

Aeronautical Engineering

Course guide 2025-2026

Semester	Fall (semester 1, Sept - Jan)
Inholland location(s)	Delft
Inholland faculty	Engineering, Design & Computing
Language of instruction	English
Cycle	Bachelor level
Number of ECTS	30

Content subjects

This exchange semester comprises the first semester of the fourth-year programme of Aeronautical Engineering in Delft. The programme has four knowledge focus areas:

- Performance
- Structures
- Manufacturing
- Smart Systems

Students can choose to specialize in a combination of two of these (2x9EC). Besides that, students will do a project (12EC) in a multidisciplinary team.

Learning outcomes

Performance Students learn about compressible aerodynamics and how to use Computational Fluid Dynamics for analysis of the flow in and around aircraft components, including engines.

Structures This track is about (aircraft) structural design. The focus will be on analysis and design with composites, dynamics of structures, verification and validation of structures and using Finite Element Methods (FEM).

Manufacturing A complete manufacturing engineering cycle of a composite product is executed: starting with manufacturing preparation and tooling design, followed by production of the part, and inspection and testing of the product quality.

Smart Systems The focus of this track lies on sensors, data processing and AI. With design assignments the following topics are addressed: measurement principles, breadboard prototyping, sensor selection, data analysis (image processing, filtering, statistics, conversion), neural networks.

Engineering Entrepreneurship Project This project challenges students to develop innovative solutions to real-world problems, combining technical expertise with entrepreneurial thinking. Multi-disciplinary teams work on assignments provided by industry partners, focusing on feasibility, sustainability, and business impact.

Mode of delivery, planned activities and teaching methods

Courses with lectures, practicals and project work in Delft, The Netherlands.

Prerequisites and co-requisites

Calculus, basic engineering mechanics (statics, mechanics of materials and dynamics).

Recommended or required reading and/or other learning materials/tools

Required literature for the courses will be announced before the start of the semester.

Assessment methods and criteria

Written exams, assignments and presentations.

Point of contact of the programme

Further information, and also for registration of chosen tracks e-mail to:

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International Coordinator of the programme