



Course syllabus

Faculty Board of Science and Engineering
School of Engineering

1TS211 Ingenjörskonst, 7,5 högskolepoäng
Engineering, 7.5 credits

Main field of study

Forest and Wood Engineering

Subject Group

Forest Science

Level of classification

First Level

Progression

GIN

Date of Ratification

Approved by Organisational Committee 2009-12-15

The course syllabus is valid from autumn semester 2010

Prerequisites

Mathematics C. Specific entry requirement 12 with the exception of Biology B, Physics A and Chemistry B)

Expected learning outcomes

After completing the course the student is expected to be able to:

- give a clear account of the engineer's professional role in the development process of a product
- give a clear account of the fundamental parameters, dimensions and units in engineering calculations (parameters concerning length, time, mass, force, temperature, electric charge, and energy/power)
- investigate problems based on laboratory experiments; this includes planning, performance, analysis, as well as the presentation of results
- put together a compilation and an analysis of the results with the help of an analysis tool such as Excel
- communicate ideas through simple pencil sketches
- understand the basics of the theory of perspective, with the concepts of cube, cylinder and ball as a starting point; also ability to reproduce a sense of volume
- produce drawings of simple details by hand, with accurate views, sections, relevant measurements and tolerances
- produce simple assembly drawings by hand, including several details and a corresponding parts list
- create models of simple 3D parts in a 3D CAD programme using basic methods

Content

The course comprises the following elements:

- the engineer's role in the product development process
- outlining and drawing techniques/CAD technique
- calculation tools
- parameters, relationships, units and dimensions
- choice of materials
- applied mathematics and statistics

Type of Instruction

Lectures and exercises.

Examination

The course is assessed with the grades U,3,4 or 5.

Written examinations, as well as mandatory case study assignments.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department.

Required Reading and Additional Study Material

Required reading

Saeed Moaveni, *Engineering Fundamentals: An Introduction to Engineering*, CL-Engineering; 3 edition (April 27, 2007). 648 pages.