

# 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://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).