ML1500 Introduction to Industrial Technology 7.5 credits

Introduktion till industriell teknik

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 ML1500 valid from Autumn 2018

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

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:

- Account and discuss knowledge building in industrial technology that is the foundation for competence needed to develop sustainable work systems as well as production system.
- Describe the field of industrial technology and its central fields, such as production logistic and maintenance as well as value chain for producing industry.
- Explain how respective field can influence sustainable production
- Describe core processes, and support and development processes and their functions in the operations
- account for concepts such as efficiency, quality, safety, operational reliability, sustainability, sustainable development, the product realisation process etc
- Discuss the importance of the engineer's role, responsibility and influence on future society
- Describe a number of functions, professional roles and primary work tasks for engineers in the application fields, as well as competence needs for different functions
- Make an interview with an engineer
- Plan, carry out and report a project
- Present a project in an oral presentations according to a rhetorical work process
- Present a project in a written report

Course contents

- Introduction to production, logistics and maintenance from the a technology and process development, as well as from a sustainable production viewpoint
- Productivity, efficiency, quality, safety, operational reliability and sustainability of production systems
- Introduction to sustainable development and different aspects on sustainability
- Working organisation from a historical perspective
- The engineer's codex and ethics
- Guest lectures and study visits in collaboration with companies
- Written and oral communication and presentation
- Implementation of a smaller project and cooperation in project groups

Course literature

Kurslitteratur meddelas 6 veckor före kursstart.

Övrigt material, som till exempel företagsbeskrivningar, tillhandahålls under kursens gång.

Examination

- INL1 - Assignment, 2.0 credits, grading scale: P, F
- PRO1 - Project, 2.0 credits, grading scale: A, B, C, D, E, FX, F
- TEN1 - Exanination, 2.0 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.

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.