



ML1501 Industrial Systems I 7.5 credits

Industriella system I

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

Establishment

Course syllabus for ML1501 valid from Autumn 2016

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Introduction to industrial technology, ML1500 or the equivalent knowledge

The course is given only for students admitted to the 5 year engineering programme in Industrial technology and sustainability.

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:

- Define and account for systems theory and central concepts and models included in it.
- Account for and discuss the industrial history development in relation to sustainable work systems.
- Demonstrate the ability to integrate systems by applying a system perspective on the two main parts of production: the technical and the physical part (e.g. machinery, factory layout, equipment, tools and support systems) and the non-physical part of human aspects (e.g. procedures for work, learning, development, processes for planning and management and control of these).
- Apply methods and tools for production planning, production logistics, factory layout and maintenance strategies.

Course contents

- Work organisation in historical context (scientific management/human relations/systems theory)
- System theory and modelling
- Socio-technical systems
- Sustainable work systems/human work science/ergonomics/human factors
- The production processes of the production system and flows
- Project work (observation, analysis and problem-solving in cases of development, change or introduction of products and processes within production, logistics or maintenance)
- Exercises and written assignments on e.g.: job analysis, time allocation, spaghetti diagrams, current state analysis, basic skills training, safety training.

Course literature

Kurslitteratur meddelas 6 veckor före kursstart.

Examination

- INL1 - Assignments, 1.5 credits, grading scale: P, F
- PRO1 - Project, 2.5 credits, grading scale: A, B, C, D, E, FX, F
- ÖVN1 - Exercises, 1.5 credits, grading scale: P, F
- TEN1 - Written examination, 2.0 credits, grading scale: A, B, C, D, E, FX, 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.

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

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.