



ML1504 Logistics in Production

6.0 credits

Produktionslogistik

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for ML1504 valid from Spring 2018

Grading scale

A, B, C, D, E, FX, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

ML1500 Introduction to Industrial technology and sustainability ML1501 Industrial systems I

or the equivalent knowledge.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course, the students should be able to:

- explain different logistics functions (order logistics, warehouse logistics, production logistics, distribution logistics and supply chains) and put these in contexts.
- explain the different processes by means of the SCOR model (Supply Chain Operations Reference)
- plan the logistics processes for the production logistics: Production program planning-balancing of staff and work Master Production Scheduling (MPS) Production planning and control Materials planning (MRP- Materials Resource Planning) Production volume planning Capacity and term planning
- explain how the material supply process is built-up in a business
- explain how IT systems and IT can be used to improve the quality of the logistics processes
- design forecasts and error estimates
- apply methods for control of production, stock, and order logistics (kanban, JIT, JILS, LIFO, FIFO, etc.)
- have knowledge of typical logistics problems
- compare and dimension various types of operational control of warehouse operations
- explain different production strategies based on a logistics perspective

Course contents

- Introduction
- Basic logistics functions and their importance for efficiency, cost and quality.
- Material supply
- Forecasts
- Inventory management
- Production planning
- IT in logistics
- Planning of production logistics processes

Course literature

Jonsson, P. & Mattsson, S-A. (2016) Logistik – Läran om effektiva materialflöden, Studentlitteratur, ISBN: 978-91-44-11077-6.

Examination

- INL1 - Assignments, 1.0 credits, grading scale: P, F
- PRO1 - Project, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Written examination, 1.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

Examination

Written assignment

Project (experimental learning)

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.