

# Master's Degree Programme AVIATION

Students who have already acquired a grounding in aviation technology or a related subject can specialise further in an aeronautical discipline of their choice, from aeronautical engineering to aviation management.

## What you will study:

### Aircraft construction.

You delve into various aspects of aircraft construction: alongside calculation, design and simulation the focus lies on using fibre-reinforced composites and hybrid materials. In addition you consider parameters such as lightweight construction and manufacturability of the complete aircraft.

### Aircraft systems.

We teach you the basics of complex aviation systems such as jet engines, avionic systems or flight control systems. You also learn about elements such as data buses, computer systems and flight controllers which process sensor data to generate control commands for electro-hydraulic or electro-mechanical actuators.

### Aviation management.

You acquire business expertise in aviation management, especially relevant knowledge about flight operations and air traffic. The programme also covers topics such as airline and airport management, modern air transport management or quality and innovation management.

### Elective subjects. Internship. Master's thesis.

In the first and second semesters you can choose from a list of electives to specialise in aeronautical engineering or aviation management. You can also specialise further within your internship and Master's thesis.

## FACTS



Master of Science in Engineering (MSc)



Full-time



4 semesters / 120 ECTS



FH JOANNEUM Graz



Language of instruction: English

- 25 places per year
- Head of Degree Programme:  
**Dr.-Ing. Holger Friehmelt**
- No tuition fees for students from the EU, EEA and Switzerland, tuition fees for Students from third countries
- All information about deadlines, requirements, application and admission can be found online.
- [www.fh-joanneum.at/mav](http://www.fh-joanneum.at/mav)

## Did you know ...

... that you can become a member of the 'joanneum aeronautics' team and compete with other universities? Our student team design and build aircraft which take part in international competitions.



## Organisation

Aviation is a full-time course. This means the classes are held at FH JOANNEUM over a 15 week period each semester, generally all day Monday to Friday. You receive a current timetable at the start of each semester.

*"I owe the positive development of my career to the technical and economic knowledge I gained during my studies at the Institute of Aviation. Thank you!"*

Günther Schindl, Graduate  
Managing Director, Aviation Safety & Quality Solutions, Luxembourg

CURRICULUM: 120 ECTS (30 ECTS per semester)

1 <sup>st</sup> semester	Type	SWS	ECTS
Human Factors	ILV	4	5
Digital Avionic Systems	ILV	3	3
CNS/ATM Systems	ILV	1	2
Aircraft Assembly	ILV	1	1
Engine and Components Dynamics	ILV	1	1
Advanced Design and Mechanical Components	KU	3	3
Heat Transfer	ILV	3	3
Fluid Mechanics & Aerodynamics	ILV	2	2
Aviation Management	ILV	3	4
Finance	ILV	1	1
<b>Elective Courses</b>			
Project 1	SE	4	5
Aeronautics for Mechanical & Electrical Engineers	ILV	2	3
Hydraulics	ILV	2	3
Elective Study 1	SE	2	2
Product Management and Marketing	ILV	2	2
Certification	ILV	2	2
		<b>26</b>	<b>30</b>

3 <sup>rd</sup> semester	Type	SWS	ECTS
Professional Internship (Seminar / Advising)	SE	2	30

ILV = Integrated course, KU = Design exercise,  
SE = Seminar, SWS = Hours per week,  
ECTS = European Credit Transfer and Accumulation System

## Career prospects

Our graduates are highly qualified engineers and optimally prepared for future executive positions in the aviation industry. Their interdisciplinary training gives them a comprehensive overview of both the aircraft and the processes associated with their development, production and operation. They work as design engineers for aircraft manufacturers or as test and quality engineers in the supply industry, but they're also employed in management positions in airlines, airports and aeronautical companies.

2 <sup>nd</sup> semester	Type	SWS	ECTS
Statistics and Data Analysis	ILV	2	2
Database Systems	ILV	1	1
Scientific Writing and Speaking in Aeronautics	SE	2	2
Aircraft Systems	ILV	2	2
Flight Control Systems	ILV	3	3
Jet Propulsion Technology	ILV	2	2
Piston Engines	ILV	1	2
Chemistry and Fuels	ILV	1	1
Maintenance Management	ILV	3	3
Air Transport Management	ILV	2	2
Industrial Management	ILV	3	4
Supply Chain Management	ILV	1	1
<b>Elective Courses</b>			
Project 2	SE	4	5
Aerospace Measurement Techniques	ILV	2	3
Aerospace Materials	ILV	2	3
Elective Study 2	SE	2	2
Quality Management	ILV	2	2
Flight Operations	ILV	2	2
		<b>27</b>	<b>30</b>

4 <sup>th</sup> semester	Type	SWS	ECTS
Strategies and Visions in Aeronautics	ILV	2	2
Teams and Interaction	ILV	2	3
Master's Thesis (Seminar / Advising)	SE	2	25
		<b>6</b>	<b>30</b>