ML1112 Mechanical Engineering, Introductory Course 7.5 credits

Maskinteknik, introduktionskurs

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

Establishment

Course syllabus for ML1112 valid from Autumn 2015

Grading scale

P, 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

On completion of the course, the student should be able to:

- account for different mechanical engineering applications and fields of use
- account at a general level for common concepts within the field of mechanical engineering
- discuss technical development from a historical perspective and reflect around the role of technology in society and its development
- account for the concepts of ecologically, socially and economically sustainable development from an engineering perspective

Strong emphasis is put on project methodology and the students carry a project task during the course.

On completion of the course, the student should be able to:

- describe a given project model and be able to write the documents that are necessary to carry out a project according to the same
- identify the knowledge needed for the project and critically review the sources of information
- account for methods used in the project and evaluate its results
- discuss the role of group dynamics for a project group and its development
- present the work of the project group in a technical report
- prepare and carry out an oral presentation for a large audience

Course contents

- Overview of the use of the mechanical engineering
- Fundamental concepts within sustainable development
- Technology from a community perspective- History of technology
- Work according to a project model including planning, work distribution, project meetings, protocols, presentation techniques and group dynamics. Strong emphasis is put on developing the writing skill of the students.

Disposition

Lectures Exercises Project

Course literature

Titel: Hållbar Utveckling: en introduktion för ingenjörer
Författare: Jon-Erik Dahlin
ISBN: 9789144092669
Förlag: Studentlitteratur

Titel: Handbok för mindre projekt
Författare: Mikael Eriksson, Joakim Lilliesköld
ISBN: 9789147052707
Förlag: Liber

Samt utdelat material under kursens gång

Examination

- PRO1 - Project, 3.5 credits, grading scale: P, F
- ÖVNA - Exercises, 1.5 credits, grading scale: P, F
- ÖVNB - Exercises, 2.5 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.

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

Other requirements for final grade

Pass grade for all parts.

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.