Aircraft and Vehicle Design

Programme course

6 credits

Flyglära

TMAL02

Valid from: 2017 Spring semester

Determined by
Board of Studies for Mechanical Engineering and Design

Date determined
2017-01-25

Main field of study
Mechanical Engineering

Course level
First cycle

Advancement level
G2X

Course offered for
- Aeronautical Engineering, Master's Programme
- Mechanical Engineering, B Sc in Engineering
- Mechanical Engineering, M Sc in Engineering
- Mechanical Engineering, Master's programme

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
Solid Mechanics, Engineering Materials, Machine Elements, Applied Mechanics and Heat Transfer.

Intended learning outcomes
The course gives fundamental knowledge and understanding of the factors that affects the configuration and dimensioning of an aeroplane.

Course content
- Lift and how lift is produced
- Drag and drag calculations
- Propulsion: different ways of producing thrust
- Performance and performance calculations
- Stability and control
- Different aircraft configurations and why they look the way they do
- Basics on aircraft dimensioning
- Special project work: dimensioning an aircraft

Teaching and working methods
The teaching consists of lectures, lessons, special projects and educational study visits.

Examination

LAB2	Laboratory work	2 credits	U, G
TEN2	Written examination	4 credits	U, 3, 4, 5

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

Department
Institutionen för ekonomisk och industriell utveckling

Director of Studies or equivalent
Peter Hallberg

Examiner
Tomas Melin

Course website and other links
http://www.iei.liu.se/flumes/tmal02

Education components
Preliminary scheduled hours: 42 h
Recommended self-study hours: 118 h

Course literature
Kompendium

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.