OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

FACULTY OF ELECTRICAL ENGINEERING AND INFORMATION TECHNOLOGY

Faculty of Electrical Engineering and Information Technology

Catalog of Elective Modules

for the Master's program

Electrical Engineering and Information Technology

This document is for information only.

The German version is legally binding!

7th October 2020

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 th e list provided, whereby it is re commended to set a focus on one specific area.

Non-technical elective modules

Modules from the entire range of OvGU can be selected - but with out engineering modules. Explicitly allowed are also foreign languages, for example German for foreign students.

Catalog of Elective Modules for the Master's program

Electrical Engineering and Information Technology

Legend:

S = weekly hours per semester (SWS)
A = kind of course
- **V** = lecture
- **S** = seminar
- **Ü** = exercises
- **K** = colloquium
- **LP** = laboratory
- **PRO** = scientific project
- **E** = excursion

CP = Credit Points = credits
LN = required precondition (examination credits)
PL = kind of examination
- **K** = exam
- **M** = oral examination
- **H** = thesis
- **EA** = experimental work
- **PRO** = scientific project
- **R** = presentation

Time of the examination:

In the examination period at the end of the semester during what the module was used.

Technical Elective Modules

Allocation: 40 CP have to be fulfilled.

Automation Systems	1. Semester (W)			2. Semester			3.Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
Automation Lab							5	2	LP				5	2	LP
Non-linear Control				5	3	V/Ü							5	3	V/Ü
Process Control				5	3	V/Ü							5	3	V/Ü
Optimal Control / Predictive Control							5	3	V/Ü				5	3	V/Ü
Digital Automation Systems							5	3	V/Ü						

Information and Communication Technology	1. Semester (W)			2. Semester			3.Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
Introduction to RF Communication Systems				5	3	V/Ü							5	3	V/Ü
Image Coding							5	3	V/Ü				5	3	V/Ü
Medical Imaging CT				5	3	V/Ü							5	3	V/Ü
Speech Recognition				5	4	V/Ü/LP							5	4	V/Ü/LP
FPGA and Microcontroller Programming 1 u. 2				2	2	LP	3	3	LP				5	5	LP
Theoretical Neuroscience II				5	5	V/Ü							5	5	V/Ü
Digital Information Processing Laboratory				5	3	S/LP							5	3	S/LP

Microsystems	1. Semester (W)			2. Semester			3.Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A

The Field of Study „Mikrosystems“ is not offered at the moment

Power and Energy	1. Semester (W)			2. Semester			3.Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
Electromagnetic Compatibility (EMC)							5	4	V/Ü				5	4	V/Ü
Power Electronic Components and Systems							5	3	V/Ü				5	3	V/Ü
Renewable Energy Resources				5	3	V/Ü							5	3	V/Ü
Power System Ecomomics and Special Topics							5	3	V/Ü				5	3	V/Ü
Digital Protection of Power Networks				5	3	V/Ü							5	3	V/Ü
Control of AC Drives							5	3	V/Ü				5	3	V/Ü

General	1. Semester (W)			2. Semester			3.Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
Integrated Project							10	6	PRO				10	6	PRO
Ultrasonic Sensors for Imaging				5	3	V/Ü							5	3	V/Ü
Introduction into Medical Imaging Technologies							5	3	V/Ü				5	3	V/Ü
Power Systems Control and Optimization				5	3	V/Ü							5	3	V/Ü

Examination Plan for the Technical Elective Modules

Automation Systems	LN	PL	CP
Automotion Lab	---	M	5
Non-linear Control	---	M	5
Process Control	---	M	5
Optimal Control / Predictive Control	---	K120	5
Digital Automation Systems	---	K90	5

Information and Communication Technology	LN	PL	CP
Introduction to RF Communication Systems	---	K90	5
Image Coding	---	M	5
Medical Imaging CT	---	M	5
Speech Recognition	Exercise proof	K90	5
FPGA and Microcontroller Programming 1 u. 2	---	M	5
Theoretical Neuroscience II	---	M	5
Digital Information Processing Laboratory	Laboratory proof	M	5

Microsystems	LN	PL	CP

The Field of Study „Mikrosystems“ is not offered at the moment

Power and Energy	LN	PL	CP
Electromagnetic Compatibility (EMC)	---	M	5
Power Electronic Components and Systems	---	M	5
Renewable Energy Resources	---	K90	5
Power System Ecomomics and Special Topics	---	K90	5
Digital Protection of Power Networks	---	K120	5
Control of AC Drives	---	K90	5

General	LN	PL	CP
Integrated Project	---	PRO	10
Ultrasonic Sensors for Imaging	---	M	5
Introduction to Medical Imaging Technologies	Exercise proof	K90	5
Power Systems Control and Optimization	---	M	5