

Why study

“MECHANICAL ENGINEERING (B.Sc.)“



in English language



in Hamburg?

PROGRAM OVERVIEW

Prof. Dr.-Ing. Achim Schmidt
Hamburg University of Applied Sciences

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<https://www.haw-hamburg.de/>



Hand tools – Practical English





tap holder

WELCOME DINNER FOR INTERNATIONAL STUDENTS AT HAW HAMBURG



Fußzeile 1 (Bearbeitung in der Masteransicht)

Fußzeile 2 (Bearbeitung in der Masteransicht)

OUR FIRST MECHANICAL ENGINEERING STUDENTS FROM ACROSS THE WORLD



at semester start



at semester end

Fußzeile 1 (Bearbeitung in der Masteransicht)

Fußzeile 2 (Bearbeitung in der Masteransicht)

STUDYING “MECHANICAL ENGINEERING“ – IMPRESSIONS



Lab in Production Planning and Control



Learning Mobile Robotics in a small group



Classroom teaching with max. 45 students



Lab in Additive Manufacturing



Robotics Lab in a small group



Practicing Robot Based Welding

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Mechanical Engineering (B.Sc.)
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MECHANICAL ENGINEERING – OVERVIEW

- Program **particularly aims at** prospective **foreign students** who have not yet considered studying in Germany due to a **lack of German language skills**
- Now, **Germany's worldwide recognized** practice-oriented **Mechanical Engineering** education becomes **accessible to all English-speaking applicants**
- Beyond the **classical** modules of **Mechanical Engineering**, this degree program includes:
 - Additive Manufacturing, Digital Engineering, Energy Technology, and Robot-based Manufacturing
 - **Ethical responsibility** and **Sustainability**
(e.g. Wind turbines, energy from regrowing biomasses)
- Some of the graduates may want to stay in Germany long-term to meet the shortage of skilled employees



UNIVERSITY OF APPLIED SCIENCES HAMBURG – OVERVIEW



- In the 2nd largest city of Germany (2 mio. inhabitants)
- Among the 20 most liveable cities of the world
- 17,000 students overall at HAW Hamburg
- 9 Faculties
- 2,500 students enrolled in Faculty of Sustainable Engineering

- Founded in 1970
- 42 Bachelor programs
- 32 Master programs



Work-life-balance in green environment



Centrally located



Studying in historical buildings



Hamburg University of Applied Sciences

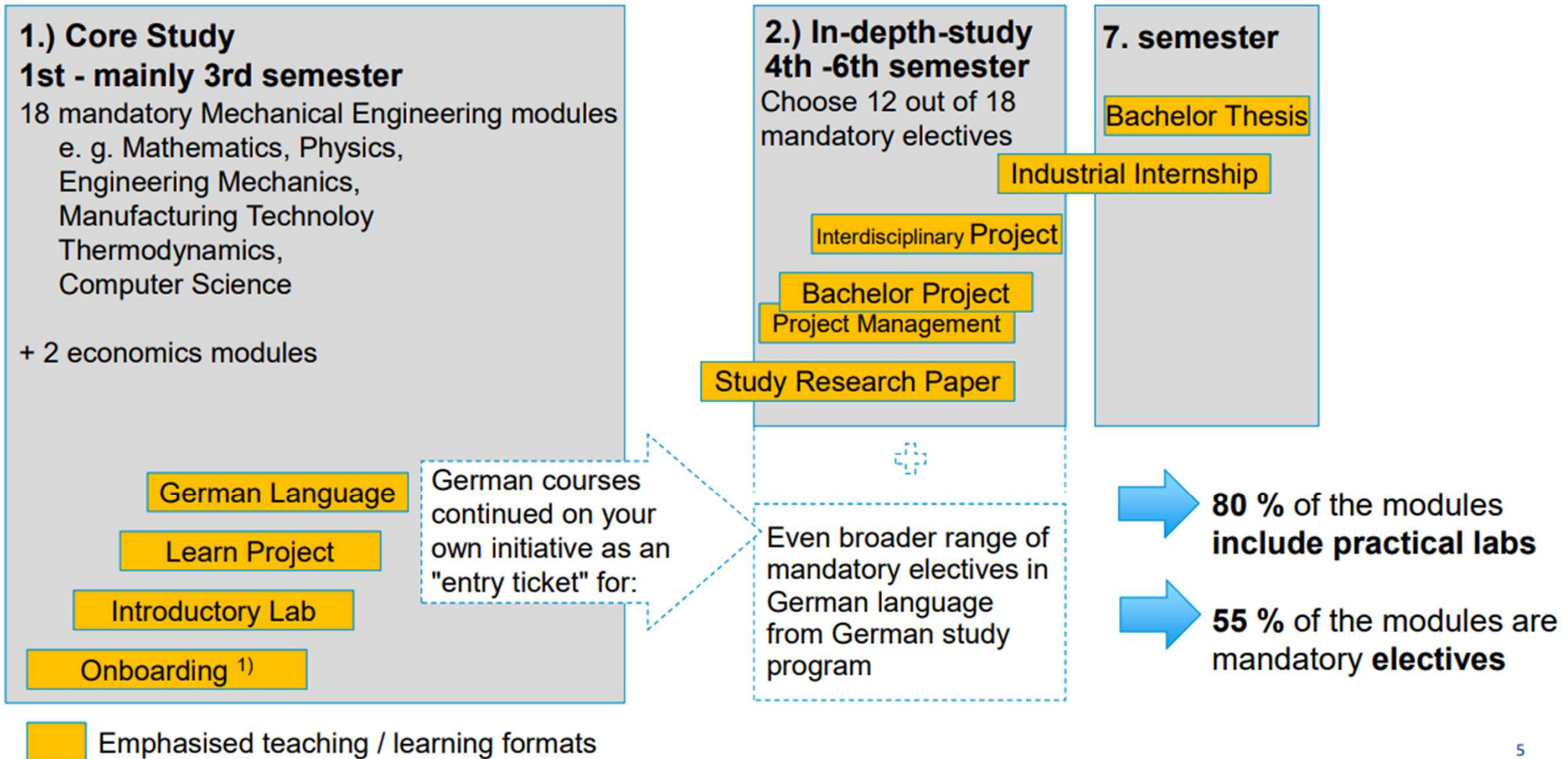
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STUDY PROGRAM “MECHANICAL ENGINEERING“



MODULE MATCH HAW HAMBURG – ESP DAKAR

1.) Core Study

Onboarding (3 weeks) before semester start

Intercultural Competencies + (Self) Study Methods + Orientation Week

Mandatory Core Study	Sem.	115 ECTS
Mathematics 1	1	8
Mathematics 2	2	5
Engineering Mechanics 1	1	4
Engineering Mechanics 2	2	4
Engineering Mechanics 3	3	4
Industrial Management	1	3
Cost Accounting	2	3
Experimental Physics	1+2	6
Technical Drawing and CAD	1	6
Machine Elements and Systems A	2	6
Machine Elements and Systems B	3	6
Materials Science	1+2	7
Introductory Lab / Learn Project	1+2	3
Manufacturing Technology	2+3	6
Applied Computer Science	3	6
Technical Thermodynamics 1	3	5
Fluid Mechanics 1	3	4
Electrical Engineering Fundamentals	3	4
Electrical Drives	4	5
German Language	4	4
Measurement and Control Systems	5/6	9
Project Management / Bachelor Project	5/6	6

2.) In-Depth Study

1/2 Mandatory Elective Modules	Sem.	5 ECTS
Study Research Paper	4/5/6	5
Machine Elements and Systems C	4/5/6	5
Design Project		

12/18 Mandatory Elective Modules	Sem.	60 ECTS
Machine Elements and Systems C	4/5/6	5
Finite Element Method	4/5/6	5
Systematic Product Development	4/5/6	5
Technology and Ethics	4/5/6	5
Energy from Biomass	4/5/6	5
Thermal Modeling of Real Systems	4/5/6	5
Technical Thermodynamics 2	4/5/6	5
Wind Turbines	4/5/6	5
Production Planning and Control	4/5/6	5
Cyber Physical Production Systems	4/5/6	5
Robot-based Manufacturing	4/5/6	5
Joining Technology	4/5/6	5
Additive Manufacturing	4/5/6	5
Mechatronics	4/5/6	5
Software Applications in Mechanical Engineering	4/5/6	5
Introduction to Commercial Vehicle Design	4/5/6	5
Introduction to Vehicle Dynamics	4/5/6	5
Introduction to Car Body Design	4/5/6	5

Internship and Bachelor Thesis	Sem.	30 ECTS
Industrial Internship	7	15
Bachelor Thesis	7	15

Legend for those courses matching with ESP B.Sc. Renewable Energy
Fundamental courses
Project formats (groups of 4 students)
Computer Science related courses
Thermodynamics in Mechanical Engineering
Electrical Engineering
Renewable Energy
Computer Science
Not marked means no match with Dakar



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STUDY PROGRAM “MECHANICAL ENGINEERING“

- STEM
- Management/Projects
- Your individual profile
- Language

SEMESTER 1	SEMESTER 2	SEMESTER 3	SEMESTER 4	SEMESTER 5/6	SEMESTER 7
Mathematics 1	Mathematics 2	Engineering Mechanics 3	Electrical Drives	Compulsory Electives	Industrial Internship
Engineering Mechanics 1	Engineering Mechanics 2	Machine Elements and Systems B	German Language		
Industrial Management	Machine Elements and Systems A	Manufacturing Technology	Compulsory Electives	SEMESTER 5 OR 6	
Experimental Physics	Material Science	Applied Computer Science		Measurement and Control Systems	Bachelor Thesis with Colloquium
Technical Drawing and CAD	Cost Accounting	Technical Thermodynamics 1		Project Management Fundamentals	
Material Science	Learn Project	Fluid Mechanics 1	Bachelor Project		
Introductory Lab	Experimental Physics	Electrical Engineering Fundamentals	SEMESTER 4, 5 OR 6		
	Manufacturing Technology		Research Paper or Design Project		

STUDY PROGRAM “MECHANICAL ENGINEERING“ – ELECTIVES 12/18

- Machine Elements and Systems C
- Finite Element Method
- Systematic Product Development
- Technology and Ethics
- Energy from Biomass
- Thermal Modelling of Real Systems
- Technical Thermodynamics 2
- Wind Turbines
- Production Planning and Control
- Cyber Physical Production Systems
- Robot-based Manufacturing
- Joining Technology
- Additive Manufacturing
- Mechatronics
- Software Applications in Mechanical Engineering
- Introduction to Commercial Vehicle Design
- Introduction to Vehicle Dynamics
- Introduction to Car Body Design



SELECTION OF INTERNATIONAL COMPANIES IN HAMBURG FOR INDUSTRIAL INTERNSHIP IN 7TH SEMESTER



NEXT STEPS

▪ When to apply?

- **Program starts annually in April** (summer semester)
- **Application period 1 October – 30 November**

▪ What to bring?

- You need a **university entrance qualification** (German Abitur equivalent)
VPD from uni-assist needs to be applied for well in advance
- You need to prove **English** language skills **level B2** (e.g. high school in English language, IELTS, TOEFL)
- **Good results in Mathematics and Physics** will be **helpful**
- **Practical job or internship experience helpful**



FURTHER INFORMATION

- Program ramp-up started in summer semester 2025
- No German language knowledge required
- **No tuition fees**, only semester contribution (379 Euro/semester)

- No particular GPA required
- All **applications** are valid when VPD, English proof and ID are uploaded
- Additional points given for voluntary activities, practical/professional experience, very good STEM/English skills
- Possible **credit transfer** after admission (degree course and university must be H+ classified on [anabin](https://www.anabin.net/))



SCHOLARSHIP / FINANCIAL ASSISTANCE

- Blocked account (approx. 12,000 €) required for visa
- Application for HAW scholarships from third semester onwards possible:
Each year the university is able to award approximately 80,000 Euros
<https://www.haw-hamburg.de/en/international/international-students/funding-and-scholarships/finances/>
- Financial hardship fund for enrolled students in financial emergency:
<https://www.haw-hamburg.de/en/study/tuition-fees-living-expenses-and-scholarships/emergency-financial-assistance/>



USEFUL LINKS

- Application:
<https://myhaw.haw.tuhh.de/qisserver/pages/cs/sys/portal/hisinoneStartPage.faces>
- Uni-assist:
<https://www.uni-assist.de/en/>
- English requirements:
https://www.haw-hamburg.de/fileadmin/Studium/StgInfo/PDF/English-language_requirements_HAWAZO_section_7_paragraph_2.pdf
- General information:
<https://www.haw-hamburg.de/en/bachelor-mechanical-engineering/>
- Further questions:
me_info@haw-hamburg.de
studierendensekretariat@haw-hamburg.de



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Thank you!

Time for your questions!



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