



Aerospace Engineering Aeronautical Engineering Astronautical Engineering Master of Engineering

FACULTY 06
AEROSPACE ENGINEERING



Aerospace Engineering

- 06 Fields of activity
- 07 Career opportunities
- 08 Competences

Before you start

- 10 Admission requirements

The practical degree programme

- 12 Industry contacts
- 13 Course profile
- 14 Curriculum without research semester
- 15 Curriculum including research semester
- 17 Modules

General Information

- 26 Organisational Matters
- 27 Addresses

You will find all relevant information with respect to the course of studies Aerospace Engineering in the internet. For that purpose, just photograph the QR code and use the adequate reader of your mobile phone*.



* Please note: Costs may arise upon initiating the web page.

Introducing the degree programme

We are pleased to know about your interest in our master courses on Aerospace Engineering.

The technical expertise of Aerospace is in many ways part of the modern life and the Aerospace Industry has reported significant growth in recent years. This industry is shaped by world-open thinking and international cooperation. Shaped by high technology, these branches offer a multiplicity of interesting jobs. As in the last years, in the next years many more qualified engineers will be required than available. Environmental aspects becoming more and more important, introduction of new materials, the envisaged shortage of natural resources together with an increase of the demand, require creative solutions - leading to a strong necessity of well-qualified engineers.

Aerospace manufacturers no longer develop and produce all the product components "in house", but increasingly assign these tasks to suitable suppliers or risk sharing partners (Outsourcing). Assigning essential tasks to the suppliers leads to a

change of the engineering requirements at both suppliers and manufacturers.

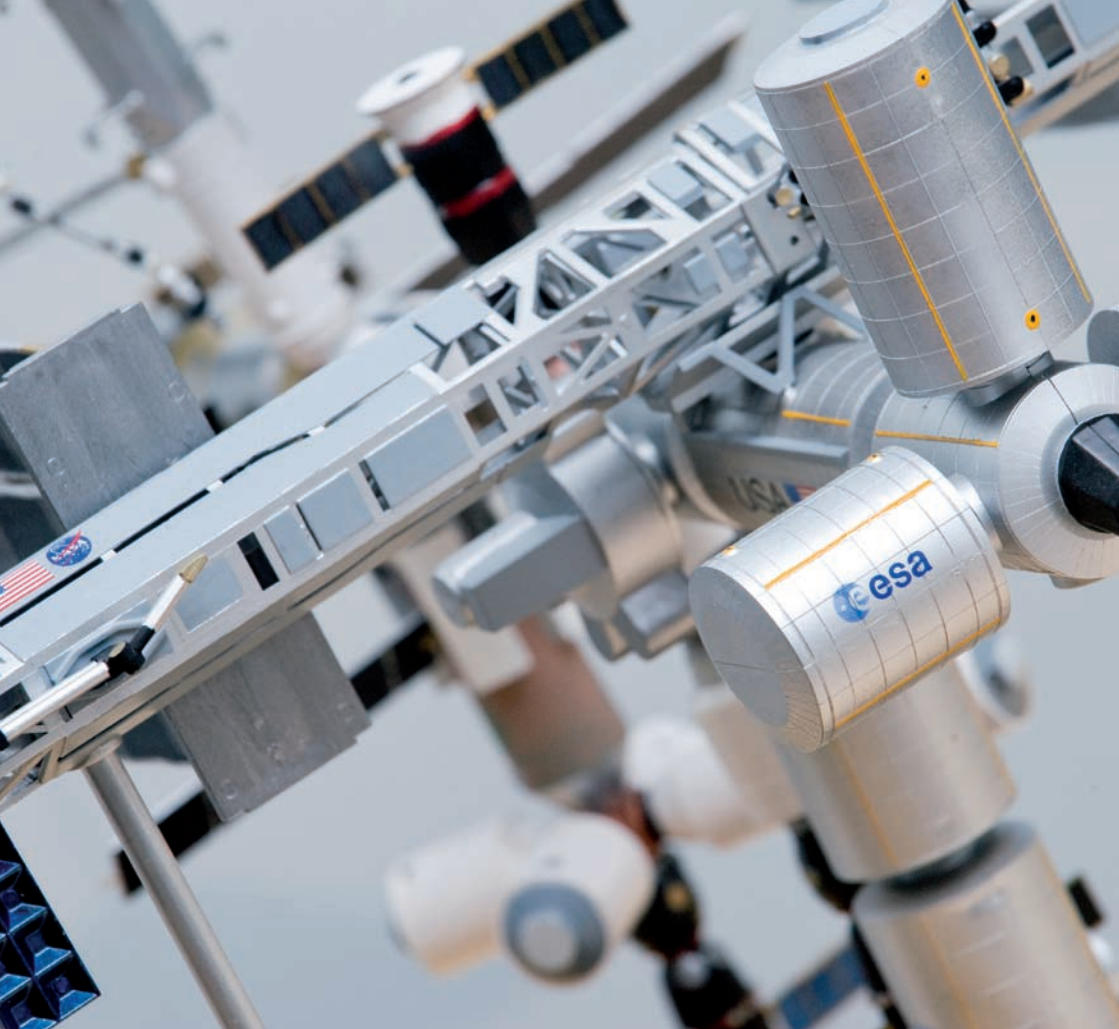
The tasks of today's engineers cover not only construction and computation, but beyond that: the supply of new technologies, pre-development, project lead, data management, management of test facilities, quality assurance and the development and use of software for the virtual product development.

The FH Aachen with its Master Aerospace Engineering realizes these demands in their education:

- > 3 semesters Master Course
(excl. Research Semester)
- > 4 semesters Master Course
(incl. Research Semester)

The faculty with its focused spectrum of competences and the highly motivated professors is awaiting you for an ambitious and application-oriented course.

Yours sincerely,
Prof. Dipl.-Ing. J.-Michael Bauschat
Study Course Director



Aerospace Engineering

Fields of activity

From the scratch to an airborne object

Graduates of the master course on Aerospace Engineering will find employments at:

- > aerospace manufacturers
- > suppliers of components and subsystems
- > aerospace research establishments
- > authorities and agencies
- > airlines and airports
- > automotive and transport
- > high technology sections of mechanical engineering

They will generate into new solutions for the future requirements and transform them to reality.

The substantial fields of working are:

- > application orientated research and maturing of technology
- > design and development
- > construction (CAD) and simulation (FEM, MBS, CFD)
- > production planning and optimization
- > experimental proofs
- > assurance of product safety and quality control
- > management of complex facilities
- > technical customer contact
- > technical management

Career opportunities

Prepared for starting up on your way

According to current inquiries most German and European enterprises look for engineers. A majority of today's aerospace engineers will retire in the next years.

The need of air transport grows strongly requesting additional new, more economical and environment friendly airplanes; the airplanes still in use are to be replaced. Space-based services, missions and exploration possibilities are constantly growing (GPS, communication, weather and environmental monitoring, satellite TV).

Therefore, today the prospects for a qualified new generation of engineers is excellent.

Based on the high scientific level of the courses, the graduates will be able to solve specific problems for product development in the industry as well as tasks in scientific research; and so they are well prepared to grow into leading management positions.

The masters of engineering can likewise find their place in the application orientated research or continue their studies with a PhD at a university. The FH Aachen Master courses qualify for the higher public service level in Germany.

Competences

All you need for a system-oriented professional

The course „Master of Aerospace Engineering“ provides the students with the ability to solve complex problems. Thus, they improve their mathematical and technical base, study modern analytical and computer-based methods and apply them to selected tasks. Special attention will be given to teamworking and multidisciplinary thinking.

This provides the ability to gain further needed knowledge independent and/or in teams.

The 3 semester Master course (w/o research semester) is based on the Bachelor course „Luft- und Raumfahrttechnik“ (Aerospace Technology). It is scheduled starting directly after this 7 semester BA course of our Faculty. The Master courses technically continue the Bachelor courses and deepen and widen their technical knowledge.

The Master courses of „Aerospace Engineering“ are consecutive application oriented courses. Consecutive study is also possible after job phases between Bachelor graduation and Master course. Training, lessons, scientific qualification of the professors, equipment and the connections of the university with industry support the orientation of the course towards application. Therefore, graduating from FH Aachen will grant the title “Master of Engineering” (M. Eng.).

Before you start

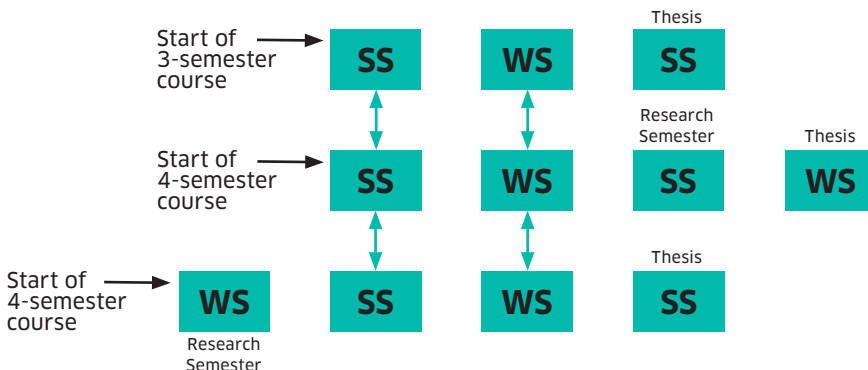


Admission requirements

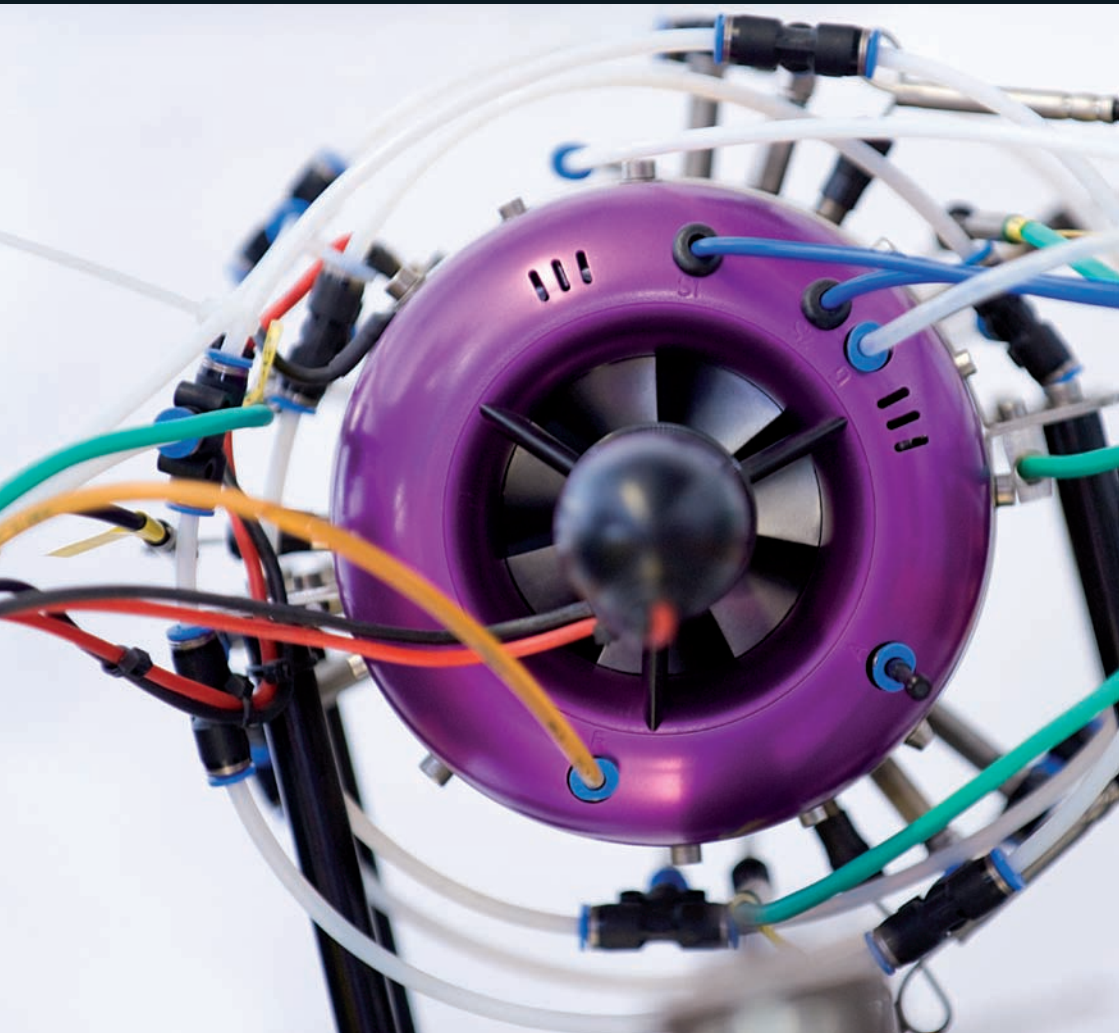
Only applicants with the following qualifications can be considered to the application procedure:

- > an excellent Bachelor degree > (B. Eng.) in Aerospace Engineering or Mechanical Engineering with correspondingly major study courses. Applicants with a degree of a six-semester Bachelor study can only apply for the foursemester master programme (with Research Semester)
- > an excellent Diplom-Ingenieur degree (Dipl.-Ing. FH or TU/TH) in Aerospace Engineering or Mechanical Engineering with correspondingly major study courses
- > an excellent University degree in another equivalent engineering study
- > Applicants, whose study qualification was not achieved at a German speaking University have to send a certified copy of the „Graduate Record Examination (GRE) - General Test“-result and proof of German language skill as “Zertifikat Deutsch (B1)”-certificate
- > Proof of English language skill (TOEFL/IELTS)
- > Applicants who already have practical experience in the Aerospace Engineering field (internship, jobs) are asked to provide proof of such achievements and/or activities.
- > a letter of motivation describing the reasons and motivations for the study at the FH Aachen.

Detailed information can be found at: www.fb6.fh-aachen.de/luft-und-raumfahrttechnik/master-english/application/



The practical degree programme Aerospace Engineering



Industry contacts

The rapid progress in aerospace technology requires highly trained engineers, who directly fit in the modern working environment.

The Faculty of Aerospace Technology maintains very good contacts to the relevant industry, research establishments and other universities. Thus there are regular consultations with the (industrially occupied) faculty advisory board, which accompanies the development and „need-oriented“ adjustment of the courses offered and releases recommendations.

Students can write their Master Thesis within the international industry, research institutes or at partner universities. Block lessons or seminars are held by industry representatives. Excursion go to selected companies in Germany or abroad.

The Master courses in the qualification group with selected partners from industry and research secure study contents highly related to the professional practice; they are constantly oriented towards industry needs.

Course profile

The three/four semester Aerospace Engineering course teaches methods and techniques for aeronautical and astronautical engineering. It has been established supported by consultations of the industry's advisory board. Most professors are well-experienced in aerospace industry or research establishments. Aerospace Engineering takes place in international cooperation. Therefore an essential part of the courses will be offered and discussed with the students in English language. Presentations held in English by the students are part of the exercises and practicals.

The course of studies deepens the most important scientific engineering bases where required for demanding applications. This is complemented by modern methods for optimized solving complex interdisciplinary problems.

By choice of Selective Modules the students have the opportunity to deepen their knowledge in a specific focus area as well as to acquire soft skills which are very important for the career. Each one of the two Focus Areas „Aeronautical Engineering“ and „Astronautical Engineering“ has its own specific Module Catalogue. The education is complemented by Soft Skill modules like Corporate Entrepreneurship, Project Management, Foreign Languages, Patent Laws and Contracts.

The study is concluded with a project oriented Master Thesis and a colloquium.

Curriculum without research semester

		SWS						
No.	Name of Module	C/E	Cr	L	T	Lab	SU	Σ
1st Semester (summer term)								
61301	Advanced Mathematics	C	4	2	2	0	0	4
61302	Mathematical Optimisation	C	5	2	1	1	0	4
61303	Advanced Control Technology	C	4	2	1	0	0	3
61304	Advanced CAD Methods	C	4	0	0	3	0	3
6xxxx	1. Choice from catalogue 1 or 2	E	Allocation					4/4
6xxxx	2. Choice from catalogue 1 or 2	E	depends on the					4/4
6xxxx	3. Choice from catalogue 1 or 2	E	selected module					3/4
Total			30					
2nd Semester (winter term)								
62301	Test Scheduling, Measurement and Control Systems	C	4	2	0	2	0	4
62302	Structural Dynamics	C	5	2	1	1	0	4
62303	Advanced Finite Element Methods	C	4	2	0	1	0	3
6xxxx	4. Choice from catalogue 1 or 2	E	Allocation					3/3
6xxxx	5. Choice from catalogue 1 or 2	E	depends on the					3/4
6xxxx	6. Choice from catalogue 1 or 2	E	selected module					8/3
6xxxx	7. Choice from catalogue 1 or 2	E						0/3
Total			30					
3rd Semester (summer term)								
6xxxx	8. and 9. Choice from catalogue 3	E	4	2	2	0	0	4
	Project orientated Master Thesis	C	26	0	0	0	21	21
Total			30	2	2	0	21	25
Cr: Credits L: Lecture								
C: Compulsory T: Tutorial								
E: Elective Lab: Laboratory								
SWS: Contact hours per week SU: Seminar								

Curriculum including research semester

		SWS						
No.	Name of Module	C/E	Cr	L	T	Lab	SU	Σ
1st Semester (summer term)								
61301	Advanced Mathematics	C	4	2	2	0	0	4
61302	Mathematical Optimisation	C	5	2	1	1	0	4
61303	Advanced Control Technology	C	4	2	1	0	0	3
61304	Advanced CAD Methods	C	4	0	0	3	0	3
6xxxx	1. Choice from catalogue 1 or 2	E	Allocation					4/4
6xxxx	2. Choice from catalogue 1 or 2	E	depends on the					4/4
6xxxx	3. Choice from catalogue 1 or 2	E	selected module					3/4
Total			30					
2nd Semester (winter term)								
62301	Test Scheduling, Measurement and Control Systems	C	4	2	0	2	0	4
62302	Structural Dynamics	C	5	2	1	1	0	4
62303	Advanced Finite Element Methods	C	4	2	0	1	0	3
6xxxx	4. Choice from catalogue 1 or 2	E	Allocation					3/3
6xxxx	5. Choice from catalogue 1 or 2	E	depends on the					3/4
6xxxx	6. Choice from catalogue 1 or 2	E	selected module					8/3
6xxxx	7. Choice from catalogue 1 or 2	E						0/3
Total			30					
3rd Semester (summer term)								
63300	Research Semester	C	30	0	0	0	25	25
Total			30	0	0	0	25	25
4th Semester (winter term)								
6xxxx	8. and 9. Choice from catalogue 3	E	4	2	2	0	0	4
	Project orientated Master Thesis	C	26	0	0	0	21	21
Total			30	2	2	0	21	25
Cr: Credits L: Lecture								
C: Compulsory T: Tutorial								
E: Elective Lab: Laboratory								
SWS: Contact hours per week SU: Seminar								

No.	Name of Module	Sem.	Cr	SWS					Σ
				L	T	Lab	SU		

Module Catalogue 1 (Focus Area „Aeronautical Engineering“)

61701	Environmental Effects of Aeronautical Propulsion	SS	4	2	1	1	0	4
61702	Dynamics of Flight / Flight Control	SS	5	2	2	0	0	4
61703	Transonic Aerodynamics	SS	4	2	1	0	0	3
62701	CFD Applications	WS	4	2	0	1	0	3
62702	Actuator Systems	WS	4	2	1	0	0	3
62703	Aircraft Design	WS	9	5	3	0	0	8
62704	Propulsion Design	WS	9	4	2	2	0	8

Module Catalogue 2 (Focus Area „Astronautical Engineering“)

61711	Space Environment / Simulation	SS	4	2	1	1	0	4
61712	Space Mission Analysis and Design 1	SS	5	2	2	0	0	4
61713	Advanced Space Dynamics	SS	4	3	1	0	0	4
62711	Advanced Space Propulsion	WS	4	2	1	0	0	3
62712	Space Mission Analysis and Design 2	WS	4	3	1	0	0	4
62713	Atmospheric Entry Technology	WS	4	2	1	0	0	3
62714	Space Utilisation and Technology	WS	5	2	1	0	0	3

Module Catalogue 3 („General Soft Skills“)

63701	Patent Rights for Engineers	E	2	0	0	0	2	2
63702	Entrepreneurship	E	2	0	0	0	2	2
63703	Project Management	E	2	0	0	0	2	2
63705	Time Management	E	2	0	0	0	2	2
63706	Successful Personal Marketing	E	2	0	0	0	2	2
66556	Technical German	E	2	0	0	0	2	2
66572	Six Sigma	E	2	0	0	0	2	2

Cr: Credits
L: Lecture

C: Compulsory
T: Tutorial

E: Elective
Lab: Laboratory

SWS: Contact hours per week
SU: Seminar

Modules

61301

4 Credits

Advanced Mathematics | Prof. Dr. rer. nat.
Christa Polaczek

Acquisition of the basic mathematical and information technological knowledge of the subjects mentioned below, and the qualification for independent application of this knowledge to engineering problems.

For the solution of linear differential equations the Laplace transform is presented. Bases of the Fourier Series are presented. The vector analysis is treated up to the integral theorems. Based on this knowledge partial differential equations are introduced as well as the most important partial differential equations for practical applications are treated; the letter includes tensor calculus formulations.

61302

5 Credits

Mathematical Optimisation | Prof. Dr. rer. nat. Klaus-Gerd Bullerschen

Acquisition of the basic mathematical and information technological knowledge of the subjects mentioned below and the qualification for the independent application of this knowledge to engineering and business management problems.

Calculation of the global extrema of scalar functions for varying constellations of domains and functional dependencies.

Especially linear optimization (for linear mappings with domains defined by linear inequations) by using the simplex algorithm, nonlinear optimization (for nonlinear mappings) performed by differential calculus or search methods, discrete optimization (for finite number of alternatives like paths in a graph) with suitable algorithms. Useful transformations between these three basic problem classes. Utilization of software tools for solving optimization problems of large-scale calculation expenditure.

61303

4 Credits

Advanced Control Technology | Prof.
Dipl.-Ing. J.-Michael Bauschat

The lecture provides the student with selected topics of control technology and it is assumed, that basics are known. The students get the ability to abstract complex technical systems, to transfer them into block diagrams and to describe them mathematically. Software tools are used to develop control systems and it will be shown how simulation techniques are used to test these systems. Typical aeronautical control systems are used as application examples. Fundamental aspects of control system design methodology like modelling and simulation are presented. It will be shown how control systems can

be designed using numerical optimisation. Design methods for controllers are topics of the lecture. The course also deals with: robust control, fuzzy logic control, neuronal networks, model following systems and stability of control systems.

61304

4 Credits

Advanced CAD Methods | Prof. Dr.-Ing. Hans-Josef Cordewiner, Prof. Dr.-Ing. Josef Rosenkranz

The students are enabled to autonomously generate complex, virtual surface models for further use in interdisciplinary applications. This covers construction of prototypes, investigations on the behaviour in operation (e.g. static and dynamic analyses of components, crash simulation), and manufacturing methods (e.g. NC technology, Rapid Prototyping).

Based on the specific needs of aerospace, as well as the car body technology, the students in the courses study the generation and modification, assembly and the analysis of complex curves and surfaces as well as the integration of solids into the surface assemblies.

61701

4 Credits

Environmental Effects of Aeronautical Propulsion | Prof. Dr.-Ing. Harald Funke
Knowledge of the environmental aspects of aircraft propulsion and the regulations of aviation authorities. Understanding of the interaction and environmental effects of exhaust gas and acoustic emissions and their influence on people and environment. Ability to derive technical solutions for the protection of our environment. Knowledge about latest techniques and research in reduction of emissions and alternative fuels for aviation.

61702

5 Credits

Dynamics of Flight / Flight Control | Prof. Dipl.-Ing. J.-Michael Bauschat

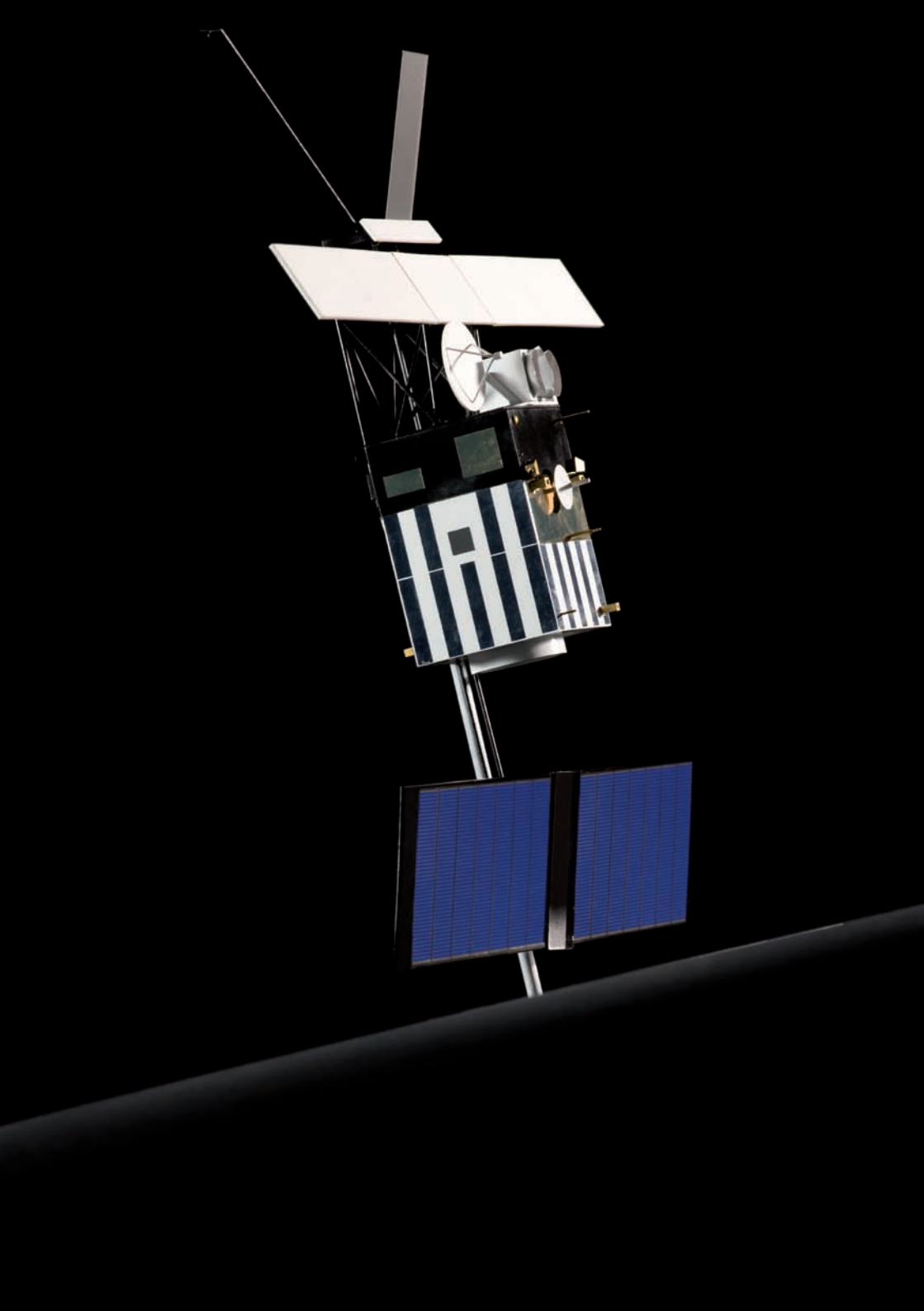
The course qualifies the participants in its first phase to apply constitutive knowledge of flight mechanics and control technology to more sophisticated problems. The investigation of the dynamic behavior of an aircraft will be done based on linear and nonlinear differential equations. This analysis is first done theoretically and subsequently on the basis of numerical simulations using suitable software tools. The influence of feedback gains on the aircraft eigen-values and therewith on the flight dynamic in the longitudinal and lateral motion will be shown. A deeper understanding concerning longitudinal and lateral dynamic aircraft stability will be gained. Fundamental knowledge how to develop a dynamic aircraft simulation will be imparted. Essential facts concerning flight control systems of actual fly by wire aircrafts will be discussed. The topic flying qualities will be addressed and the essential requirements and rating methods will be presented.

61703

4 Credits

Transonic Aerodynamics | N.N.

Based on fluid dynamics and aircraft aerodynamics, flow around transonic airfoils is introduced. Transonic effects like normal shocks, shock/boundary-layer interference and buffet are explained; the variations of aerodynamic coefficients with Mach number are derived. The consequences on flight stability of airfoils is investigated. The swept wing with its aerodynamic pros and cons is introduced and its coupling to structural deformation is demonstrated. The transonic area rule is applied to the whole aircraft. Transonic wind tunnels are presented and the flow simulation at insufficient Reynolds numbers is exemplified.



61711

4 Credits

Space Environment / Simulation | Prof.

Dr.-Ing. Bernd Dachwald

The objective of this course is to get a deeper understanding of the space environment, its effects on spacecraft, and its simulation. The students will acquire the ability to analyze the complex environmental interrelations for the design and the operations of spacecraft and will be able to apply their knowledge through adequate simulation and test methods.

61712

5 Credits

Space Mission Analysis and Design 1 |

Prof. Dr.-Ing. Bernd Dachwald

The objective of this course is to get a deeper understanding of the space mission analysis and design process. The students will acquire the ability to analyze and understand space mission requirements, as well as to make a preliminary space mission design that meets those requirements. The topics of this course are: the space mission analysis and design process, space payload design and sizing, spacecraft design and sizing, spacecraft subsystems, space propulsion systems, communications architecture.

61713

4 Credits

Advanced Space Dynamics | Prof. Dr.-Ing.

Bernd Dachwald

The objective of this course is to develop the competence to solve current problems in near-earth and interplanetary spaceflight (e.g. formation flying, gravity assists) and to get a deeper understanding of non-Keplerian spaceflight dynamics (e.g. perturbed orbits, Lagrange-point orbits) and spacecraft attitude dynamics. At the end of this course, the students will understand the basic analytical methods and know how they can be implemented numerically. Furthermore, they will acquire the ability to discuss the relevant prob-

lems with practitioners in this field and to understand current scientific and technological publications on space dynamics.

62301

4 Credits

Test Scheduling, Measurement and

Control Systems | Prof. Dr.-Ing. Thomas

Franke

The practical ability

- > to design, program and operate computer controlled measurement chains
- > to organize experiments and to apply sensors specific for automotive or aerospace application

Planning of experiments especially considers optimal selection of hardware-respecting for costs and required accuracy, an anticipatory documentation of the experiment schedule, the collected data and the programming, and strategies for minimizing influence of disturbances.

Using the graphical programming language „LabVIEW“ the student should learn,

- > to acquire, to evaluate and to display graphically any analog and digital measuring values
- > to generate analog and digital control values and to transmit them to an external hardware.

Basics of the LabVIEW-programming and the data acquiring hardware inside and outside of the personal computer will be discussed for an optimized organization of experiments.

The function of specific sensors used in the aerospace or automotive industry will be discussed in detail and used in the practical training. Additionally, instrument control using USB, GPIB and RS232 interfaces will be introduced and the numerical evaluation of pictures.

Structural Dynamics | Prof. Dr.-Ing. Michael Wahle

First the mathematical and physical fundamentals of the finite element method (FEM) are presented and deepened based on simple examples. The different possibilities of damping and mass matrices in the structural analysis are treated in particular. The inclusion and/or consideration of test results for the complete structure and parts of it and/or their components is introduced. The model validation on the basis of the experimental modal analysis is treated. Besides modal analysis the theory of computation variants for forced oscillations will be established for different kinds of excitation (transient by means of step wise integration; harmonic to random steady state modal and not modal); this will be deepened using practical examples. Critical cases from practice experience will be discussed with respect to means of compensation. In the practicals diverse complex finite element models are provided with ANSYS, and the different computation possibilities are discussed.

Advanced Finite Element Methods | Prof. Dr.-Ing. Jörn Harder

The aim of this course is (based on the knowledge of the bachelor course „FEM Grundlagen“ [Fundamentals of FEM] for the FE treatment of linear problems) that the students acquire the capability to solve more complex structural mechanics tasks (nonlinear problems, stability problems). Moreover the students should gain a deeper understanding of the universality of the finite element method by the treatment of another class of field problems, namely heat transfer problems. This should also enable the students to analyse thermal stresses when consecutively performing stress analyses. In the practical

trainings the students should deepen the acquired theoretical knowledge by exemplarily performing FEanalyses (or essential parts of it) of close to reality examples. At the same time the ability for teamwork and social competence shall be practised by executing the practical tasks in small groups.

CFD Applications | Prof. Dr.-Ing. Frank Janser

The main aim is to develop the competence to solve difficult fluid dynamic problems numerically. To do so a deeper understanding of turbulent flows, far in excess of the Bachelor study, and of the numerical solutions of turbulent flow problems has to be gained. This is mandatory for any judicious decision if a particular fluid dynamic problem is prone for a numerical solution and which turbulence model will render the optimal solution. The most common numerical codes and turbulence models will be demonstrated using practical examples (aerospace and automotive).

Actuator Systems | Prof. Dr.- Ing. Peter Dahmann

This module qualifies for description and calculation of linear and rotary actuators based on hydraulic, pneumatic or electro mechanical principles. It qualifies both for conservative calculation and for digital simulation. One attains the capability to solve problems independently with actuators in systems. Actuators are always part of a system. One attains the ability to think interdisciplinary. A competence is reached by autonomous computation not only to attain knowledge but also use it productively in new tasks.

Aircraft Design | Prof. Dr.-Ing. Bodo Baums, Prof. Dr.-Ing. Harald Funke

- > Understanding for the interconnections of the individual technical disciplines and the most important design parameters within the aircraft design. Overview of the individual phases of aircraft design and the associated tasks of the development phases.
- > Understanding of the complex and extensive requirements of the product „aero engine“ and its integration into an airplane. Knowledge of the interdisciplinary interactions of design processes and fundamentals in project management in the aircraft industry.

Propulsion Design | Prof. Dr.-Ing. Thomas Franke, Prof. Dr.-Ing. Harald Funke

Understanding of the complex and extensive requirements for the system „aero engine“ and its integration into an aircraft. Knowledge of the interdisciplinary interactions of design processes and fundamentals in project management in aircraft and aero engine industry. Design of compressor and turbine blades.

Advanced Space Propulsion | Prof. Dr.-Ing. Thomas Esch, Prof. Dr.-Ing. Bernd Dachwald

The objective of this course is to get an understanding of advanced space propulsion concepts for innovative applications. The following systems are covered: for in-space propulsion, electric propulsion systems have a much higher specific impulse than chemical systems and require therefore less propellant to accomplish a mission. Solar sails use the freely available solar radiation for propulsion and require

therefore no propellant at all. For into-space-propulsion, ramjets with sub- and supersonic combustion, which can be combined with conventional rockets, can offer a significant higher performance than the latter alone. The course sets the basis for independent lecture of the relevant literature and autonomous scientific research.

Space Mission Analysis and Design 2 |

Prof. Dr.-Ing. Bernd Dachwald

The objective of this course is to get a deeper understanding of the space mission analysis and design process. The students will acquire the ability to analyze and understand space mission requirements, as well as to make a preliminary space mission design that meets those requirements. The topics of this course are: spacecraft computer systems, spacecraft manufacturing and testing, mission operations, ground system design and sizing, launch systems, reliability, and cost modeling. Also, a survey of the legal aspects of space will be given.

Atmospheric Entry Technology | Prof. Dr.-Ing. Bernd Dachwald

The objective of this course is to get an understanding of the phenomena that are associated with the entry of a space vehicle into a planetary atmosphere. Based on aerothermodynamics, the flow around the entering vehicle is investigated and the physical problems of hypersonic flow are explained, including the respective similarity laws and parameters. The dynamics of an entering vehicle is analyzed for the ballistic case as well as for the lifting case. The course sets the basis for independent lecture of the relevant literature and autonomous scientific research.



Space Utilisation and Technology | Prof.*Dr. rer. nat Rainer Willnecker (LB, DLR)*

Acquisition of the competence and/or ability for interdisciplinary co-operation and deepening of the understanding of the topic „space usage“ and the technologies used thereby. Acquisition of the abilities to use and transmit knowledge/ strategies on engineering problems and its complexity.

- > presentation or one interdisciplinary research project in one of the offered project teams at the FH Aachen with duration of 24 weeks. Regarding the arrangement of the activities within the research project as well as their conclusion presentation, the accordingly regulations as for the industrial internship is applied.

Research Semester

By choosing a four-semester master course (with Research Semester), the student is required to achieve one of the following options in order to earn a master degree:

- > an internship with duration of 24 weeks in an industrial enterprise including the pre- and wrap-up meetings. The internship must contain engineer activities within the range of system integration in an enterprise of the vehicle technology. The arrangement of the practical course is co-ordinated with the respective qualification profile of the student and must be agreed upon in the procedure of admission with the study advisor of the university department. The study advisor supports the student also with the search for a suitable placement. Over the research semester a report is to produce as well as conclusion

The Research Semester serves the goal to introduce the students with already acquired basic knowledge to engineer-moderate working. This requires a continuous cooperation to one or more small projects. The work portion of the students is to be thereby not only subordinated nature, but approximate from the quality that of an engineer.

The Research Semester offers the possibility for the students to use the knowledge and abilities acquired in the past study and to reflect and evaluate afterwards the experiences made with the practical activity.

In advance to the Research Semester the Department of Aerospace Engineering offers in October, once a year an integration course in “German Life and Business Culture” for all the new students.

General Competencies | To strengthen also the soft-skill qualification of the students the study is supplemented by multidisciplinary modules.

General Information



Organisational Matters

Course Duration and Course Begin | The regular study duration of the Master Course is 3 semesters (without Research Semester) or respectively 4 semesters (including Research Semester). Admission to the Master Course is possible every summer semester for the 3- and 4-semester course, and every winter semester for the 4-semester course.

Course Fee | Every semester all students have to pay the contribution fee to the students' union executive committee (AstA). Included in the contribution fee is the so called „Semester Ticket“, which entitles you to use the local public transportation as well as some train connections freely. The cost for the contribution may change every semester. More information can be found at www.fh-aachen.de/sozialbeitrag.html

Starting in the winter semester of 2011 the Land Government North-Rhine Westphalia refrains from charging additional study fees.

Application Documents | For further information please refer to www.fb6.fh-aachen.de/automobiltechnik/master-english/application/

Application Deadline | Until November 30th of the previous year for the registration in summer for the 3 and 4 semester courses, until May 31st of the year for the registration in winter semester only for the 4 semester course

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

Modules Description and List of Lectures | As well as details about application deadline available at www.fb6.fh-aachen.de/luft-und-raumfahrttechnik/master-english/application/

Addresses

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Student Advisory Service

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Department of International Affairs

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