, production and distribution and distribution.
- The customer perspective. The importance of logistics in a supply chain.
- Logistics costs, how logistics affects return on capital, analysis of relations, activity-based calculation
- The importance of logistics to corporate profitability, decision-making, customer service, logistics costs and capital immobilisation.
- Core logistics processes and functions. Order processing, forecasting.
- Material and production control, transport planning, stock management.
- The link between materials flow, information flow and monetary flow.
- Methods for managing stock and flows, time, costs, customer service and quality.
- Material control methods: order point, KanBan, batch formation, dimensioning of buffer stores.
- Transport planning methods: network planning, consolidation, route planning, load planning, track & trace.
- Packaging logistics
- Environmental issues relating to logistics and transport
- Analysis methods such as process mapping and value flow analysis, quality tools, ABC analysis, cost and capital immobilisation analysis

### Learning Outcomes

After completing the course, students are expected to be able:

- To identify and explain basic concepts in the field of logistics.
- To understand and be able to describe the role of logistics in an organisation or supply chain.
- To describe the procedure in the core logistics functions materials supply, production and distribution.
- To understand and describe the link between logistics and central peripheral functions such as product development.
- Design, marketing and research.
- To apply methods related to transport, storage and material coordination.
- To be aware of and describe technical information systems and aids to support logistics.
- To describe the environmental impact of transportation and to propose measures to reduce environmental impact.
- To analyse practical, logistics-related problems.

## **Forms of Teaching**

Teaching consists of lectures, submitted work, and oral and written presentation of submitted work.

## **Forms of Examination**

The course will be examined through the following examination elements:

### *Examination*

Learning outcomes:

Credits: 5

Gradingscale: ECTS-credits

### *Submitted work and oral presentations*

Learning outcomes:

Credits: 2.5

Gradingscale: Fail (U) or Pass (G)

Student rights and obligations at examination are in accordance with guidelines and rules for the University of Borås.

## **Literature and Other Teaching Materials**

Logistics and Supply chain management. Patrik Jonsson (McGraw-Hill 2009)

Supplementary material handed out during the course.

## **Student Influence and Evaluation**

The head of department and teacher responsible for the course are responsible for ensuring that students are invited systematically and regularly to put forward their views on the course. The results of the evaluations will be reported back to the students and will form the basis for the future structure of the course.

## **Miscellaneous**