

Exclosure to Subject Specific Regulations from 26.11.2014  
for Master-Programme Microelectronics and Microsystems  
at TUHH

Programme Director: Prof. Wolfgang Krautschneider

Total: 120 CP

Number of Specialisations to choose: 1

# Course Scheme Master Microelectronics and Microsystems (IMPMM)

Consolidated Version  
for Study Cohort: WiSe 14/15  
according to Decision of Academic Senate: 26.04.2017  
and Approval of Chair from: 17.05.2017  
Replaces Version from: 25.06.2014  
In Force on: 01.04.2016  
Out of Force on: 30.09.2017

Re com. Term	Module Name (German)	Modul Name (English)	Institute	C/EC (1)	CM/OM (2)	Grade	Examination Form(3)	CP (4)	Course Name (German)	Course Name (English)	Course Form LV(5)	Language (6)	SWS (7)	Sem. LV
<b>Core qualification</b> Compulsory Courses: 28 LP Optional Courses: 44 LP														
1	CMOS-Nanoelektronik mit Praktikum	CMOS Nanoelectronics with Practice	E-9	EC	CM	Yes	KI	6						
									CMOS-Nanoelektronik	CMOS Nanoelectronics	VL	EN	2	1
									CMOS-Nanoelektronik	CMOS Nanoelectronics	UE	EN	1	1
									CMOS-Nanoelektronik	CMOS Nanoelectronics	PR	EN	2	1
1	Elektronische Bauelemente und Schaltungen	Electronic Devices and Circuits	E-9	EC	CM	Yes	MdIP	6						
									Elektronische Bauelemente für IMPMM	Electronic Devices	VL	EN	2	1
									Schaltungsdesign	Circuit Design	VL	EN	2	1
1	Mikrosystemtechnik	Microsystem Engineering	E-7	EC	CM	Yes	KI	6						
									Mikrosystemtechnik	Microsystem Engineering	VL	EN	2	1
									Mikrosystemtechnik	Microsystem Engineering	UE	EN	1	1
									Mikrosystemtechnik	Microsystem Engineering	POL	EN	1	1
1	Mikrosystemtechnologie in Theorie und Praxis	Microsystems Technology in Theory and Practice	E-7	EC	CM	Yes	MdIP	6						
									Mikrosystemtechnologie	Microsystems Technology	VL	EN	2	1
									Mikrosystemtechnologie	Microsystems Technology	POL	EN	2	1
2	Grundlagen des IC-Entwurfes	Fundamentals of IC Design	E-9	EC	CM	Yes	MdIP	6						
									Grundlagen des IC-Entwurfes	Fundamentals of IC Design	VL	DE/EN	2	2
									Grundlagen des IC-Entwurfes	Fundamentals of IC Design	PR	DE/EN	2	2
2	Halbleiterseminar	Semiconductor Seminar	E-9	EC	CM	Yes	Re	2						
									Halbleiterseminar	Semiconductor Seminar	SE	EN	2	2
2	Mikrosystementwurf	Microsystem Design	E-7	EC	CM	Yes	MdIP	6						
									Mikrosystementwurf	Microsystem Design	VL	EN	2	2
									Mikrosystementwurf	Microsystem Design	PR	EN	3	2
2	Technischer Ergänzungskurs für IMPMM - Bereich ET (laut FSPO)	Technical Elective Complementary Course for IMPMM - field ET (according to FSPO)	E-9	EC	CM	Yes	lt. FSPO	6						

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2-3	Praktischer Schaltungsentwurf analog und digital	Laboratory: Analog and Digital Circuit Design	E-9	EC	CM	Yes	KI	6						
									Praktischer Schaltungsentwurf digital	Laboratory: Digital Circuit Design	PR	DE	2	2
									Praktischer Schaltungsentwurf analog	Laboratory: Analog Circuit Design	PR	DE	2	3
3	Projektarbeit IMPMM	Project Work IMPMM	E-9	C	CM	Yes	PA lt. FSPO	16						
3	Seminar Informationstechnik	Seminar Communications Engineering	E-8	EC	CM	Yes	Re	2						
									Seminar Informationstechnik	Seminar Communications Engineering	SE	DE/EN	2	3
3	Technischer Ergänzungskurs für IMPMM - Bereich TUHH (laut FSPO)	Technical Elective Complementary Course for IMPMM - field TUHH (according to Subject Specific Regulations)	E-9	EC	CM	Yes	lt. FSPO	6						
1-3	Betrieb & Management	Business & Management	W-1	C	OM			6	Selection out of Catalogue					
1-3	Nichttechnische Ergänzungskurse im Master	Nontechnical Elective Complementary Courses for Master	0-TUHH	C	OM			6	Selection out of Catalogue					

**Specialisation Communication and Signal Processing** Compulsory Courses: 0 LP Optional Courses: 18 LP

1	Hochfrequenztechnik	Microwave Engineering	E-3	EC	CM	Yes	KI	6						
									Hochfrequenztechnik	Microwave Engineering	VL	DE/EN	2	1
									Hochfrequenztechnik	Microwave Engineering	HÜ	DE/EN	2	1
									Hochfrequenztechnik	Microwave Engineering	PR	DE/EN	1	1
1	Kommunikationsnetze I - Analyse und Struktur	Communication Networks I - Analysis and Structure	E-4	EC	CM	Yes	Ko	6						
									Analyse und Struktur von Kommunikationsnetzen	Analysis and Structure of Communication Networks	VL	EN	2	1
									Ausgewählte Themen der Kommunikationsnetze	Selected Topics of Communication Networks	POL	EN	2	1
									Übung Kommunikationsnetze	Communication Networks Exercise	POL	EN	1	1
1	The Computational Web	The Computational Web	E-13	EC	CM	Yes	PA	6						
									The Computational Web	The Computational Web	VL	EN	2	1
									The Computational Web	The Computational Web	PS	EN	2	1
2	Faseroptik und Integrierte Optik	Fibre and Integrated Optics	E-12	EC	CM	Yes	KI	4						
									Faseroptik und Integrierte Optik	Fibre and Integrated Optics	VL	EN	2	2
									Faseroptik und Integrierte Optik (Übung)	Fibre and Integrated Optics (Problem Solving Course)	UE	EN	1	2
2	Mobilkommunikation	Mobile Communications	E-8	EC	CM	Yes	KI	4						
									Mobilkommunikation	Mobile Communications	VL	EN	2	2
									Mobilkommunikation	Mobile Communications	HÜ	EN	1	2
3	3D Computer Vision	3D Computer Vision	E-2	EC	CM	Yes	KI	6						

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									3D Computer Vision	3D Computer Vision	VL	EN	2	3
									3D Computer Vision	3D Computer Vision	UE	EN	2	3
3	Digitale Audiosignalverarbeitung	Digital Audio Signal Processing	E-8	EC	CM	Yes	KI	4						
									Digitale Audiosignalverarbeitung	Digital Audio Signal Processing	VL	EN	2	3
									Digitale Audiosignalverarbeitung	Digital Audio Signal Processing	HÜ	EN	1	3
3	Digitale Bildanalyse	Digital Image Analysis	E-2	EC	CM	Yes	KI	6						
									Digitale Bildanalyse	Digital Image Analysis	VL	EN	4	3
<b>Specialisation Microelectronics Complements</b> Compulsory Courses: 0 LP Optional Courses: 18 LP														
1	Medizinelektronik	Electronic Circuits for Medical Applications	E-9	EC	CM	Yes	MdIP	6						
									Medizinelektronik	Electronic Circuits for Medical Applications	VL	EN	2	1
									Medizinelektronik	Electronic Circuits for Medical Applications	UE	EN	1	1
									Medizinelektronik	Electronic Circuits for Medical Applications	PR	EN	1	1
2	Optoelektronik I - Wellenoptik	Optoelectronics I - Wave Optics	E-12	EC	CM	Yes	KI	4						
									Optoelektronik I: Wellenoptik	Optoelectronics I: Wave Optics	VL	EN	2	2
									Optoelektronik I: Wellenoptik (Übung)	Optoelectronics I: Wave Optics (Problem Solving Course)	UE	EN	1	2
3	Digitale Signalverarbeitung und Digitale Filter	Digital Signal Processing and Digital Filters	E-8	EC	CM	Yes	KI	6						
									Digitale Signalverarbeitung und Digitale Filter	Digital Signal Processing and Digital Filters	VL	EN	3	3
									Digitale Signalverarbeitung und Digitale Filter	Digital Signal Processing and Digital Filters	HÜ	EN	1	3
3	Optoelektronik II - Quantenoptik	Optoelectronics II - Quantum Optics	E-12	EC	CM	Yes	KI	4						
									Optoelektronik II: Quantenoptik	Optoelectronics II: Quantum Optics	VL	EN	2	3
									Optoelektronik II: Quantenoptik (Übung)	Optoelectronics II: Quantum Optics (Problem Solving Course)	UE	EN	1	3
3-4	Design von hochkomplexen integrierten Systemen und CAD-Werkzeuge	Design of Highly Complex Integrated Systems and CAD Tools	E-9	EC	CM	Yes	MdIP	6						
									CAD-Werkzeuge	CAD Tools	VL	EN	2	3
									Design von hochkomplexen integrierten Systemen	Design of Highly Complex Integrated Systems	VL	EN	2	4
<b>Thesis</b> Compulsory Courses: 30 LP Optional Courses: 0 LP														
4	Masterarbeit	Master Thesis	not defined	C	CM	Yes	lt. FSPO	30						

## Explanation:

<sup>1</sup>C=Compulsory, EC=Elective Compulsory

<sup>2</sup>CM=Compulsory Defined Module, OM=Optional Defined Module

<sup>3</sup>MdlP=Oral exam, PA=Project, Kl=Written exam, Ko=Colloquium, KI=Written exam, SA=Written elaboration, Re=Presentation, MdlP=Oral exam, Re=Presentation, lt. FSPO=according to Subject Specific Regulations,

HA=Homework, PA=Project, PA lt. FSPO=Project (accord. to Subject Specific Regulations)

<sup>4</sup>CP=Credit Points

<sup>5</sup>VL=Lecture, SE=Seminar, UE=Recitation Section (small), POL=Problem-based Learning, PR=Laboratory Course, PS=Project Seminar, HÜ=Recitation Section (large)

<sup>6</sup>DE=German, EN=English, DE/EN=German and English

<sup>7</sup>SWS=Contact hours