Hochschule Offenburg
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Study Content

The Master's programme in Electrical Engineering/Information Technology (EIM) builds consecutively on corresponding Bachelor's programmes in the relevant subject area and offers in-depth technical and scientific content with close practical relevance to key areas of electrical engineering and information technology.

The teaching modules offered in the Master's programme in Electrical Engineering/Information Technology (EIM) includes **compulsory modules**, specialisation modules and in-depth modules. The compulsory modules with a total of 55 credits convey basic theoretical and mathematical-technical contents necessary for independent scientific activities on the one hand and on the other hand promote the personal development of the students, so that they can assume management tasks and responsibility for their own contributions in their scientific field. The final master thesis proves the ability to work independently on a problem from the respective subject according to scientific methods within typically 6 months.

Furthermore, the students have to choose one of the two **focus areas** Energy and Automation Technology or Communication Technology, each with 21 credits. The following modules can be chosen between the two focus areas:

Focus on Energy and Automation Technology:

- Renewable Energy Systems (5CP)
- Mobile and stationary electric drives (5CP)
- Control Systems I (6CP)
- Control Systems II (5CP)

Focus on Communication Technology:

- High Frequency Technology (7CP)
- Microwave technology (7P)
- Radio communication (7CP)

The modules in these focus areas convey technical-scientific content with close practical relevance in accordance with the state of the art in the respective areas. As a result, basic knowledge from the Bachelor's programme is significantly deepened and expanded. This knowledge enables the graduates to independently carry out research and application-oriented projects (including doctorate) in the relevant subject areas.

Finally, the students have the opportunity to expand their specialist knowledge from one of the two focus areas for two of the following five **specialisation modules**:

- Microelectronics (7CP)
- Advanced Embedded Systems (7CP)
- image processing (7CP)
- signal processing (7CP)
- Applied Research (7CP)

The aim of these specialisation modules is to expand specialist knowledge from the focus areas through well-founded knowledge in key areas of electrical engineering and information technology with close practical relevance. The teaching and learning forms used in the courses, such as independent study of scientific publications, should enable students in particular to acquire new knowledge independently, to use knowledge from related subject areas and to deal with complex tasks.

The detailed content of the modules of the Master's programme EIM is described in the study and examination regulations. Studien- und Prüfungsordnung