Exclosure to Subject Specific Regulations
from 25.07.2018
for Master-Programme
Microelectronics and Microsystems
at TUHH
Programme Director: Prof. Hoc Khiem Trieu
Total: 120 CP
Number of Specilisations to choose: 1

Course Scheme Master Microelectronics and Microsystems (IMPMM)

Consolidated Version
for Study Cohort: WiSe22/23
en_head_sda
and Approval of Chair from:
11.01.2023
Replaces Version from: 20.04.2022
In Force on: 01.10.2022
Out of Force on: 30.09.2025

Information regarding the lectures are available in the TUHH modul manuals as well as in the course catalogue.

	Module							Examination			Course Work		
	Re-com. Term	Module Name (German / English)	Language	ModuleResponsability	Institute	C/EC (1)	CM/ OM (2)	CP (4)	Grade	Exami-nation Form(3)	Compulsory	Course Work Type	Bonus (in %)
Core Qualification Compulsory Courses: 30 LP Optional Courses: 42 LP													
	1	Digitale Nachrichtenübertragung / Digital Communications	DE / EN	Prof. Bauch	E-8	EC	CM	6	Y	KL	Y	SA	0
	1	Entwurf Integrierter Schaltungen / Integrated Circuit Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	KL			
	1	Mikrosystemtechnik / Microsystem Engineering	EN	Dr. rer. nat. Kusserow	E-7	EC	CM	6	Y	KL	N	RE	10
	1	Mikrosystemtechnologie in Theorie und Praxis / Microsystems Technology in Theory and Practice	EN	Prof. Trieu	E-7	EC	CM	6	Y	MP	Y	FFST	0
	1	Technischer Ergänzungskurs für IMPMM - Bereich ET (laut FSPO) / Technical Elective Complementary Course for IMPMM - field ET (according to Subject Specific Regulations)		Prof. Trieu	E-7	EC	OM	6	according to Subject Specific Regulations				
	2	Erweiterter IC-Entwurf / Advanced IC Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	KL			
	2	Halbleitertechnologie / Semiconductor Technology	DE / EN	Prof. Trieu	E-7	EC	CM	6	Y	MP			
	2	Mikrosystementwurf / Microsystem Design	EN	Dr. rer. nat. Kusserow	E-7	EC	CM	6	Y	MP	Y	SA	0
	2	Technischer Ergänzungskurs für IMPMM - Bereich TUHH (laut FSPO) / Technical Elective Complementary Course for IMPMM - field TUHH (according to Subject Specific Regulations)		Prof. Trieu	E-7	EC	OM	6	according to Subject Specific Regulations				
	3	Projektarbeit IMPMM / Project Work IMPMM		Dozenten des SD E	E-7	C	CM	15	Y	STA			
	3	Seminar für IMPMM / Seminar for IMPMM	EN	Prof. Trieu	E-7	C	CM	3	Y	RE			
	1-3	Betrieb & Management / Business & Management	DE / EN	Prof. Meyer	W-1	C	OM	6	Selection out of seperatly published Catalogue				
	1-3	Nichttechnische Angebote im Master / Non-technical Courses for Master	DE / EN	Richter	0-TUHH	C	OM	6	Selection out of seperatly published Catalogue				
Specialisation Communication and Signal Processing Compulsory Courses: 0 LP Optional Courses: 18 LP													
	1	Hochfrequenztechnik / Microwave Engineering	DE / EN	Prof. Kölpin	E-3	EC	CM	6	Y	KL	Y	FFST	0

	Module							Examination			Course Work		
	Re-com. Term	Module Name (German / English)	Language	ModuleResponsability	Institute	C/EC (1)	CM/ OM (2)	CP (4)	Grade	Exami-nation Form(3)	Compulsory	Course Work Type	Bonus (in %)
	1	Kommunikationsnetze / Communication Networks	EN	Prof. Timm-Giel	E-4	EC	CM	6	Y	RE			
	2	Satellitenkommunikation und Navigation / Satellite Communications and Navigation	EN	Prof. Bauch	E-8	EC	CM	6	Y	MP			
	2	Weiterführende Konzepte der drahtlosen Kommunikation / Advanced Concepts of Wireless Communications	EN	Dr. Grünheid	E-8	EC	CM	6	Y	KL			
	3	Ausgewählte Aspekte der Kommunikation und Signalverarbeitung / Selected Aspects of Communication and Signal Processing	EN	Prof. Trieu	SD-E	EC	CM	6	Y	MP			
	3	Bildverarbeitung / Image Processing	DE / EN	Prof. Knopp	E-5	EC	CM	6	Y	KL			
	3	COSIMA (Competition in Microsystem Application) / COSIMA (Competition in Microsystem Application)	EN	Prof. Trieu	E-7	EC	CM	6	Y	FFA			
	3	Digitale Audiosignalverarbeitung / Digital Audio Signal Processing	EN	Prof. Zölzer	E-8	EC	CM	6	Y	KL			
	3	Digitale Signalverarbeitung und Digitale Filter / Digital Signal Processing and Digital Filters	EN	Prof. Bauch	E-8	EC	CM	6	Y	KL			
	3	Medizinische Bildgebung / Medical Imaging	DE / EN	Prof. Knopp	E-5	EC	CM	6	Y	KL			
Specialisation Embedded Systems Compulsory Courses: 0 LP Optional Courses: 18 LP													
	1	Energieeffizienz in eingebetteten Systemen / Energy Efficiency in Embedded Systems	DE / EN	Prof. Kulau	E-EXK3	EC	CM	6	Y	MP			
	1	Rechnerarchitektur / Computer Architecture	DE / EN	Prof. Falk	E-13	EC	CM	6	Y	KL	N	FFST	15
	2	Eingebettete Systeme / Embedded Systems	EN	Prof. Falk	E-13	EC	CM	6	Y	KL	Y	FFST	10
	2	Entwurf von Dependable Systems / Design of Dependable Systems	DE / EN	Prof. Fey	E-13	EC	CM	6	Y	MP	Y	FFST	0
	2	Research Based Learning - Smart Sensing Applications / Research Based Learning - Smart Sensing Applications	DE / EN	Prof. Kulau	E-EXK3	EC	CM	6	Y	SA			
	2	Smart Sensors / Smart Sensors	DE / EN	Prof. Kulau	E-EXK3	EC	CM	6	Y	MP			
	2	Software für Eingebettete Systeme / Software for Embedded Systems	DE / EN	Prof. Renner	E-24	EC	CM	6	Y	KL	N	TE	10
	3	Ausgewählte Aspekte Eingebetteter Systeme / Selected Aspects of Embedded Systems	EN	Prof. Trieu	SD-E	EC	CM	6	Y	MP			
	3	COSIMA (Competition in Microsystem Application) / COSIMA (Competition in Microsystem Application)	EN	Prof. Trieu	E-7	EC	CM	6	Y	FFA			
	3	Fortgeschrittener Entwurf von Chip-Systemen (Praktikum) / Advanced System-on-Chip Design (Lab)	DE / EN	Prof. Falk	E-13	EC	CM	6	Y	FFA			
	3-4	Entwurf Digitaler Schaltungen / Digital Circuit Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	MP			

	Module							Examination			Course Work		
	Re-com. Term	Module Name (German / English)	Language	ModuleResponsability	Institute	C/EC (1)	CM/ OM (2)	CP (4)	Grade	Exami-nation Form(3)	Compulsory	Course Work Type	Bonus (in %)
Specialisation Microelectronics Complements Compulsory Courses: 0 LP Optional Courses: 18 LP													
	1	Silizium Photonik / Silicon Photonics	EN	Dr. Lipka	E-7	EC	CM	6	Y	MP			
	1-2	Entwurf Digitaler Schaltungen / Digital Circuit Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	MP			
	2	EMV I: Kopplungen, Gegenmaßnahmen und Prüfverfahren / EMC I: Coupling Mechanisms, Countermeasures and Test Procedures	DE / EN	Prof. Schuster	E-18	EC	CM	6	Y	MP	Y	RE	0
	2	Faseroptik und Integrierte Optik / Fibre and Integrated Optics	EN	Prof. Eich	E-12	EC	CM	4	Y	KL			
	2	Optoelektronik I - Wellenoptik / Optoelectronics I - Wave Optics	EN	Dr. Petrov	E-12	EC	CM	4	Y	KL			
	2	Praktischer Schaltungsentwurf - Digital / Laboratory: Digital Circuit Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	FFA			
	3	Ausgewählte Aspekte der Mikroelektronik und Mikrosysteme / Selected Aspects of Microelectronics and Microsystems	EN	Prof. Trieu	SD-E	EC	CM	6	Y	MP			
	3	COSIMA (Competition in Microsystem Application) / COSIMA (Competition in Microsystem Application)	EN	Prof. Trieu	E-7	EC	CM	6	Y	FFA			
	3	EMV II: Signalintegrität und Spannungsversorgung elektronischer Systeme / EMC II: Signal Integrity and Power Supply of Electronic Systems	DE / EN	Prof. Schuster	E-18	EC	CM	6	Y	MP	Y	RE	0
	3	Mixed-signal Schaltungsentwurf / Mixed-signal Circuit Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	KL	Y	FFST	5
	3	Optoelektronik II - Quantenoptik / Optoelectronics II - Quantum Optics	EN	Dr. Petrov	E-12	EC	CM	4	Y	KL			
	3	Praktischer Schaltungsentwurf - Analog / Laboratory: Analog Circuit Design	EN	Prof. Kuhl	E-9	EC	CM	6	Y	FFA			
Thesis Compulsory Courses: 30 LP Optional Courses: 0 LP													
	4	Masterarbeit / Master Thesis		Professoren der TUHH	0-TUHH	C	CM	30	Y	AB			

Explanation:

[1]C=Compulsory, EC=Elective Compulsory
[2]CM=Compulsory Defined Module, OM=Optional Defined Module
[3]KL=Written exam, SA=Written elaboration, FFST=Subject theoretical and practical work, FFA=Subject theoretical and practical work, MP=Oral exam, RE=Presentation, STA=Study work, AB=Thesis, SA lt. FPrO=Written elaboration (accord. to Internship Regulations), TE=Attestation
[4]CP=Credit Points
[5]VL=Lecture, SE=Seminar, GÜ=Recitation Section (small), PBL=Project-/problem-based Learning, PR=Practical Course, HÜ=Recitation Section (large)
[6]DE=German, EN=English, DE/EN=German and English
[7]SWS=Contact hours