

Faculty of Electrical Engineering and Information Technology

Catalogue of Elective Modules

for the Master's program

Electrical Engineering and Information Technology

Version from 26. June 2024

This Document is for information only.

The German version is legally binding.

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Elective modules

Elective modules in the extent specified in the study regulations have to be chosen. The required number of credit points must be achieved.

Technical elective modules

Technical elective modules can be chosen from the list provided, whereby it is recommended to set a focus on one specific area.

Non-technical elective modules

Modules from the entire range of OvGU can be selected - but without engineering modules. Explicitly allowed are also foreign languages, for example German for foreign students.

Attachment: Study- and Examination Schedule of the Master's Degree Program in Electrical Engineering and Information Technology for elective modules

Legend for the study and examination schedule

SWS = Semester hour per week (time required for the course per week)
V = Lecture
Ü = Tutorial
P = Internship
S = Seminar
CP = Credit Points
PL = Type of examination performance

SoSe = Summer semester
WiSe = Winter semester
K = Written examination (stated duration in minutes)
M = Oral examination
PRO = Research Project
R = Referat (Presentation)
***** = Please refer to the module handbook for the examination performance

In accordance with §14 (11) of the General Study and Examination Regulation, the person in charge of the module can specify examination prerequisites for each module, which are required as prerequisites for obtaining CP.

Module overview of the technical elective modules

Allocation: Choice of modules according to the study plan. The required number of CP can be taken from the programme-specific study and examination regulation.

Master Electrical Engineering and Information Technology	SWS		Semester								CP Σ	
			1. (WiSe)		2. (SoSe)		3.		4.			
			CP	PL	CP	PL	CP	PL	CP	PL		
Modules	V Ü P S	V Ü P S										
Automation Systems												30
Automation Lab	0 0 2 0						5	M				5
Digital Automation Systems	2 1 0 0					5	K90					5
Non-linear Control	2 1 0 0			5	M							5
Optimal Control / Predictive Control	2 1 0 0					5	K120					5
Process Control	2 1 0 0			5	M							5
State Estimation	2 2 0 0			5	K90							5
Total credit points by semester in this field						15		15				
Information and Communication Technology												61
Automatic Speech Recognition Systems	2 1 1 0			5	K90							5
Chatbot-Challenge	2 0 0 2			10	*							10

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Master Electrical Engineering and Information Technology	SWS V Ü P S V Ü P S		Semester								CP Σ
			1. (WiSe)		2. (SoSe)		3.		4.		
			CP	PL	CP	PL	CP	PL	CP	PL	
Modules											
Information and Communication Technology											
Computed Tomography I - Methods on CT	2	1	0	0			5	K60			5
Digital Information Processing Laboratory	0	0	2	1			5	M			5
Heterogeneous Computing	2	1	0	0			5	M			5
Image Coding	2	1	0	0			5	M			5
Microwave Engineering	2	1	0	0			5	M			5
Microwave Measurement Techniques (µWMT) / Mikrowellenmesstechnik	2	1	1	0			6	M			6
Seminar „System-on-Chip“	0	0	0	3			5	R			5
System-on-Chip	2	1	0	0			5	M			5
Theoretical Neuroscience II	3	2	0	0			5	M			5
Total credit points by semester in this field					35		26				
Microsystems											
The field "Microsystems" is currently not offered											
Power and Energy											
35											
Control of AC Drives	2	1	0	0			5	K90			5
Digital Protection of Power Networks	2	1	0	0			5	K120			5
Electromagnetic Compatibility (EMC)	2	2	0	0			5	M			5
Power Electronic Components and Systems	2	1	0	0			5	K90			5
Power System Economics and Special Topics	2	1	0	0			5	K90			5
Power System Dynamics	2	1	0	0			5	M			5
Renewable Energy Sources	2	1	0	0			5	K90			5
Total credit points by semester in this field					15		20				
General											
25											
Basics of Medical Image Science	2	1	0	0			5	K90			5
Integrated Project	0	0	0	6			10	PRO			10
Micromechanics	2	2	0	0			5	K90			5
Microsystems Processes and Technologies	3	0	0	0			5	K90			5
Total credit points by semester in this field					10		15				