



SD1600 Project Course in Aeronautics 15.0 credits

Fördjupningsarbete i flygteknik

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 SD1600 valid from Autumn 2007

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Previous courses in base program T, in particular the courses in mathematics, numerical methods, mechanics, fluid mechanics, solid mechanics and thermodynamics.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The overall objective with the course is that you shall apply your current knowledge and skills in order to train your ability to:

- combine your basic knowledge in different engineering subjects to estimate an aeroplanes properties regarding aerodynamics, performance, stability and structural loads,
- formulate reasonable requirements for an engineering project, and critically review such requirements,
- independently solidify and deepen your own existing knowledge,
- plan, lead and perform a project task,
- communicate your technical results, and judge the work by others, in a professional manner,
- compile and write a CV and other documents necessary for your future career,
- identify and discuss ethical questions related to your engineering profession.

Another overall objective is to give you an insight in that engineering problems, such as the design of a new aeroplane, usually are very complex, incompletely defined and can include contradicting requirements.

Course contents

The main part of this project course consists of a conceptual design of an aeroplane. You are encouraged to discuss the technical work with a few other members of a learning team, but you have to report an individually performed study. To be able to successfully complete such a study, you need to inform yourself about how a conceptual design of an aeroplane is commonly performed, and also the essence of project work. Some aspects of this, as well as the basics of aeroplane design, will be discussed during a few overview lectures. But the main part of the development is performed during teamwork sessions, where one important task for the team is to deliver lecture requests for full class discussions.

Your ability to communicate your results in a professional manner is also an important part of the course, and is trained as an integrated part of the project. You will also get the opportunity to learn more about how to write an application and a CV, and how to promote a new project.

Course literature

Anderson, J. D., Jr., Aircraft Performance and Design, McGraw-Hill, 1999.

Written hand-outs from the Department.

Examination

- PRO1 - Project, 15.0 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.

Other requirements for final grade

Project assignment (PRO1; 15 university credits).

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.