Join us in the exploration of future aircraft and propulsion systems! This curriculum enables students to acquire the scientific knowledge and technical skills necessary to address the design challenges of modern and next generation aircraft and their propulsion and power systems. Our driving goal is to form engineers and scientists who will maintain and even extend the technology leadership of the aeronautic industry, and who will greatly reduce the environmental impact of aviation.

The educational program offered by FPP culminates with an individual thesis project of 54 ECTS, where the student directly contributes to the research activity pursued by the Chairs in the areas of advanced and innovative aircraft configurations, novel propulsion concepts and aircraft-engine integration. Under the supervision of the scientific staff, students will explore new concepts and/or develop the required design and analysis methods to improve the prediction and simulation of air-vehicle and/or propulsion systems performance and enhance the quality and effectiveness of the overall design process. In order to give students the necessary knowledge and specific competences to tackle the thesis project, the FPP track offers two profiles: one focused on flight performance, which covers the multidisciplinary area of aircraft design and design methodologies, and one dedicated to propulsion and power. The two profiles include two different sets of mandatory courses that deepen the knowledge of the students in the respective fields. However, they share a set of common courses which enables working on thesis projects where the integration of the aircraft and the propulsion system is key. The shared courses are Aircraft Aerodynamics, Aero Engine Technology, Computational...

### MSc Programme

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<tr>
<th>Degree</th>
<th>Master of Science</th>
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<tr>
<td>Starts</td>
<td>September</td>
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<tr>
<td>Type</td>
<td>Full-time</td>
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<tr>
<td>Credits</td>
<td>120 ECTS, 24 months</td>
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<td>Language</td>
<td>English</td>
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The following deadlines apply according to Dutch and Non-Dutch degree status:

- **Dutch degree**: May 1st
- **Non-Dutch degree**:
  - EU/EFTA: April 1st
  - Non-EU/EFTA: January 15th

For more information on scholarships, visit [scholarships.tudelft.nl](http://scholarships.tudelft.nl)

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TU Delft
Fluid Dynamics and Multidisciplinary Design Optimization for Aerospace Applications. The thesis project, a thesis support course on Research Methodology, a course on Ethics and a period of internship at a company or research institute are also common to the two profiles.

Profile 1: Flight Performance
The specialization courses (14 ECTS in total) included in this profile deal with aerodynamic analysis and design of high subsonic transport aircraft, aircraft performance optimisation, aeroelastics and knowledge-based engineering techniques to support the design of complex systems. Some courses have a theoretical approach and aim to provide a fundamental understanding of the governing physics, whereas others are more applied and require good programming skills. Finally, students can choose a set of elective courses, for a minimum amount of 15 ECTS. The selection of these courses is made in consultation with the profile coordinator and aims at deepening knowledge in one of the three areas: Flight mechanics, Propulsion Integration and Aircraft Design & Design Methodologies.

Student Profile
The ideal FPP student has passion for aircraft design and/or propulsion, wants to make an impact on future sustainable aviation, has a multidisciplinary mind, is able to go in depth without losing control of the big picture, has solid understanding of flight physics, fluid dynamics and thermodynamics, is strong in mathematics and computer programming, is proactive and can work independently. Optionally she/he likes experimental work in our labs. To this purpose we offer a broad range of world class facilities, ranging from wind tunnels and combustion rigs with laser diagnostics, to manufacturing labs to build sub-scaled aircraft prototypes.

Profile 2: Propulsion and Power
The specialization courses in this profile (18 ECTS in total) cover relevant aspects in turbomachinery, combustion, internal flows, advanced heat transfer and methods for modelling, simulation and application of propulsion and power systems. Students can also select a number of elective courses (for a minimum of 11 ECTS) to extend their knowledge in the areas of design & analysis methods, aircraft design or other advanced topics.

Career prospects
The job perspectives for FPP graduates are outstanding. Many of our graduates pursue a career in the aerospace field, either in industry or research institutes. In the Netherlands, popular employers are GKN Fokker (Aerostructures and ELMO), the Dutch National Aerospace Laboratory (NLR), TNO, Royal Dutch Shell, KLM, Siemens and techno-starters such as KE-works and ParaPy. Many of our graduates aspire to an international career and take interesting positions at Airbus, Leonardo, Rolls Royce, MTU Aero Engines and Safran, or at research institutes such as the German Aerospace Center (DLR). Others start their own company or work in consultancy and even finance. Some choose to stay in academia and pursue a PhD degree.

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