



**Hochschule Augsburg**  
University of Applied Sciences

Faculty of Mechanical and  
Process Engineering



**Welcome**

**FACULTY OF MECHANICAL AND PROCESS ENGINEERING**



Hochschule Augsburg  
University of Applied Sciences

Faculty of Mechanical and  
Process Engineering



**26 professors**  
**59 part-time lecturers**  
**23 research assistants and support staff**

## Our mission

Our motivation and our impetus is  
our mission to **train engineers**  
to become “people in demand”.  
We are motivated by a love of technology,  
responsibility for future generations and  
the importance of looking forwards.  
Our focus is on training, teaching and research  
of the highest standards.

## Program



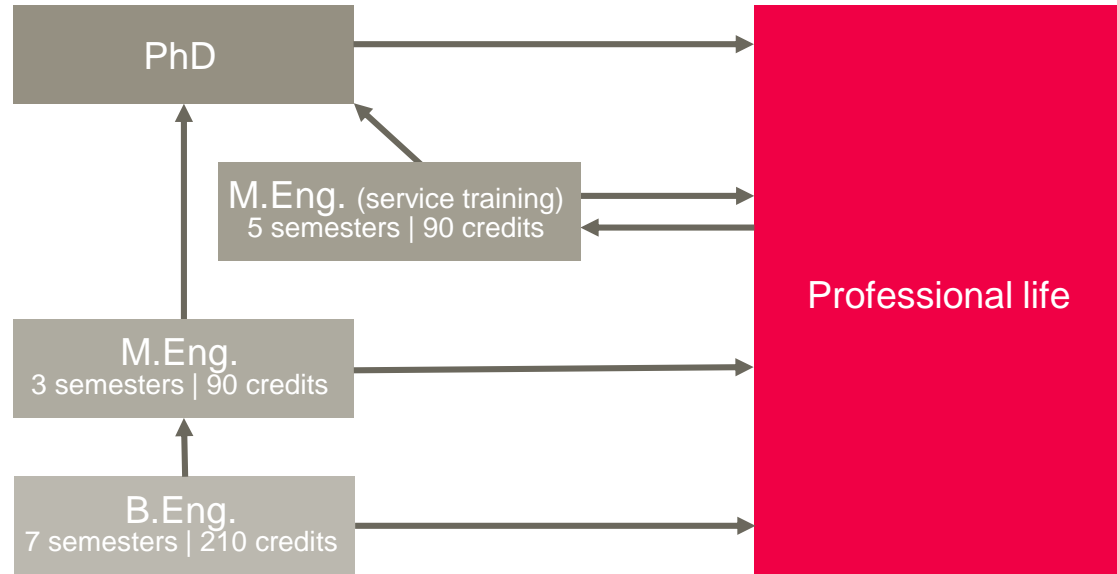
### **Bachelor of Engineering (B.Eng.)**

- > Mechanical Engineering
- > Environmental and Process Engineering

### **Master of Engineering (M.Eng.)**

- > Mechanical Engineering
- > Environmental and Process Engineering
- > Production (new)
- > Technology Management (service training)

## Course of study



# Mechanical Engineering (B.Eng.)

		CREDITS																													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
SEMESTER	1	M0100 Engineering Mathematics 1					M0300 Physics					M0400 Mechanics 1 (Statics)					M0600 Strength of Materials 1					M0800 Material Science 1					M1000 Engineering Design 1				
	2	M0200 Engineering Mathematics 2					M0500 Mechanics 2 (Cinematics / Kinetics)					M0700 Strength of Materials 2					M0900 Material Science 2					M1200 Machine Elements 1					M1100 Engineering Design 2				
	3	M1300 Numerics and Informatics					M1400 Mechanical Vibrations					M1900 Measurement and Instrument. Control Syst. 1					M1600 Thermodynamics 1					M2100 Electrical Engineering					M2200 Machine Elements 2				
	4	M1700 Thermodynamics 2					M1500 Fluid Mechanics					M1800 Control and Drive Engineering					M2000 Measurement and Instrument. Control Syst. 2					M2400 Manufacturing Methods					M2300 Engineering Design 3				
	5	M2500 Industrial Placement																									M2600 Business Management				
	6	Electives															M2700 Project					M2800 Project Management					M2900 General Electives				
	7	Electives															M3100 Bachelor's Thesis														

# Environmental and Process Engineering (B.Eng.)

CREDITS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	U0100 Engineering Mathematics 1						U0400 Chemistry						U0500 Technical Mechanics						U0700 Material Engineering						U0900 Environmental Engineering					
2	U0200 Engineering Mathematics 2						U0300 Physics						U0600 Strength of Materials						U0800 Electrical Engineering						U1000 Process Engineering					
3	U1100 Numerics and Informatics						U1200 Equipment Design and CAD						U1400 Thermodynamics 1						U1300 Fluid Mechancis						U1800 Mechanical Process Engineering					
4	U2000 General Electives						U1600 Measurement and Instrument. Control Syst.						U1500 Thermodynamics 2						U1700 Mechanical and Apparatus Components						U1900 Thermal Process Technology					
5	U2100 Industrial Placement																								U2200 Business Management					
6	Electives																													
7	Electives																		U2400 Bachelor's Thesis											

## Mechanical Engineering (B.Eng.)

### Courses offered in English

- > Aerospace Structural Analysis
- > Aerospace Systems Design
- > Basics of Electrical Energy Storages
- > Development and Certification of Aeronautical Structures
- > Energy Economics
- > Finite Element Method
- > Flight Mechanics
- > Project
- > Regenerative Power Engineering II
- > Bachelor's Thesis



## Environmental and Process Engineering (B.Eng.)

### Courses offered in English

- > Basics of Electrical Energy Storages
- > Energy Economics
- > Project
- > Regenerative Power Engineering II
- > Bachelor's Thesis (if required)



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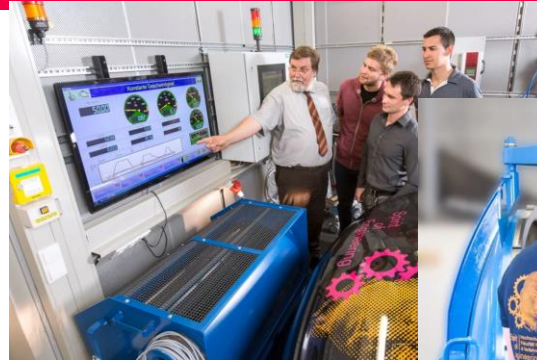
Faculty of Mechanical and  
Process Engineering



Laboratories  
Study Program | Research and Development

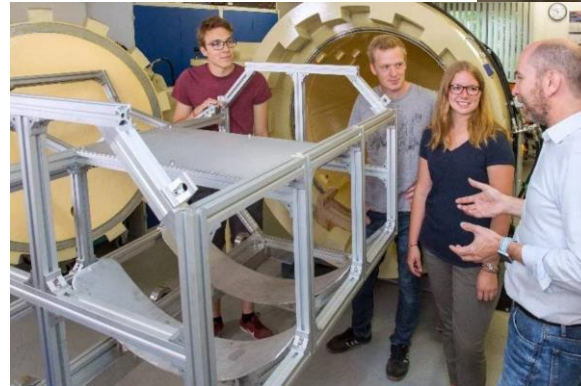
## Selected examples

- > Automotive Engineering Laboratory
- > Fatigue Laboratory I and II
- > Fiber Composite Laboratory
- > Laboratory for Electrical Energy Storage
- > Laboratory for Energy and Process Engineering
- > Laboratory for Internal Combustion Engines
- > Laboratory for Robotics
- > Laboratory for Welding Technology
- > Machine Tools Laboratory
- > Materials Testing Laboratory
- > ... Complete overview: [see website](#)



## Selected examples

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**Research and Development**

# Research Group: THA\_comp: Composites for Lightweight Structures

- > Applied research and technology development in field of lightweight and composite structures
- > Combined research group addressing the value-added chain from design to recycling

Contact: **Prof. Dr.-Ing. Ralf Goller**  
**Maschinenbau und Verfahrenstechnik**  
Telefon: +49 821 5586-2068  
[ralf.goller@tha.de](mailto:ralf.goller@tha.de)

## Recycling & LCA



- > Recycling
- > LCA
- > Sustainability

Contact: **Prof. Dr.-Ing. Stefan Schlichter**

## Advanced Manufacturing



- > 3D-Druck
- > Automated Fiber Placement

Contact: **Prof. Dr.-Ing. Neven Majić**

## Design & Engineering



- > Sizing
- > Simulation
- > Modelling

Contact: **Prof. Dr.-Ing. André Baeten**

## Process Technologies



- > Process Development CFC/CMC
- > New Materials

Contact: **Prof. Dr.-Ing. Ralf Goller**

## Textiles & Preforms



- > Textile Technology
- > Non-woven Fabric Technology

Contact: **Prof. Dr.-Ing. Mesut Cetin**

## Research Group: HSA\_sim: Research group for Simulation in Mechanical Engineering

- > Multidisciplinary research group for simulation
- > Integrated approach covering analysis, optimization and verification
- > Labs available for data acquisition, calibration and validation:
  - Mechanics of Materials Lab with Material Analysis and Strain Gauge Equipment
  - Wind Tunnel Lab, equipped with Pressure, Velocity and Resistance Measurement Technology
  - Equipment for Thermal and Thermomechanical Analysis (DMA, DSC and TGA)



### Contact

Prof. Dr.-Ing.  
Alexandra Jördening  
alexandra.joerdening@  
hs-augsburg.de  
Tel. +49 821 5586-3215

### Column 1:

Modelling,  
Analytical  
and Numerical  
Calculation

### Column 2:

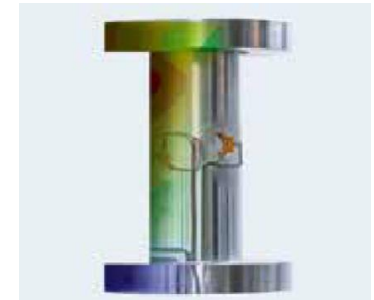
Verification  
and Validation

### Column 3:

Optimization

### Contact

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Tel. +49 821 5586-3193





Energy,  
Process and  
Environmental  
Technologies



Lightweight  
Construction  
and Composite  
Technology



Production  
and  
Automation



Simulation  
Technologies





MatWaTa



K-AXFLUX-H2



KI-Produktionsnetzwerk

intelliPro



Forschung

Multimaterial-Injector-Casting (MMIC)



Datacube



KI gegen Lebensmittelverschwendung

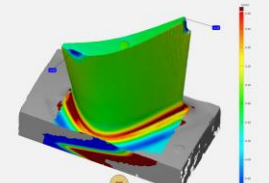


CERAHEAT 4.0



Forschung

SCANCUT



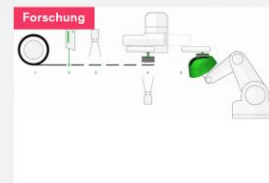
R4CMC

Repair Concepts for Reduced Reject Rates of Virgin and Overhauled CMC



Leichtbau und Faserverbundtechnologie

MAI CampusCarbon 4.0 FastMove



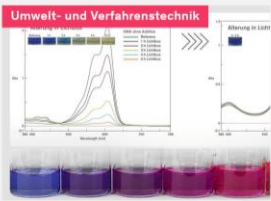
Forschung

Fiber-Patch-Placement



Forschung

The future of Cutting



Umwelt- und Verfahrenstechnik

Vom OME-Rohprodukt zum Kraftstoff



Forschung

Erinnerungsbänder in der Stadt Augsburg



Verbundwerkstoffe

CERAMEC



bifa Umweltinstitut

Recycling / Ressourceneffizienz



Umwelt- und Verfahrenstechnik

Wärmeübertrager aus Kunststoffhohlfasern



Forschung

Experimentelle Charakterisierung von hochdämpfenden Metallen



**Thank you very much for your attention!**

**Visit us at [www.hs-augsburg.de](http://www.hs-augsburg.de)**

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