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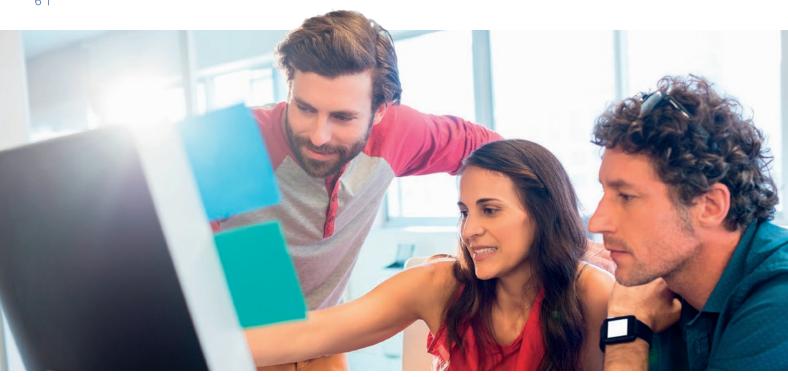


Technology Programmes at PFH Hansecampus Stade

Master of Science

Digitalization and Automation
Industrial Engineering
New Mobility - Micromobility
Lightweight Engineering & Composites





Digitalization and Automation

Master of Science (M.Sc.) 120 ECTS

Exploring the newest Developments in Science and Technology – do you like to break new ground and use digital and automated approaches to do so? Would you like to study the latest developments in science and technology?

The Digitalization and Automation study programme is aimed at graduates of electrical engineering, mechanical engineering, computer science and industrial engineering. In the field of robotics, PLC-programming, automation and machine learning technologies, you will be introduced to new developments and future-oriented topics. The special features of the newly created curriculum are the advanced study contents and varied teaching activities, such as interactive lectures and a practice-oriented training on current robots and full-fledged, modern industrial devices from well-known manufacturers.

The future of Master's graduates is the digital, computerised and robotised world. You will develop a comprehensive understanding of digitalization and automation and your studies will prepare you in the best possible way to apply your knowledge in those fields.

Overview

Degree Master of Science (M.Sc.)

ECTS 120

Duration 4 semesters

Start Dates April 1st and Oktober 1st

Admission Requirements

Completed university degree in (industrial) engineering, technical-scientific or a closely related subject.

Language Requirements

English proficiency at a minimum level of B2 (CEFR), can be proven with English language certificate (TOEFL iBT score 86, IELTS score 6.5, Duolingo, or equivalent). Alternatively, a document stating that the medium of instruction for your Bachelor's course was English.

Application Procedure

Written or online application & admissions interview; Deadline: possible to apply at any time. International applicants are advised to apply at least 3 months before the programme starts; Documents: PFH application form, letter of motivation, CV, copies of all official university diplomas and internship certificates, letter of reference from university and/or research center and/or company, copy of passport, digital photo

Study Location Stade

Tuition Fees

900.- Euros per month

500.- Euros admin fee (one-off),

waived for EU citizens

500.- Euros enrolment fee (one-off)

1,000.- Euros examination fee (one-off)

Application

Digitalization and Automation (M.Sc.) | Master of Sciences | 4 Semesters | CURRICULUM

Semester

Module 1: Consolidation of Mathematics and Technical Mechanics

Higher Mathematical Methods, Higher Technical Mechanics

Module 2 Advanced Project Management

Agile Project Management, Digital Enterprise Planning

Module 3: Big Data

Machine Learning, OLAP and Data Mining

Module 4: Innovation and Digital Transformation

Digital Business Models, Innovation Management and Entrepreneurship

Module 5: Legal and ethical issues in Engineering

Ethics of Engineering, Intellectual Property Rights

Module 6: Sustainable Development / Circular Economy

Sustainable Design of Structures, Circular Economy

Module 7: Sensor Technology and Applications

Measurement and Control Technology, Sensor Technology

Module 8: Automation

Programmable Logic Controllers (PLC), Actuators and Sensors in Automation and Robotics

Module 9: Information Technology and Cyber Security

IT Security Threads and Measures, Data, Information and Knowledge Technology

Module 10: Digital Technologies

Industrial Internet of Things (IIoT), Applied Simulation / Virtual, Augmented, Mixed Reality

Module 11: Management Accounting

Internal Accounting and Controlling, Finance and Risk

Module 12: Change Management and Leadership

Change Management, Leadership

Semester

Module 13: Quality Assurance and Quality Control

Quality Techniques and Procedures, Nondestructive Testing

Module 14: Robotics

Applied Robotics, Applied Control of Dynamic Systems

Module 15: Image Processing

Digital Image Processing, Digital Image Transformation

Module 16: Automation Lab

Automation, Robotic and Machine Learning Lab

Module 17: Project / Practice Module

Research Methods and Knowledge Management, Internship

Module 18: Master Thesis

This full-time programme with its inclusion of management courses and intensive German language training is designed to give international students the full student experience and to increase their employability in Germany, Europe and worldwide. The heart of the M.Sc. programme consists of four 16-day blocks of lectures and workshop/lab sessions, between which students take intensive German language and Management courses. The final semester is dedicated to the Master's thesis. Upon successful completion, students will be awarded a fully accredited and state-recognised M.Sc. degree in Lightweight Engineering & Composites, a Management Certificate, and a German Language Certificate.



Industrial Engineering

Master of Science (M.Sc.) 120 ECTS

Optimizing Processes and Workflows

For engineers and industrial engineers with a passion for innovation, who design the interfaces of business and technology and who want to improve products, processes and corporate structures in the long term.

The comprehensive addition to any technically-oriented academic degree "Industrial Engineering" impresses with its triad of engineering and business management specializations and the digitization of processes.

The goal is to address the rapidly changing tasks at the interface between sustainability, engineering and digitalization responsibly and succesfully. Also you can develop or improve engineering products with a view to optimizing their marketability in a global context.

Overview

Degree Master of Science (M.Sc.)

ECTS 120

Duration 4 semesters

Start Dates April 1st and Oktober 1st

Admission Requirements

Completed university degree in (industrial) engineering, technical-scientific or a closely related subject.

Language Requirements

English proficiency at a minimum level of B2 (CEFR), can be proven with English language certificate (TOEFL iBT score 86, IELTS score 6.5, Duolingo, or equivalent). Alternatively, a document stating that the medium of instruction for your Bachelor's course was English.

Application Procedure

Written or online application & admissions interview; Deadline: possible to apply at any time. International applicants are advised to apply at least 3 months before the programme starts; Documents: PFH application form, letter of motivation, CV, copies of all official university diplomas and internship certificates, letter of reference from university and/or research center **Study Location** Stade

Tuition Fees

900.- Euros per month

500.- Euros admin fee (one-off), waived for EU citizens

500.- Euros enrolment fee (one-off)

1,000.- Euros examination fee (one-off)

Application

Industrial Engineering (M.Sc.) | Master of Sciences | 4 Semesters | CURRICULUM

Semester

Module 1: Consolidation of Mathematics and Technical Mechanics

Higher Mathematical Methods, Higher Technical Mechanics

Module 2: Advanced Project Management

Agile Project Management, Digital Enterprise Planning

Module 3: Big Data

Machine Learning, OLAP and Data Mining

Module 4: Innovation and Digital Transformation

Digital Business Models, Innovation Management and Entrepreneurship

Module 5: Legal and ethical issues in Engineering

Ethics of Engineering, Intellectual Property Rights

Module 6: Sustainable Development / Circular Economy

Sustainable Design of Structures, Circular Economy

Semeste

Module 7: Sensor Technology and Applications

Measurement and Control Technology, Sensor Technology

Module 8: Advanced Materials and Technologies

Additive Manufacturing, Composites and Processes

Module 9: Information Technology and Cyber Security

IT Security Threads and Measures, Data, Information and Knowledge Technology

Module 10: Digital Technologies

Industrial Internet of Things (IIoT), Applied Simulation / Virtual, Augmented, Mixed Reality

Module 11: Management Accounting

Internal Accounting and Controlling, Finance and Risk Management

Module 12: Change Management and Leadership

Change Management, Leadership

Semester

Module 13: Quality Assurance and Quality Control

Quality Techniques and Procedures, Nondestructive Testing

Module 14: CRM and Sales Psychology

Customer Relationship Management, Purchases Decisions and Consumer Behavior

Module 15: Personal Selling in a Digital World

Sales Pitch, Negotiation Tactics, Solution Selling and Serivitization

Module 16: Global Logistics and Supply Chain Management

Supply Chain Management, Transport and Distribution Logistics

Module 17: Project / Practice Module

Research Methods and Knowledge Management, Internship

Semester

Module 18: Master Thesis

Master Thesis, Disputation

This full-time programme with its inclusion of management courses and intensive German language training is designed to give international students the full student experience and to increase their employability in Germany, Europe and worldwide. The heart of the M.Sc. programme consists of four 16-day blocks of lectures and workshop/lab sessions, between which students take intensive German language and Management courses. The final semester is dedicated to the Master's thesis. Upon successful completion, students will be awarded a fully accredited and state-recognised M.Sc. degree in Lightweight Engineering & Composites, a Management Certificate, and a German Language Certificate.



New Mobility - Micromobility

Master of Science (M.Sc.) **120 ECTS**

Creating the Future of new Mobility

For you, deciding between car, bus or train is ancient history? Are you interested in sustainable ways of getting around? The Master's study programme Mobility - Micromobility provides a study programme in a growing and future-oriented subject area.

The Master's programme is aimed at engineers from a wide range of disciplines as well as designers who are enthusiastic about materials, locomotion and lightweight construction. The study programme offers the best professional conditions thanks to the special expertise in lightweight construction and fibre composites, which has been part of PFH in research and teaching for years. In addition, you will apply the knowledge you have acquired during your studies to practical, "real-life" projects.

As a graduate of the New Mobility degree programme, you will be involved in the development of mobility solutions and will be able to use your knowledge to understand mobility concepts and evaluate them.

Overview

Degree Master of Science (M.Sc.)

ECTS 120

Duration 4 semesters

Start Dates April 1st and Oktober 1st

Admission Requirements

Completed university degree in (industrial) engineering, technical-scientific or a closely related subject.

Language Requirements

English proficiency at a minimum level of B2 (CEFR), can be proven with English language certificate (TOEFL iBT score 86, IELTS score 6.5, Duolingo, or equivalent). Alternatively, a document stating that the medium of instruction for your Bachelor's course was English.

Application Procedure

Written or online application & admissions interview; Deadline: possible to apply at any time. International applicants are advised to apply at least 3 months before the programme starts; Documents: PFH application form, letter of motivation, CV, copies of all official university diplomas and internship certificates, letter of reference from university and/or research center Study Location Stade

Tuition Fees

900.- Euros per month

500.- Euros admin fee (one-off), waived for EU citizens

500.- Euros enrolment fee (one-off) 1,000.- Euros examination fee (one-off)

Application

New Mobility - Micromobility (M.Sc.) | Master of Sciences | 4 Semesters | CURRICULUM

Semester

Module 1: Consolidation of Mathematics and Technical Mechanics

Higher Mathematical Methods, Higher Technical Mechanics

Module 2: Advanced Project Management

Agile Project Management, Digital Enterprise Planning

Module 3: Big Data

Machine Learning, OLAP and Data Mining

Module 4: Innovation and Digital Transformation

Digital Business Models, Innovation Management and Entrepreneurship

Module 5: Legal and ethical issues in Engineering

Ethics of Engineering, Intellectual Property Rights

Module 6: Sustainable Development / Circular Economy

Sustainable Design of Structures, Circular Economy

2 Semes

Module 7: Sensor Technology and Applications

Measurement and Control Technology, Sensor Technology

Module 8: Advanced Materials and Technologies

Additive Manufacturing, Composites and Processes

Module 9: Information Technology and Cyber Security

IT Security, Threads and Measures, Data, Information and Knowledge Technology

Module 10: Digital Technologies

Industrial Internet of Things (IIoT), Applied Simulation / Virtual, Augmented, Mixed Reality

Module 11: Management Accounting

Internal Accounting and Controlling, Finance and Risk Management

Module 12: Change Management and Leadership

Change Management, Leadership

Semester

Module 13: Quality Assurance and Quality Control Quality Techniques and Procedures

Quality Techniques and Procedures, Nondestructive Testing (NDT)

Module 14: Mobility Concepts and Technologies

Vehicle Categorisation, Novel Drive Concepts, Energy Storage

Module 15: Infrastructure in Transport and Mobility

Road Network (Infrastructure), Energy Supply (Charging Infrastructure)

Module 16: Design for Mobility

Digital Mockup, Lightweight Design

Module 17: Project / Practice Module

Research Methods and Knowledge Management, Internship

Semester

Module 18: Master Thesis

Master Thesis, Disputation

This full-time programme with its inclusion of management courses and intensive German language training is designed to give international students the full student experience and to increase their employability in Germany, Europe and worldwide. The heart of the M.Sc. programme consists of four 16-day blocks of lectures and workshop/lab sessions, between which students take intensive German language and Management courses. The final semester is dedicated to the Master's thesis. Upon successful completion, students will be awarded a fully accredited and state-recognised M.Sc. degree in Lightweight Engineering & Composites, a Management Certificate, and a German Language Certificate.



Lightweight Engineering & Composites

Master of Science (M.Sc.) 60 ECTS (Part-Time Programme) 90 ECTS (Triple-Award Programme)

CFRP - Key Technology as a Career Factor

The significance of composite technologies will strongly increase over the next years. The availability of study programmes on this subject is directly based on the demand from companies and research institutions for education and training in order for Germany to remain competitive in these key technologies in the future.

Carbon fibre-reinforced polymers (CFRP) and other composite materials are considered to be the material family of the future. These materials are particularly robust, noncorrosive and at the same time lighter than steel or aluminum. The CFRP industrial sector is predicted to grow by around 10% per year. Lightweight structures made of composite materials are increasing in importance across all industrial branches such as the automobile, mechanical engineering and plant construction, railway and shipbuilding industries. The demand of business enterprises and research institutions for engineers specialized in the field of composite structures who can work in positions at the interface between research, production and technology management will strongly increase.

Overview

Degree Master of Science (M.Sc.)

ECTS 90

(M.Sc. 60, Management Certificate 12, German Language Certificate 18)

Duration 3 semesters

Start Dates Oktober 1st

Admission Requirements

Degree in engineering or mathematical science with above-avarage marks and ar least one year of professional experience.

Language Requirements

English proficiency at a minimum level of B2 (CEFR), can be proven with English language certificate (TOEFL iBT score 86, IELTS score 6.5, Duolingo, or equivalent). Alternatively, a document stating that the medium of instruction for your Bachelor's course was English.

Application Procedure

Written or online application & admissions interview; Deadline: possible to apply at any time. International applicants are advised to apply at least 3 months before the programme starts; Documents: PFH application form, letter of motivation, CV, copies of all official university diplomas and internship certificates, letter of reference from university and/or research center **Study Location** Stade

Tuition Fees

1.200.- Euros per month (triple-award)
900.- Euros per month (part-time)
500.- Euros admin fee (one-off),
waived for EU citizens
500.- Euros enrolment fee (one-off)
1,000.- Euros examination fee (one-off)

Application

Lightweight Engineering & Composites (M.Sc.) | Master of Science | 3 semesters | CURRICULUM

Semester

Module 1: Business Administration

Internal Accounting & Controlling (IAC), Strategic Management (SMA)

Module 2: Consolidation of math.-engineering science principles

Calculation Methods in Structural Mechanics (MSM), Material Mechanics and Material Behaviour (WME)

Module 3: Structural design of Composites

Damage-Tolerant Structural Design (STS), Non-linear Methods of Structural Design (NLM)

Module 4: Partial automatic and automatic manufacturing processes

Assembly Logistics of automated Production processes (MLF), Quality Assurance methods in Production and Service (QFS)

German

German Level A1, German Level A2

Management

Sales Management I, Sales Management II, Project Management, Business Simulation Game

Semester

Module 5: Sustainable Process Optimisation

Deterministic Assessment of Production Processes (DBP), Industrial Production Technologies for Composite Structures (IPT), Digital plant Planning (DFP)

Module 6: Design of Multifunctional, Composite Structures

Adaptive Composite Structures (AFV), Hybrid Construction, (HYS), Design of Composite Materials (EVT)

Management

Innovation Management

German

German Level B1.1

Semest

Module 7: Master's thesis

Master's Thesis, Disputation of the Master thesis

This full-time programme with its inclusion of management courses and intensive German language training is designed to give international students the full student experience and to increase their employability in Germany, Europe and worldwide. The heart of the M.Sc. programme consists of four 16-day blocks of lectures and workshop/lab sessions, between which students take intensive German language and Management courses. The final semester is dedicated to the Master's thesis. Upon successful completion, students will be awarded a fully accredited and state-recognised M.Sc. degree in Lightweight Engineering & Composites, a Management Certificate, and a German Language Certificate.

Your Professors

The key to a top-notch education is the faculty that brings it to life, and at PFH, our professors come with years of real-world experience in top positions in the business world. From corporate execs to consulting gurus to entrepreneurial whizzes, our faculties are deeply connected to our network of industrial partners, ensuring that your education is relevant, practical, and always on the cutting edge of business trends and demands. The close collaboration between PFH and the business world is exemplified by the establishment of endowed professorships.



Prof. Dr. Frank Albe

Professor of General Business
Administration, specialising
in Tourism Management and

Controlling

Prof. Dr.-Ing.



Prof. Dr.-Ing.
Nikolay Avgustinov

Professor of Production and
Manufacturing Technology



Richard DegenhardtProfessor of Stability of Fibre-Reinforced Composites



Prof. Dr.-Ing. Heinrich FehrenProfessor of Adaptronics



Prof. Dr. Hubert SchüleProfessor of Business Information
Systems and E-Business



Prof. Dr.-Ing. Marc SiebertTechnology of Fibre-Reinforced
Composites



Vice-President for Technology | Technology of Fibre-Reinforced Composites

Prof. Dr.-Ing. Wilm F. Unckenbold



Professor of General Business Administration, specialising in Entrepreneurship and Finance

Prof. Dr. sc. agr. Julian Voss



Vice-Chancellor | Management PFH Hansecampus Stade

Peggy Repenning

PFH Technology Programmes (M.Sc.) Best Career Prospects for your Future!

Our Master's programmes equip you with the skills, knowledge, and leadership abilities needed to thrive in dynamic and forward-thinking industries.

Whether you aim to innovate in digitalization, lead in industrial engineering, revolutionize mobility, or excel in lightweight engineering, these programs open doors to diverse and impactful career paths.

Explore the possibilities and see where your journey can take you!

Digitalization and Automation (M.Sc.)

Whether in companies, organizations or in start-ups: Students of Digitalization and Automation acquire the most proper ability to work for example as production managers, factory planners and strategic planners. They will be able to better understand, shape and lead the increasingly digitalized industry of the future.

Industrial Engineering (M.Sc.)

As an Industrial Engineer, you can take advantage of a wide range of opportunities. Unlike an engineer, there is less specialization. The industrial engineer acts as a management generalist and is in demand in every industry. Characterizing for later jobs are the interface character between technology and business as well as the focus on analysis, solution finding and the management of demanding challenges.

New Mobility - Micromobility (M.Sc.)

A job for the future that will become increasingly important. With the focus on New Mobility - Micromobility, graduates are able to develop leadership skills at a higher management level. They will be involved in the development of mobility solutions as well as in planning and strategically oriented decision-making.

Lightweight Engineering & Composites (M.Sc.)

This qualification will open up the best possible career prospects, with the CFRP branch of the economy alone being forecast to grow by 10 percent a year. It offers a cross-industry qualification enabling you to undertake management tasks in activities related to fibre composites. It will, for example, open up excellent career prospects in aircraft construction, automotive engineering, machine construction, ship and yacht building, railway vehicle and wind turbine construction.

Your Benefits

English-taught programmes

Experts from business & industry

Small learning groups

Individual support

High employability

Affordable living



Unique

Europe-wide unique study courses.

Career-oriented

Digitalization and Automation, Industrial Engineering, New Mobility - Micromobility and Lightweight Engineering & Composites - all these study programmes are geared to current megatrends and specifically impart the knowledge that is in demand in the present and future. Currently specialists in these fields are urgently needed. And having studied "German Engineering" directly on site is another great advantage. You will have excellent career opportunities in the coming years.

High-Tech-Location

The PFH Hansecampus Stade offers 3,000 square meters of space, including a lecture hall for around 140 students, numerous other seminar rooms and laboratories with state-of-the-art equipment, a mensa, offices and meeting rooms for professors and lecturers.

Practice-related

Strong network and business contacts to corporations and scientific establishments, integration of business studies and management skills into study programme.

Individual

PFH Stade stands out with small study groups and individual support. Language lessons as well as a semester ticket for public transport (including free rides to Hamburg) is included in the tuition fee.

On top students can train for free in the local VFL Stade (offering for example basketball, baseball, cricket, martial arts).

Questions – always welcome

Need assistance? Just let us know and we'll be happy to help.

International Student Recruitment

- **Call** +49 157 3598 2149
- **WhatsApp Chat** +49 157 3598 2149
- Email study@pfh.de





About PFH

Private University of Applied Sciences

As the oldest and largest private university in Lower Saxony, we have been paving the way for success for over 25 years. Our programmes are designed to educate the next generation of leaders, innovators, and entrepreneurs. With a focus on practical learning and real-world experience, you will gain the skills and knowledge you need to succeed in the competitive business landscape. Plus, our personalized approach means that we are here to support you every step of the way as you unleash your full potential.

PFH currently offers more than 50 campus or distance learning programmes with Bachelor's and Master's degrees in the fields of Management, Business Law, Business Information Systems, Business Psychology, Psychology, Sociology and Technology. The nearly 4,800 enrolled students (as of August 2024) divided into 600 campus students and 4,200 distance learning students.

With its total of 30,000 students at three universities, Göttingen is a young, international city where everything is at close proximity to each other. As such, a thriving cycling culture has become predominant, adding to its liveliness.

Located just a stone's throw from the vibrant city center, our state-of-the-art campus is perfectly situated for easy access to all that Göttingen has to offer. Whether you're hopping on a train, hitting the books at the ultra-modern Lower Saxony State and University Library or grabbing a bite to eat at one of the many canteens of the university, everything is just a few steps away. Plus, with a wide range of student union facilities and amenities at your fingertips, you'll have everything you need to succeed – right here at PFH!

As an enrolled student at PFH, you'll enjoy a wide range of perks that are designed to enhance your student experience. With our semester and culture ticket, you'll have the freedom to explore all that Lower Saxony has to offer – completely free of charge! Hop on a train and discover new cities or take advantage of discounted cultural activities and events – the choice is yours. Plus, with so much to see and do, you'll never be bored as you study and grow at PFH.

As a proud member of the Galileo Global Education Group, PFH is a true trailblazer in the world of business and entrepreneurship.

Mastering Tomorrow's Challenges with our Advanced Programmes

Our cutting-edge curricula are designed to give you the skills and knowledge you need to thrive in today's fast-paced business world – and with a focus on practical, real-world applications, you'll be able to hit the ground running from day one. Plus, with close ties to some of the world's most innovative and forward-thinking companies – including Airbus, TUI, along with 500 more – you'll have plenty of opportunities to connect with industrial leaders, network with your peers, and get a firsthand look at what it takes to succeed in the world of business.

PFH takes your career to the next level with our innovative Master Programmes. Choose from a variety of areas, including Computer Science for Business, General Management, MBA, Technology (Digitalization & Automation, Industrial Engineering, Lightweight Engineering & Composites, New Mobility - Micromobility), and UX Management & Design.

At PFH, our courses go beyond theory and deliver practical, hands-on experience through exciting projects with our partner companies. With regular internships in Germany and abroad, you'll gain valuable insights and a clear idea of what to expect in your future career.

Our curricula also include opportunities for studying abroad and experiencing different cultural environments, giving you a broader perspective for a successful and international career.

PFH Private University of Applied Sciences Hansecampus Stade Airbus-Straße 6 | 21684 Stade | Germany Tel. +49 (0)4141 7967-100 study@pfh.de

Holding Company: Gesellschaft für praxisbezogene Forschung und wissenschaftliche Lehre GmbH



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