OTTO VON GUERICKE
UNIVERSITÄT MAGDEBURG

EIT

FAKULTÄT FÜR
ELEKTROTECHNIK UND
INFORMATIONSTECHNIK

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!

2nd October 2013

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, whe reby 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

Automation Systems	1. Semester			2. Semester			3. Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
Distributed Control Systems				5	4	V/Ü/LP							5	4	V/Ü/LP
Automotion 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
Structure and Behaviour Modelling - UML							5	3	V/Ü				5	3	V/Ü

Information and Communication Technology	1. Semester			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				2	2	LP	3	3	LP				5	5	LP
Theoretical Neuroscience II				5	5	V/Ü							5	5	V/Ü
Mobile and Satellite Communication Systems							5	3	V/Ü				5	3	V/Ü
Advanced Antenna Theory							5	3	V/Ü				5	3	V/Ü
Digital Information Processing Laboratory				5	3	S/LP							5	3	S/LP

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Microsystems	1. Semester			2. Semester			3. Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
CMOS Si Process							5	3	V/Ü				5	3	V/Ü
Sensors and Microsystems				5	3	V/Ü	5	3	V/Ü				10	6	V/Ü
Optoelectronic and Photovoltaic Devices				5	3	V/Ü							5	3	V/Ü
Ultrasonic Sensors for Imaging							5	3	V/LP				5	3	V/LP
Introduction into Medical Imaging				5	3	V/Ü							5	3	V/Ü
MEMS-Technologies				5	4	V/Ü							5	4	V/Ü
Packaging of Microelectronics and Microsystems				5	4	V/Ü							5	4	V/Ü

Power and Energy	1. Semester			2. Semester			3. Semester			4. Semester			Summe		
	CP	S	A	CP	S	A	CP	S	A	CP	S	A	CP	S	A
Modern Concepts of EMC and EMC Measurements				5	3	V/Ü	5	3	Ü/LP				10	6	V/Ü/LP
Advanced Power Electronics				5	3	V/Ü/LP							5	3	V/Ü/LP
Power Electronic Components and Systems							5	3	V/Ü				5	3	V/Ü
Renewable Energy Sources				5	3	V/Ü							5	3	V/Ü
Power System Economics and Special Topics							5	3	V/Ü				5	3	V/Ü

General	1. Semester			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

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Examination Plan for the Technical Elective Modules

Automation Systems	LN	PL	CP
Distributed Control Systems	-----	K90	5
Automotion Lab	-----	M	5
Non-linear Control	-----	M	5
Process Control	-----	M	5
Structure and Behaviour Modelling - UML	-----	M	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	Übungsschein	K90	5
FPGA and Microcontroller Programming	-----	M	5
Theoretical Neuroscience II	-----	M	5
Mobile and Satellite Communication Systems	-----	M	5
Advanced Antenna Theory	-----	M	5
Digital Information Processing Laboratory	Praktikumsschein	M	5

Microsystems	LN	PL	CP
CMOS Si Process	-----	K90	5
Sensors and Microsystems	-----	M	10
Optoelectronic and Photovoltaic Devices	-----	M	5
Ultrasonic Sensors for Imaging	-----	M	5
Introduction into Medical Imaging	-----	M	5
MEMS-Technologies	Übungsschein	K90	5
Packaging of Microelectronics and Microsystems	-----	K90	5

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Power and Energy	LN	PL	CP
Modern Concepts of EMC and EMC Measurements	-----	M	10
Advanced Power Electronics	-----	M	5
Power Electronic Components and Systems	-----	M	5
Renewable Energy Sources	-----	K90	5
Power System Economics and Special Topics	-----	K90	5

General	LN	PL	CP
Integrated Project	-----	PRO	10