

Electronic Engineering: Modulplan | Progress of Program

Semester 7	Bachelor Thesis (incl. Colloquium) ECTS 12 + 3			Special Emphasis B ECTS 15		
Semester 6	Control Engineering 2 ECTS 5	Hardware Engineering 2 ECTS 5	Project Work ECTS 8	Special Emphasis A ECTS 12		
Semester 5	Internship / Exchange Semester ECTS 30					
Semester 4	Control Engineering 1 ECTS 5	Hardware Engineering 1 ECTS 5	Prototyping and Systems Engineering ECTS 10	Mathematics 4 ECTS 5	Business Communication ECTS 5	
Semester 3	Microelectronics ECTS 5	Software Engineering ECTS 5	Embedded Systems ECTS 10	Mathematics 3 ECTS 5	Audio and Video Processing ECTS 5	
Semester 2	Electronic Engineering 2 ECTS 5	Programming 2 ECTS 5	Computer Networks ECTS 5	Engineering Design ECTS 5	Mathematics 2 ECTS 5	Audio and Video Technologies ECTS 5
Semester 1	Electronic Engineering 1 ECTS 5	Programming 1 ECTS 5	Computer Engineering ECTS 5	Physical Foundations ECTS 5	Mathematics 1 ECTS 5	Scientific Work ECTS 5

Subject to change without notice/status: 10/2024



Visiting addresses:

Hamm Campus

Marker Allee 76–78
59063 Hamm

Lippstadt Campus

Dr.-Arnold-Hueck-Straße 3
59557 Lippstadt

Postal address:

for all campuses

Marker Allee 76–78
59063 Hamm

www.hshl.de

HAMM-LIPPSTADT UNIVERSITY OF APPLIED SCIENCES

A new university in Hamm and Lippstadt with plenty of design potential. Modern campus life, market- and practice-oriented study courses, openness, tolerance, team spirit, and high demands from the start.

The newly constructed and barrier-free campuses in Hamm and Lippstadt provide ideal conditions for the future-oriented education of engineers.

Contact:

International Office

Phone +49 (0)2381 8789-140
internationaloffice@hshl.de

A total floor area of 32,250 square meters provides laboratories with state-of-the-art equipment, such as scanning electron microscope, industrial CT scanner, 3D projection surfaces, embedded systems or crane tracks, as well as plenty of space for student work, communication, teaching, and research.

YOUR FUTURE!

Campus Office

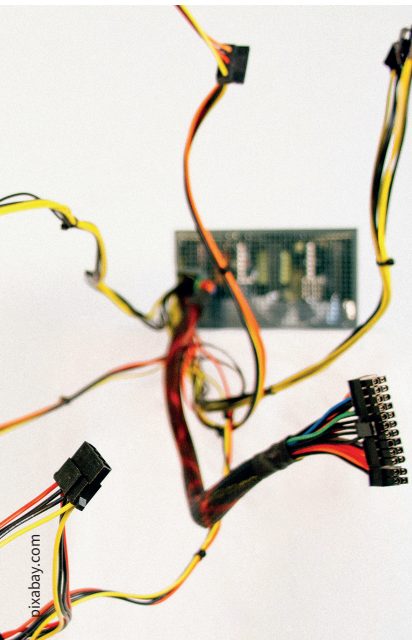
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ELECTRONIC ENGINEERING

B. Eng. | Lippstadt Campus

ELECTRONIC ENGINEERING



ELECTRONIC SYSTEMS ARE EVERYWHERE

In the age of digitization with current application areas such as connected and autonomous driving or Industry 4.0, the discipline of electronics is essential. The tight integration with computer science, which is the only way to develop complex, usually highly interactive systems, currently provides the breeding ground for more than 80% of innovations in application domains such as transport, medicine, telecommunications, automation, and smart home. Electronics is one of the most important disciplines in industry and business. Electronic engineers trained in Germany enjoy an excellent reputation worldwide.

A major goal of the **"Electronic Engineering"** bachelor program is to prepare you for your professional work as an electronic engineer and the involved current and future challenges. In order to achieve this objective, the program not only promotes a close interrelation of the topics of electronics and computer science, but also provides a holistic understanding of system development. This allows you to apply standardized modeling techniques to develop complex systems in an interdisciplinary manner and enables you to create design models with common tools and implement them, for example, using 3D printing technologies.

Short information:

- Degree: Bachelor of Engineering
- Standard study period: 7 semesters
- Practical semester/ semester abroad: included 5th semester
- Location: Lippstadt Campus
- Start date: every winter semester

Language of instruction:

- English

THE FUTURE HAS ALREADY BEGUN – ELECTRONIC ENGINEERING

All in all, you are given an education that enables you to (among other things):

- develop hardware / software prototypes up to the production of printed circuit boards,
- design simple control engineering systems up to distributed technical systems / cyber-physical systems,
- model complex system behavior from requirements to system design and its prototypical implementation,
- design and implement human-centered systems.

The elective modules in the sixth and seventh semester offer the two major fields of study **"Autonomous Systems"** and **"Embedded Electronic Engineering"** for free choice.

The major field of study **"Autonomous Systems"** focuses on deep learning and cyber-physical systems by deepening your competencies in the area of connected, technical systems, as well as machine pattern recognition. You will acquire competencies to understand challenges in the field of autonomous systems, such as autonomous driving, and you will be able to develop solutions for this application domain.

The major field of study **"Embedded Electronic Engineering"** focuses on a deepening of methods and design techniques. We focus on deepening your competencies in the field of hardware/ software co-design techniques up to design as well as analysis techniques for mechatronic and time-critical systems.

CAREER OPPORTUNITIES

In order to allow a direct career entry, the **"Electronic Engineering"** bachelor program ensures high practical relevance. Practical laboratory courses are already done in the first semesters, as addition to the theoretical principles. Here, the theoretical foundations are not only translated into practical units, but also supported by work in interdisciplinary teams, intercultural competencies as well as oral and written communication.

The degree program enables students to take up a qualified job in many areas of industry, with service providers and in the public sector. Fields of activity can be found, among other things, in the electrical or transportation industry: automotive industry, aerospace, automation technology,

components, environmental & energy technology, medical technology, smart home, light or communications technology, industrial and consumer electronics, microsystems, robotics, and transport & logistics.

Due to the acquired technical and interdisciplinary qualifications as well as the high practical relevance of the program, the students have the opportunity for taking a qualified employment in specialist and management positions.

The course also enables a subsequent master's degree, which can lead to a qualified academic career.

