



# Aerospace Engineering

## Master of Science

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All information about the degree programme can also be found on the internet. To this end, use a suitable reader to take a photo of the QR code.

[fhac.de/master-aerospace-engineering](http://fhac.de/master-aerospace-engineering)



# Introducing the Degree Programme

This academic degree programme, offered almost entirely in English, is the foundation for careers in the Aviation or Mechanical Engineering industries or a doctorate.

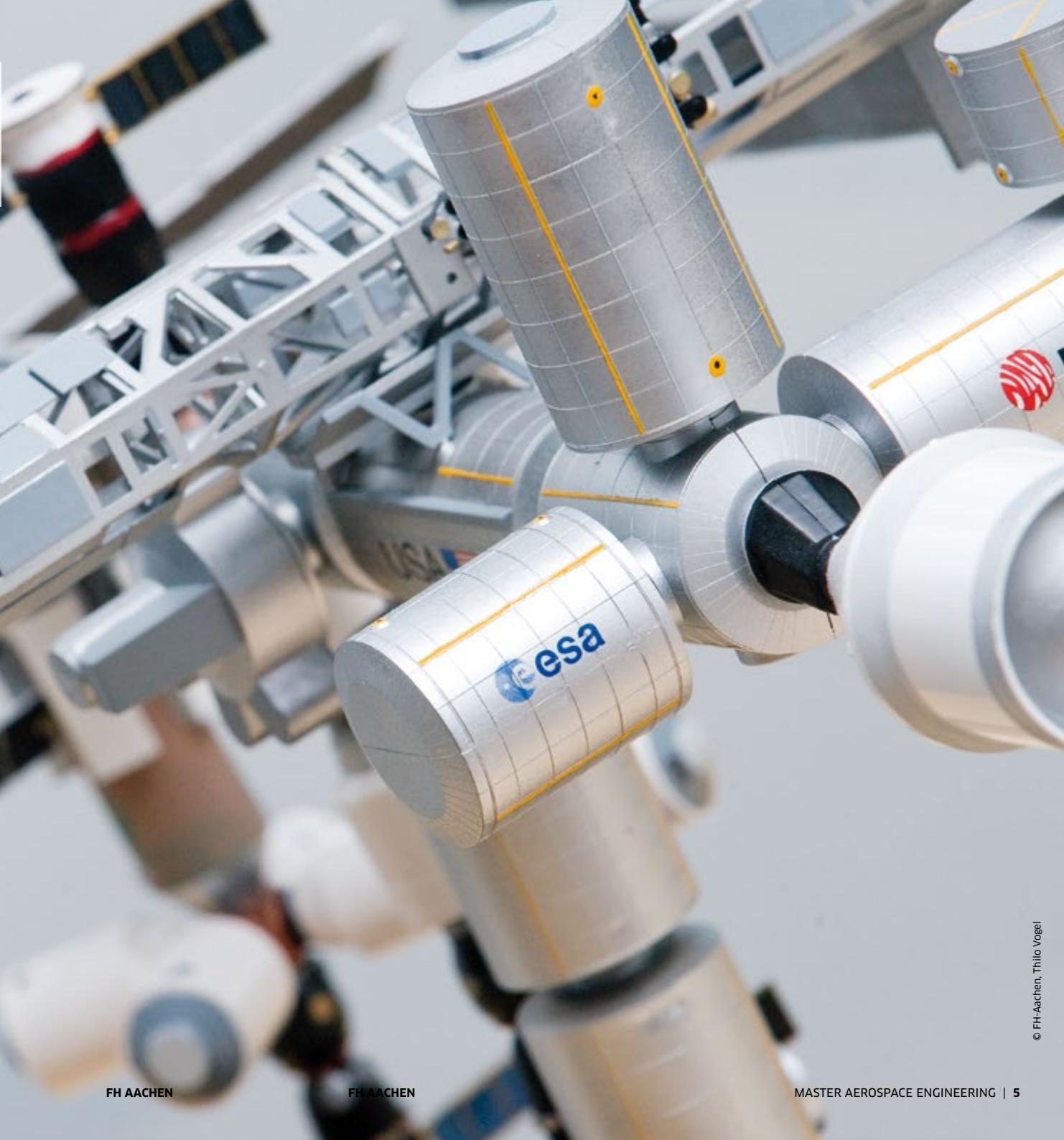
The Master of Science degree programme runs 3 semesters. The Master of Science/Master of Engineering dual degree programme with RMIT Melbourne, Australia, runs 4 semesters. Both will support you in becoming a professional in Aerospace Engineering and Mechanical Engineering contexts.

Our course programme allows you to select courses freely from the sets of "General Aerospace Engineering", "Advanced Aerospace Engineering" and "General Competencies" course catalogues. To allow for conflict-free schedules, four focus areas with pre-defined module sets were defined incorporating our students' preferences. These are: Aeronautical Engineering, Propulsion Engineering, Astronautical Engineering and Simulation Engineering.

In addition to classroom or online courses, you will enjoy access to more than 35 laboratories and a faculty aircraft at FH Aachen early on in your studies.

Teaching staff look forward to assisting you with their years of experience in industry and at major research institutions.

Join our successful and internationally renowned programme to secure a long-term and fulfilling career following your interests.



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# Careers and Fields of Activity

Economic and ecological challenges provide excellent opportunities for our graduates, and they are highly sought after by

- > Aerospace manufacturers
- > Component and subsystem suppliers
- > Aerospace research establishments
- > Airlines and airports
- > Automotive and transport manufacturers
- > High technology sections of mechanical engineering
- > Engineering and mobility solution providers
- > Space exploration industry
- > Communications industry and environment monitoring service providers

Graduates find their roles across a wide field including

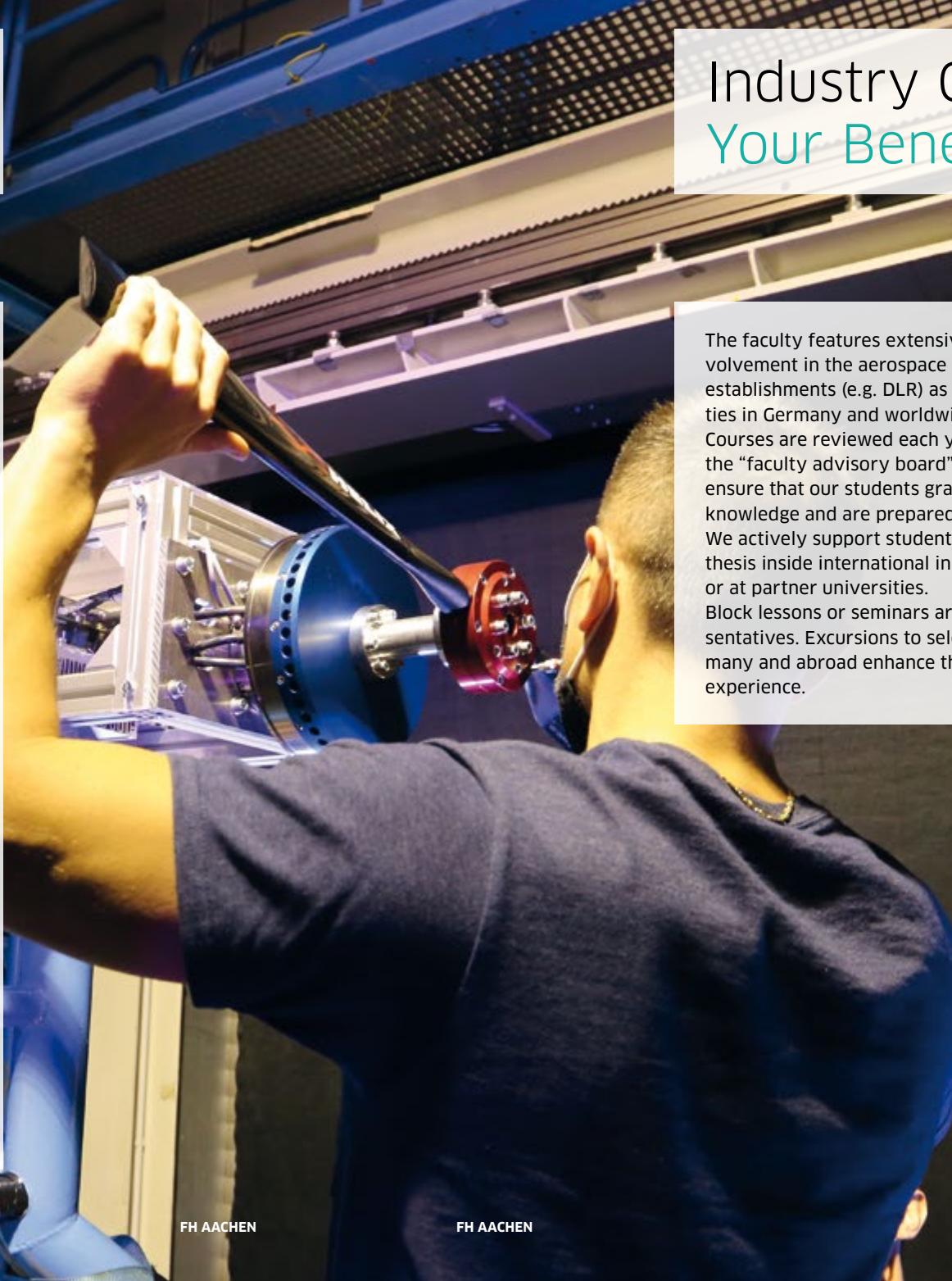
- > Application oriented research and development
- > Systems engineering and design
- > Construction (e.g. CAD) and various fields in simulation technology
- > Production planning and Optimisation
- > Experimental proofs and flight testing
- > Assurance of product safety and quality control
- > Management of complex facilities
- > Technical customer contact
- > Technical management
- > Join our successful and internationally renowned programme to secure a long-term and fulfilling career following your interests.

# Industry Contacts – Your Benefit

The faculty features extensive contacts and project involvement in the aerospace sector, large scale research establishments (e.g. DLR) as well as with other universities in Germany and worldwide.

Courses are reviewed each year by industry experts on the “faculty advisory board”, which is one element to ensure that our students graduate with the appropriate knowledge and are prepared for a professional career. We actively support students writing their Master’s thesis inside international industry, research institutes or at partner universities.

Block lessons or seminars are held by industry representatives. Excursions to selected companies in Germany and abroad enhance the learning and networking experience.



# Faculty of Aerospace Engineering



## Top ranked

- > Ranked top in application orientation and internationalisation by Center für Hochschulentwicklung (CHE ranking, 2019);
- > Ranked "excellent" by Master students for support by academic staff and course content (CHE ranking, 2019);
- > Most favoured university of applied sciences to recruit from in Germany (Wirtschaftswoche ranking 2018, 2019-category mechanical and Aerospace Engineering).

## Element of professional success

- > 89% of Master's graduates enter employment no later than 6 months after graduation, 81% in industry (istat evaluation, 2018)
- > 90% of Master's graduates would choose the same degree programme again 1.5 years after graduating (istat evaluation, 2018)

## Leading in infrastructure and facilities:

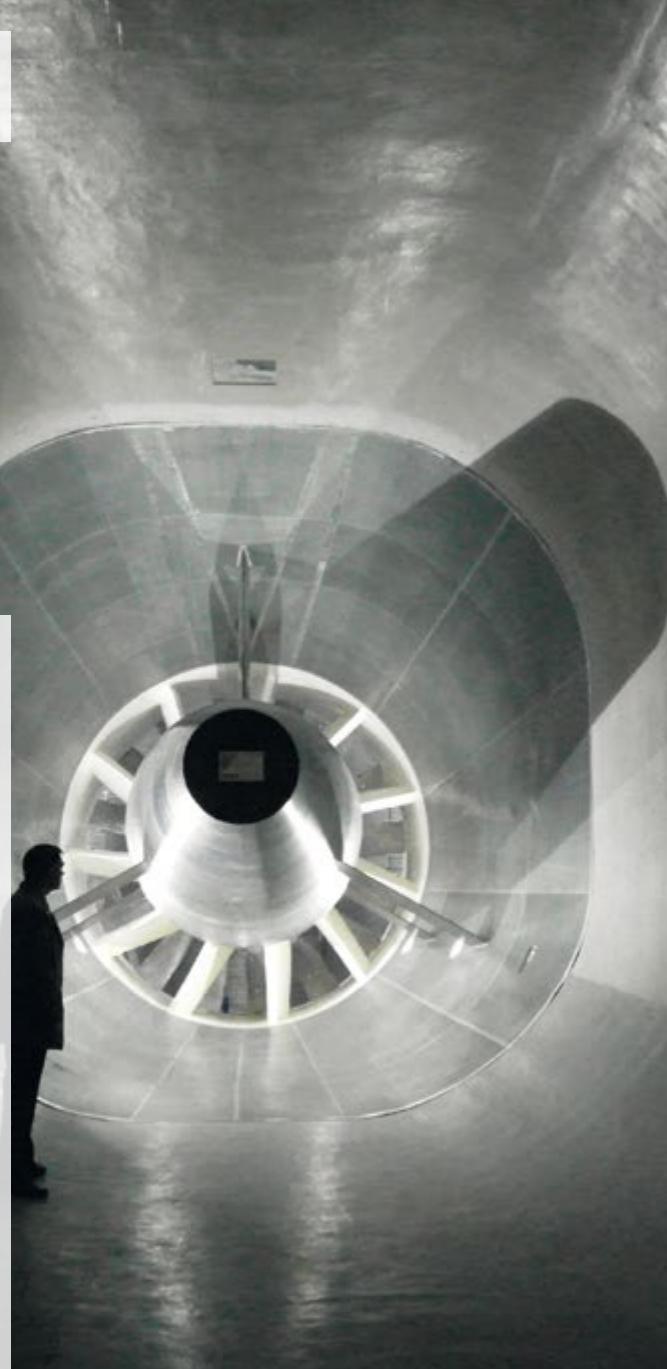
- > Over 35 laboratories including 2 wind tunnels, combustion and thermal test stands, flight simulator, procedure trainer.
- > Faculty-owned training aircraft and summer school flying practice.
- > Future home of the Competence Center of Mobility Aachen, CCMA, and the new powertrain testing center PSG – one of the largest education investments in Germany.
- > Part-owner of Aachen-Merzbrück research airport, an 80 hectare development site for research, development and production of hybrid flight solutions.

# Alumni Statements



## Falk Götten

Since I was young, my dream was always to become an aerospace engineer. Besides my strong interest in the aerospace sciences, I am also a quite practical guy who loves to work hands-on. Studying at FH Aachen gave me the perfect combination of theoretical learning and directly applying my new knowledge in many of the practical courses. This is exactly what makes studying here different from other universities. You really learn what you need to know in the industrial environment. During my studies, I specialized in aircraft design and worked in the UAV departments of Airbus and UMS SKELDAR for both Bachelor's and Master's theses. Directly after my Master degree, I got the opportunity to take a position as a research engineer at FH Aachen and did not hesitate a moment. I now work in the fluid dynamics department and continue my passion for unmanned systems by doing a PhD in cooperation with the Royal Melbourne Institute of Technology.



## Julian Schirra, Phd.

The decision to study in Aachen was both a private and a professional one. Ever since my adolescence, I have been an enthusiastic model aircraft pilot interested in aeronautics, which is why the question of which engineering field to study did

not even arise. In my case, the decision between FH and TH was clearly made in favour of FH Aachen, as I was looking for both a theoretical and an applied education. I am among the last to have completed a Diplom degree.

My consistently very good experiences at FH Aachen were the reason why I subsequently registered for the Aerospace Master's degree programme, which I successfully completed with the Master of Engineering at the end of 2011. Especially the last years at FH Aachen were characterised by my interests in the field of numerical aerodynamics. A perfect complement to my studies was therefore the student project Advanced Aircraft Configuration, which was initiated by myself and Professor Bauschat, and which I successfully conducted with interested fellow students. We dealt with possible future, so-called non-planar transport aircraft configurations. Outstanding results emerged from practical projects, Bachelor's and Master's theses, national and international publications, and, ultimately, even my doctoral thesis. I worked on this within the framework of the FH Aachen cooperation with the Royal Melbourne Institute of Technology (RMIT). After completing the doctoral examination process in 2016 with the PhD, my professional career led me to Intel, to the field of UAVs. I was responsible for the aerodynamic and flight mechanical design as well as for flight tests and prototype construction. I have recently started my new job as Senior CAE Engineer at Schübeler Technologies / Microdrones. There, I also work on the aerodynamic and flight mechanical design of UAVs as well as the development of electrically driven turbomachines (ducted fans). I can justifiably say that my decision for FH Aachen was spot-on and that the training there gave me, an enthusiastic aeronautical engineer, perfect options.

# Admission Requirements

## 3 Semester Degree Programme

Only applicants with the following qualifications can be considered into the application procedure:

- > An excellent Bachelor Degree in Aerospace Engineering or Mechanical Engineering with corresponding degree programmes, at least 210 ECTS
- > An excellent University degree in another equivalent engineering course of study.
- > Applicants whose study qualification was not achieved at a German-speaking university have to provide proof of German language skills, such as "Zertifikat Deutsch (A2)" - certificate for admission to the degree programme and "Zertifikat Deutsch (B1)" for admission to the Master's thesis.
- > Applicants whose study qualification was not achieved at a university in a country that participates in the Bologna process have to send a certified copy of the "Graduate Record Examination (GRE) – General Test" -result.
- > Proof of English language skills (TOEFL/IELTS).

## 4 Semester Degree Programme (Dual Degree Programme)

- > Requirement of English language proficiency for RMIT enrolment
- > If you have studied for at least 2 years and your qualification has been taught and assessed in English, it is assumed that you meet the English language requirement (an official letter from the institution stating that the programme is taught and assessed entirely in English must be submitted).
- > "Fachhochschulreife" with at least grade 3 in English, or Abitur with at least 7 points in English, or the DAAD language test with a minimum of B in all sections (completion within 5 years of RMIT programme commencement).

Detailed information can be found at  
[fhac.de/master-aerospace-engineering](http://fhac.de/master-aerospace-engineering)



# Dual Degree

The Master's degree programme can be studied in a 3 semester variant (Master of Science, M.Sc.) or 4 semester variant (dual degree). Students participating in the dual degree programme spend the first two semesters in Aachen and the following two at the prestigious Royal Melbourne Institute of Technology (RMIT) in Melbourne, Australia. They are awarded both the M.Sc. and M.Eng. degrees. Modules to be attended are fixed and a limited number of fee waivers is available to the best students.

In addition to two degrees from renowned universities, dual degree students acquire additional technical and non-technical qualifications and proof of their excellent knowledge of English, making them extremely attractive for the international job market.

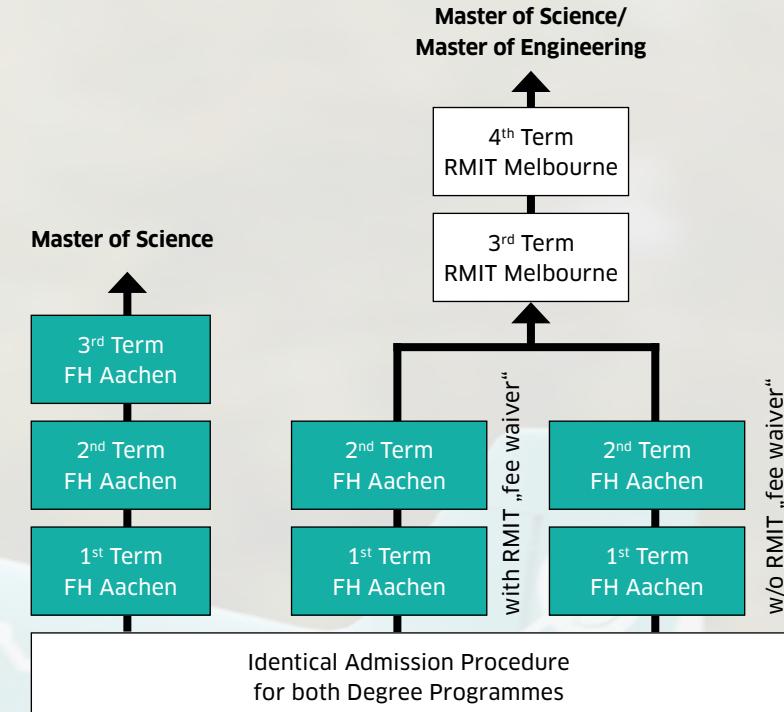


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# Course Structure

Regular Degree  
Programme  
**3 semesters**

Dual Degree Programme  
**4 semesters**



# Curriculum

Specialisation Aeronautic, Astronautic, Propulsion

## 3 semester degree programme

Example for General Competencies Programme selected in 1<sup>st</sup> semester replacing one General Aerospace subject

Name of Module	C/E	CR	SWS					Σ
			L	T	Lab	SU		
<b>1<sup>st</sup> Semester</b>								
Elective General Aerospace Engineering (GAE Programme)	E	10	-	-	-	-	-	
Elective Advanced Aerospace Engineering (AAE Programme)	E	15	-	-	-	-	-	
Elective GAE Programme or General Competencies Programme	E	5	-	-	-	-	-	
Total		30	-	-	-	-	-	

<b>2<sup>nd</sup> Semester</b>								
Elective General Aerospace Engineering (GAE Programme)	E	15	-	-	-	-	-	
Elective Advanced Automotive Engineering (AAE Programme)	E	15	-	-	-	-	-	
Total		30	-	-	-	-	-	

<b>3<sup>rd</sup> Semester</b>								
Master's Thesis	C	29	-	-	-	-	-	
Colloquium	C	1	-	-	-	-	-	
Total		30	-	-	-	-	-	

Cr: Credits  
L: Lecture

C: Compulsory  
T: Tutorial

E: Elective  
Lab: Laboratory

SWS: Semester periods per week  
SU: Seminar

# Curriculum

Specialisation Simulation

## 3 semester degree programme

Example for General Competencies Programme selected in 1<sup>st</sup> semester replacing one General Aerospace subject

Name of Module	C/E	CR	SWS					Σ
			L	T	Lab	SU		
<b>1<sup>st</sup> Semester</b>								
Elective General Aerospace Engineering (GAE Programme)	E	10	-	-	-	-	-	
Elective Advanced Aerospace Engineering (AAE Programme)	E	15	-	-	-	-	-	
Elective GAE Programme or General Competencies Programme	E	5	-	-	-	-	-	
Total		30	-	-	-	-	-	

<b>2<sup>nd</sup> Semester</b>								
Elective General Aerospace Engineering (GAE Programme)	E	15	-	-	-	-	-	
Elective Advanced Automotive Engineering (AAE Programme)	E	15	-	-	-	-	-	
Total		30	-	-	-	-	-	

<b>3<sup>rd</sup> Semester</b>								
Master's Thesis	C	29	-	-	-	-	-	
Colloquium	C	1	-	-	-	-	-	
Total		30	-	-	-	-	-	

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# Elective Modules

Name of Module	C/E	CR	SWS					Σ
			L	T	Lab	SU		

## Summer Semester Electives General Aerospace Engineering

Advanced Control Technology	E	5	2	1	1	0	4
Advanced CAD Methods	E	5	0	0	4	0	4
Advanced Mathematics	E	5	2	2	0	1	5
Actuator Systems	E	5	2	2	0	0	4
Hypersonic Aerodynamics and Atmospheric Entry	E	5	2	2	0	0	4

## Summer Semester Electives Advanced Aerospace Engineering

Environment Effects of Aircraft Propulsion	E	5	2	1	1	0	4
Dynamics of Flight and Flight Control	E	5	2	2	0	0	4
Aircraft Design	E	5	3	1	0	0	4
Space Environment	E	5	1	1	0	1	4
Space Mission Analysis and Design	E	5	2	1	0	0	4
Advanced Space Dynamics	E	5	2	1	0	1	4
Einführung in die Aeroelastik	E	5	2	1	0	1	4

Name of Module	C/E	CR	SWS					Σ
			L	T	Lab	SU		

## Winter Semester Electives General Aerospace Engineering

Structural Dynamics	E	5	2	1	1	0	4
Advanced Finite Element Methods	E	5	2	1	1	0	4
Flight Simulation Technology	E	5	2	1	1	0	4
Advanced Measurement and Control Systems	E	5	1	2	1	0	4
Mathematical Optimisation	E	5	2	1	1	0	4
Composite Design and Manufacturing	E	5	2	1	1	0	4

## Winter Semester Electives Advanced Aerospace Engineering

Transsonic Aerodynamics	E	5	2	2	0	0	4
Applied Computational Fluid Dynamics	E	5	2	0	2	0	4
Analysis and Sizing of Aircraft Structures	E	5	2	2	0	0	4
Propulsion System Integration	E	5	3	1	0	0	4
Advanced Space Propulsion	E	5	2	2	0	0	4
Space Mission Engineering	E	5	3	1	0	0	4
Space Utilisation and Exploration Project	E	5	0	0	0	4	4
Climate Change Adaption in Commercial Aviation	E	5	3	1	0	0	4

## Elective General Competencies

Intercultural Communication	E	5	0	0	0	4	4
Negotiation Strategies & Scientific Reasoning	E	5	0	0	0	4	4
Transformative Urban Mobility	E	5	0	0	0	4	4
Engineering meets Design	E	5	0	0	0	4	4
Technisches Deutsch	E	5	0	0	0	4	4
Critical Thinking and the Scientific Method	E	5	0	0	0	4	4
Other Faculty Electives	E	5	0	0	0	4	4
Negotiation Strategies and Scientific Reasoning	E	5	0	0	0	4	4

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## Advanced Control Technology (61901)

- > Design of Advanced Control Systems
- > Identification of Dynamic System
- > Soft-computing Methods in Control Technology
- > Numerical Simulation and of Control Systems

## Advanced Control Technology (61901)

- > Design of Advanced Control Systems
- > Identification of Dynamic System
- > Soft-computing Methods in Control Technology
- > Numerical Simulation and Optimisation of Control Systems

## Advanced CAD Methods (61902)

- > Modelling of wireframe structures
- > Mathematical description of curves and surfaces
- > Modelling of advanced surfaces and shapes
- > Modelling of full-parameterised parts
- > Analysing and evaluating of surfaces

## Advanced Mathematics (61903)

- > Fourier Series and Fourier Transform
- > Curves, Moving Coordinate Systems and Surfaces

- > Analysis of Scalar and Vector Fields
- > Ordinary and Partial Differential Equations: Laplace Transform and Numerical Methods
- > Data Analysis: Error Propagation, Correlation and Regression

## Actuator Systems (61904)

- > Overview about Actuators in Aviation
- > Basics in Hydraulic Actuator Systems
- > Introduction to Simulation Techniques for Mechatronic Systems
- > Simulation of an Aileron Actuator in Closed-Loop Control

## Hypersonic Aerodynamics and Atmospheric Entry (61905)

- > Inviscid hypersonic gas dynamics: lift and drag calculation
- > Hypersonic boundary layers: friction and heat transfer
- > High-temperature gas effects and kinetic theory of gases
- > Hypersonic ground testing facilities and similarity parameters
- > Dynamics of Ballistic and Lifting Atmospheric Entry

## Environmental Effects of Aircraft Propulsion (61911)

- > Environmental aspects of aircraft propulsion (Noise and exhaust gas emissions)
- > Regulations of airworthiness authorities
- > Environmental effects of exhaust gas and noise emissions and their influence towards people and environment.
- > Technical and political solutions for the protection of our environment and reduction of emissions
- > Alternative fuels for aviation

## Dynamics of Flight and Flight Control (61912)

- > Mathematical Modeling of Aircraft Dynamics
- > Handling Qualities of Aircraft
- > Design of Typical Flight Control Approaches
- > Design of State of the Art Fly by Wire Systems

## Aircraft Design (61913)

- > Approaches and Methods in Aircraft Design
- > Assessment of Aircraft Configurations

- > Preliminary Sizing of Aircraft
- > Conceptual Design of Fuselage, Wing, and Empennage
- > Performance Analysis and Design Assessment

## Space Environment (61915)

- > Space Plasma Physics
- > Current Research Topic from Space / Planetary Sciences
- > Research Paper Analysis and Presentation

## Space Mission Analysis and Design (61916)

- > Space Mission Elements & Spacecraft Subsystems
- > Space Mission Design Process
- > Spacecraft Systems Engineering
- > Spacecraft Development Process

## Advanced Space Dynamics (61917)

- > Planetary and Lunar Orbits
- > Interplanetary Trajectories and Mission Design
- > Rendezvous & Docking and On-Orbit Servicing
- > Spaceflight Procedures
- > Spaceflight in the Three-Body Problem

**Structural Dynamics (62901)**

- > Creation of damping and mass matrices within the finite element method (FEM)
- > Modal analysis using FEM and experiment as the basis of the structural analysis
- > Calculation of the forced vibrations of proportional and non-proportional damped linear vibration systems
- > Explanation of structural non-linearities and extension to non-linear FEM calculations

**Advanced Finite Element Methods (62902)**

- > Derivation of a Finite Element Formulation for Static Problems
- > Nonlinear Material Behaviour (Creep and Plasticity)
- > Treatment of Contact Problems
- > Basic Introduction into Stability Problems
- > Heat Transfer and the Corresponding Thermal Stresses

**Flight Simulation Technology (62904)**

- > Introduction to Real-Time Flight Simulation Technology
- > Demands Concerning Real-Time Flight Simulators
- > Software Design of Real-Time Systems (Aircraft and Helicopters)
- > Certification of Real-Time Flight Simulators

**Advanced Measurement and Control Systems (62905)**

- > Using and programming computer based measurement chains
- > Applying the graphical computer language LabVIEW
- > Conducting experiments e.g. to calculate the achievable accuracy of the hardware and the sensors

**Mathematical Optimisation (62907)**

- > Calculation of the extreme values of scalar functions for varying constellations of domains and functional dependencies
- > Nonlinear optimisation (for nonlinear functions and/or constraints). Methods: differential calculus or iterative search methods
- > Linear optimisation with the simplex algorithm
- > Utilization of computing power for solving optimisation problems of large-scale calculation expenditure

**Transonic Aerodynamics (62911)**

- > Review of compressible flow
- > Extension of incompressible aerodynamics to compressible flows (sub- and supersonic)
- > Numerical simulation methods for transonic flows
- > Applied transonic aerodynamics: swept wing, area rule, supercritical airfoils
- > Transonic wind tunnels and similarity parameters

**Applied Computational Fluid Dynamics (62912)**

- > Derivation and discretisation of the conservation equations for fluid dynamics
- > Solution methods for discretised partial differential equations
- > Grid generation and turbulence modelling
- > Examination of CFD results
- > Guided CFD tutorials and final CFD project work with presentations

**Analysis and Sizing of Aircraft Structures (62913)**

- > Preliminary Design of Aircraft Structures
- > Analysis of Flight Loads
- > Stress Analysis in Preliminary Design
- > Failure Analysis of Aircraft Structures
- > Sizing of Structural Components

**Propulsion System Integration (62914)**

- > Requirements for the propulsion system and the integration into aircrafts
- > Regulations of airworthiness authorities
- > Interdisciplinary interactions of design processes in aero-engine development
- > Fundamentals of project management in aero-engine development

**Advanced Space Propulsion (62915)**

- > Fundamentals of Advanced Space Propulsion
- > Electric Propulsion Systems
- > Solar Sails
- > Options for Interstellar Spaceflight

**Space Mission Engineering (62916)**

- > Space Mission Engineering and Concept Definition
- > Space Mission Requirements and Analysis
- > Ground System Design and Operations
- > Space Mission Management
- > Legal Aspects of Space Activities

**Space Utilisation and Exploration Project (62917)**

- > Application of Space Mission Definition Process
- > Application of Space Systems Engineering
- > Application of Spacecraft and Payload Design Approaches
- > Application of Space Mission Management

**Einführung in die Aeroelastik (62918)**

- > Physics of Static and Dynamic Aeroelasticity
- > Wing Divergence, Rudder and Tailplane Reversal
- > Wing Sweep Effects
- > Aeroelastic Similarity Parameters
- > Coupled/Uncoupled Bending-Torsion Motion of Wing Structures
- > Quasi-Steady and Unsteady Aerodynamic Approach
- > Aeroelastic Flutter and Classical Flutter Analysis

**Climate Change Adaption in Commercial Aviation (62935)**

- > Fundamentals of climate change
- > Power generation and distribution for the mobility sector
- > Climate change prediction Impact on aviation related weather phenomena
- > Consequences for airports and the infrastructure
- > Climate impact on flight operations
- > Effects on the aircraft maintenance
- > Effects on the overall aviation system
- > Adaptation strategies
- > Sustainability of development

**Composite Design & Manufacturing (62908)**

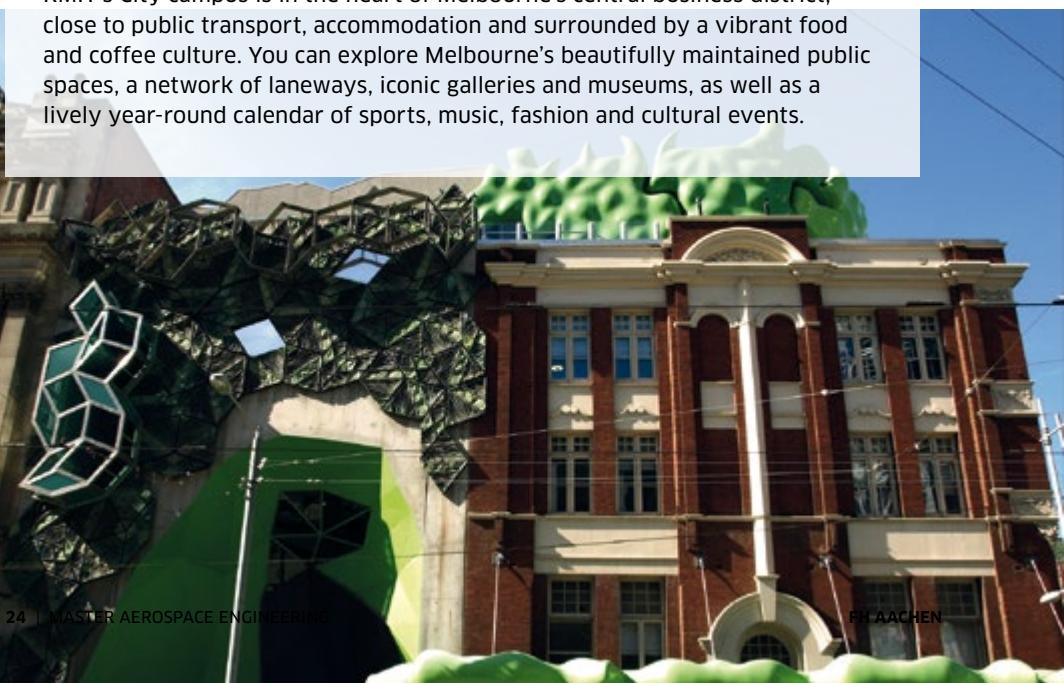
- > Theoretical and practical demonstration of experiments to determine important material properties
- > Methods and guidelines for optimal lightweight designs using monolithic composites and sandwich structures
- > Analytical and numerical strength and failure assessment procedures for monolithic and sandwich parts
- > Special finite element methods for manufacturing, engineering and tooling design
- > Part design, strength evaluation and manufacturing engineering using realistic examples from industry

# RMIT - University and College

Our dual degree partner university RMIT is a global university recognized for leadership and innovation in technology, design and enterprise. As a QS 5-Star rated institution, RMIT is ranked as one of the world's leading universities with a strong research record and state-of-the-art facilities and infrastructure. Whether you complete your degree in Australia or on exchange anywhere in the world, RMIT aim to provide students with the best experience possible along with the skills to succeed in their chosen career.

RMIT is one of Australia's top 5 universities for students to go on an international exchange as part of their studies. With campuses in Melbourne and Vietnam as well as access to over 150-plus partner institutions, studying at RMIT puts the world at your fingertips. When you study at RMIT in Melbourne you are part of a vibrant and welcoming university. RMIT has over 100 student clubs, societies and collectives to choose from which are a great way to meet new friends, develop new skills and connect with people who share your interests. You can even start your own club. Safe, multicultural, and voted the world's most livable city seven years in a row (2017 Economist Intelligence Unit Global Livability Ranking) - Melbourne is a great place to live and study.

RMIT's City campus is in the heart of Melbourne's central business district, close to public transport, accommodation and surrounded by a vibrant food and coffee culture. You can explore Melbourne's beautifully maintained public spaces, a network of laneways, iconic galleries and museums, as well as a lively year-round calendar of sports, music, fashion and cultural events.



# Modules Royal Melbourne Institute of Technology

## Aerospace Materials

- > This course provides skills required to assist the design process of aerospace structures and components considering the broad range of engineering materials available.
- > Teaching both qualitative and quantitative methods of materials selection.
- > Main properties, domain of application and fabrication processes of aerospace materials, with a particular emphasis on lightweight alloys and composite materials.
- > Investigating the impact of different materials in critical areas pertaining to the operation of aircraft, such as structural integrity (including prevention methods), airworthiness requirements (including testing and maintenance), sustainability/recyclability issues and cost effectiveness.
- > State-of-the-art materials topics (e.g., nanomaterials and smart materials), and assess pathways for the development of aerospace structures and components with optimized features.

## Avionics and ATM Systems

- > This course aims to address fundamental and advanced topics in Aviation Electronics (Avionics) and Air Traffic Management (ATM) systems.
- > The course will cover the fundamental theoretical aspects of the underlying technologies and provides an overview of the principles of the associated

electronic equipment incorporated in modern avionics and ATM systems.

- > The course will further explore architectures, functions and operations of existing avionic systems (communication and navigation systems, flight instrumentation, flight control systems, etc.) and will also provide an understanding of modern Communication, Navigation and Surveillance/Air Traffic Management and Avionics (CNS+A) concepts, including design, test/evaluation, and certification challenges.
- > How these systems contribute to the safe, reliable and efficient operation of modern aircraft and Remotely Piloted Aircraft Systems (RPAS).
- > Particular emphasis is given to emerging technologies (sensors, data fusion algorithms, etc.) aiming to improve safety, efficiency, maintainability/reliability and environmental sustainability of aircraft and RPAS in the current and next generation ATM framework (in line with SESAR and NextGen modernization initiatives).
- > In addition, the distinctive characteristics of avionic systems used in military aircraft and RPAS are discussed (guided weapon systems, electronic-warfare equipment, etc.).

## Aviation Safety Systems

- > This course provides the students with an understanding of safety management systems (SMS) by addressing to

the fundamental components stipulated in the ICAO framework.

- > Students will get an insight into key areas that are relevant for the implementation of a safety program in the context of small and large organizations in the aviation sector, including Risk Management, Human Factors, Security, Safety Culture and Investigation/Auditing techniques.
- > The final part of this course will also cover the technical aspects impacting aviation safety, particularly the contribution of aircraft/airport safety systems to the mitigation of risks inherent to flight operations.

#### **Research Methods in Engineering**

- > Development of skills to undertake a comprehensive literature review and research project plans.
- > This course introduces the general principles, methodologies and practices of data collection (both qualitative and quantitative) and analysis in qualitative research, analytics, content analysis, design aspects and research ethics.
- > Data analysis tools will be covered as well as understanding the validity and reliability of data.
- > Development of skills in communicating scientific findings including writing academic publications and presentations.

#### **Master's Research Project Part 1 & Part 2**

- > Designed to consolidate and expand knowledge through an in-depth experiment and analytical study of technical and engineering management application.
- > Work on research projects individually or in small groups
- > In this course it will be required to plan, manage and complete a research project, conduct a critical analysis of relevant literature, undertake research work to a high level standard of

professional engineers and researchers, evaluate and report the research findings.

- > It is a work-integrated project done either in conjunction with industry or in a simulated engineering work environment.

# **FH Aachen University of Applied Sciences**

One of the biggest and most important universities of applied sciences in Germany:

- > more than 14,500 students and 2,000 graduates a year
- > leading position in research volume
- > ten faculties with more than 90 degree programmes
- > nine in-house and three affiliated institutes as well as four competence platforms
- > locations in Aachen and Jülich
- > strong competencies in the future-oriented areas of energy, mobility, and life sciences
- > FH Aachen's Freshman Institute prepares students from all over the world for a further course of study in Germany



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# Organisational Matters



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## FAQs

Please consult the website at  
[fhac.de/master-aerospace-engineering](http://fhac.de/master-aerospace-engineering)

**Standard Period of Study and Start of Studies** | The standard period of study of the Master's degree programme is 3 semesters, and 4 semesters for the dual degree option. Admission to the Master's degree programme is possible every summer semester and every winter semester.

**Tuition Fee** | There is no tuition fee. Students have to pay the contribution fee to the students' union executive committee (AstA) each semester. This fee includes local public transportation. Details can be found at [www.studierendensekretariat.fh-aachen.de](http://www.studierendensekretariat.fh-aachen.de)

Students participating in the dual degree programme with RMIT pay the normal international student tuition fees at RMIT Melbourne. A limited number of fee waivers are available. More information can be found at [www.international.rmit.edu.au/info/programfees.asp](http://www.international.rmit.edu.au/info/programfees.asp).

**Application Documents** | For further information, please refer to  
[fhac.de/master-aerospace-engineering](http://fhac.de/master-aerospace-engineering)

**Application Deadline** | Application deadlines for the admission restricted (oNC) degree programme are as follows:

**For the Summer Semester:** Citizens of Germany, other EU-member states or EEA states, as well as foreign applicants holding a German Bachelor's Degree: 15 January, for applicants from abroad: 30 November

**For the Winter Semester:** Citizens of Germany, other EU-member states or EEA states, as well as foreign applicants holding a German Bachelor's Degree: 15 July, for applicants from abroad: 31 May

Detailed information regarding the affiliation to these groups can be found at [www.recht.nrw.de](http://www.recht.nrw.de)

Any change of this date will be published on the website.

**Description of Modules and List of Lectures** | As well as details about application deadlines are available at  
[fhac.de/master-aerospace-engineering](http://fhac.de/master-aerospace-engineering)

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