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 2016

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

The course is given only for students admitted to the 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:

- Describe the field of industrial technology and its central application fields such as production, logistics and maintenance in manufacturing industry.
- Define and explain central concepts within the application fields in relation to sustainability.
- Describe the value chain of a business or an enterprise.
- Describe primary and supporting activities in production systems and discuss how these relate to the value chain.
- Discuss how development of technology and processes and problem-solving in production systems contribute to goals for productivity, efficiency, quality, safety, operational reliability and different aspects of sustainability.
- Describe a number of functions, professional roles and main working tasks for engineers within the application fields as well as the need for competence in the different functions.
- Carry out simple interviews and present these in writing and orally for a group.
- Plan, carry out and report simple projects.

Course contents

- Introduction to production, logistics and maintenance technology from the perspectives of technology and process development and problem-solving in the context of production systems
- The productivity, efficiency, quality, safety, operational reliability and sustainability of production systems.
- Introduction to systems theory, human work science/ergonomics/risk management, modelling/simulation/programming, data analysis and statistics, IT and control systems, quality and improvement work, project management and sustainability in industry.
- Written and oral communication and presentation.
- Implementation of a minor 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.