Aircraft Aerodynamics - Project Course

Programme course

6 credits

Aircraft Aerodynamics - Project Course

TMMV17

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Offered for the last time
Autumn semester 2019

Replaced by
TMMV26

Main field of study
Mechanical Engineering

Course level
Second cycle

Advancement level
A1X

Course offered for
- Mechanical Engineering, M Sc in Engineering

Entry requirements
Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

Prerequisites
Engineering Systems Design, Aircraft conceptual design, Prototype Realization.

Intended learning outcomes
This course is aimed at developing skills for making an integrated analysis of an aircraft concept. After completing the course the students will

- be able to apply transform a conceptual design into a model for an aerodynamic analysis, and for design refinement.
- have knowledge about using CFD tools for aerodynamics.
- be able to define design cases for aerodynamic analysis.
- have experience from working in a team with product development.

Course content
The course can be seen as a continuation of the Prototype Realization course. In this course the design built as prototype will be further analyzed and further refined. To a varying degree, students will work with aerodynamic modelling, both CFD and simpler tools, to relevance of models of different fidelity. The course contains some lectures on project specific technology.

Teaching and working methods

The course is carried out as a project with regular meetings. In addition there are lectures in project specific technology. The result from the project is a design of product, a physical demonstrator a written report.

Examination

PRA1	Project work	6 credits	U, 3, 4, 5

Grades

Four-grade scale, LiU, U, 3, 4, 5

Department

Institutionen för ekonomisk och industriell utveckling

Examiner

Roland Gårdhagen

Course website and other links

Education components

Preliminary scheduled hours: 48 h
Recommended self-study hours: 112 h

Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at http://styrdokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva.