Exclosure to Subject Specific Regulations
from 18.07.2018
for Master-Programme Materialwissenschaft
at TUHH
Programme Director: Prof. Jörg Weißmüller
Total: 120 CP
Number of Specilisations to choose: 1

Course Scheme Master Materials Science (MAMS)

Consolidated Version
for Study Cohort: WiSe21/22
en_head_sda
and Approval of Chair from:
04.05.2022
Replaces Version from: 17.03.2021
Out of Force on: 30.09.2024

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: 66 LP Optional Courses: 0 LP													
	1	Angewandte Computermethoden der Materialwissenschaft / Applied Computational Methods for Material Science	DE / EN	Prof. Huber	M-22	C	CM	6	Y	FFA			
	1	Materialphysik und atomare Materialmodellierung / Materials Physics and Atomistic Materials Modeling	DE	Prof. Huber	M-22	C	CM	6	Y	KL			
	1	Phänomene und Methoden der Materialwissenschaften / Phenomena and Methods in Materials Science	DE	Prof. Weißmüller	M-22	C	CM	6	Y	KL			
	2	Fortgeschrittenenpraktikum Materialwissenschaften / Advanced Laboratory Materials Sciences	DE / EN	Prof. Weißmüller	M-22	C	CM	6	N	SA			
	2	Mechanische Eigenschaften / Mechanical Properties	DE / EN	Dr. Lilleodden	M-9	C	CM	6	Y	KL			
	2	Mehrphasige Materialien / Multiphase Materials	DE	Prof. Meißner	M-11	C	CM	6	Y	KL	Y	SA	0
	3	Moderne Funktionsmaterialien / Advanced Functional Materials	DE	Prof. Huber	M-22	C	CM	6	Y	RE			
	3	Studienarbeit Moderne Probleme der Materialwissenschaften / Study work on Modern Issues in the Materials Sciences		Prof. Weißmüller	M-22	C	CM	12	Y	STA			
	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				
	1-3	Betrieb & Management / Business & Management	DE / EN	Prof. Meyer	W-1	C	OM	6	Selection out of seperatly published Catalogue				
Specialisation Engineering Materials Compulsory Courses: 0 LP Optional Courses: 24 LP													
	1	Kunststoffe / Polymers	DE / EN	Dr. Wittich	M-11	EC	CM	6	Y	KL			
	2	Aufbau und Eigenschaften der Faser-Kunststoff-Verbunde / Structure and properties of fibre-polymer-composites	DE / EN	Prof. Fiedler	M-11	EC	CM	6	Y	KL			

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	2	Ermüdung metallischer Strukturwerkstoffe und Verfahren für die Lebensdauerverlängerung / Fatigue of metallic structural materials and methods for extending service life	DE / EN	Dr. Kashaev	M-11	EC	CM	6	Y	KL			
	2	Verarbeitung von Faser-Kunststoff-Verbunde / Processing of fibre-polymer-composites	DE / EN	Prof. Fiedler	M-11	EC	CM	6	Y	KL			
	3	Konstruieren mit Faser-Kunststoff-Verbunden / Design with fibre-polymer-composites	DE / EN	Prof. Fiedler	M-11	EC	CM	6	Y	KL			
	3	Materialprüfung, Bauzustands- und Schadensanalyse / Examination of Materials, Structural Condition and Damages	DE	Prof. Schmidt-Döhl	B-3	EC	CM	6	Y	KL			
	3	Materialwissenschaftliches Seminar / Materials Science Seminar	DE / EN	Prof. Weißmüller	M-22	EC	OM	6	Selection out of Catalogue below				
	3	Metallische und Hybride Werkstoffe für den Leichtbau / Metallic and Hybrid Light-weight Materials	EN	Prof. Rutner	B-8	EC	CM	6	Y	MP			
Specialisation Modeling Compulsory Courses: 0 LP Optional Courses: 24 LP													
	1	Werkstoffmodellierung / Materials Modeling	DE	Prof. Cyron	M-15	EC	CM	6	Y	KL			
	2	High-Order FEM / High-Order FEM	EN	Prof. Düster	M-10	EC	CM	6	Y	KL	N	RE	10
	2	Methoden der theoretischen Materialphysik / Methods in Theoretical Materials Science	DE / EN	Prof. Müller	M-9	EC	CM	6	Y	MP			
	2	Numerische Algorithmen in der Strukturmechanik / Numerical Algorithms in Structural Mechanics	DE	Prof. Düster	M-10	EC	CM	6	Y	KL			
	2	Numerische Strukturdynamik / Computational Structural Dynamics	DE	Prof. Düster	M-10	EC	CM	6	Y	KL			
	2	Quantenmechanik von Festkörpern / Quantum Mechanics of Solids	DE / EN	Prof. Müller	M-9	EC	CM	6	Y	MP			
	3	Kontinuumsmechanik / Continuum Mechanics	DE	Prof. Cyron	M-15	EC	CM	6	Y	KL			
	3	Materialwissenschaftliches Seminar / Materials Science Seminar	DE / EN	Prof. Weißmüller	M-22	EC	OM	6	Selection out of Catalogue below				
	3	Nichtlineare Strukturanalyse / Nonlinear Structural Analysis	DE / EN	Prof. Düster	M-10	EC	CM	6	Y	KL			
Specialisation Nano and Hybrid Materials Compulsory Courses: 0 LP Optional Courses: 24 LP													
	1	BIO II: Biomaterialien / BIO II: Biomaterials	EN	Prof. Morlock	M-3	EC	CM	3	Y	KL			
	1	Mikrosystemtechnologie / Microsystems Technology	EN	Prof. Trieu	E-7	EC	CM	4	Y	MP			
	2	BIO II: Gelenkersatz / BIO II: Artificial Joint Replacement	DE	Prof. Morlock	M-3	EC	CM	3	Y	KL			

Module							Examination			Course Work		
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2	Experimentelle Mikro- und Nanomechanik / Experimental Micro- and Nanomechanics	DE / EN	Dr. Lilleodden	M-9	EC	CM	6	Y	KL			
2	Halbleiterseminar / Semiconductor Seminar	EN	Prof. Kuhl	E-9	EC	CM	2	Y	RE			
2	Optoelektronik I - Wellenoptik / Optoelectronics I - Wave Optics	EN	Dr. Petrov	E-12	EC	CM	4	Y	KL			
2	Quantenmechanik von Festkörpern / Quantum Mechanics of Solids	DE / EN	Prof. Müller	M-9	EC	CM	6	Y	MP			
2-3	Grenzflächen und grenzflächenbestimmte Materialien / Interfaces and interface-dominated Materials	DE / EN	Prof. Huber	M-22	EC	CM	6	Y	KL			
3	Materialwissenschaftliches Seminar / Materials Science Seminar	DE / EN	Prof. Weißmüller	M-22	EC	OM	6	Selection out of Catalogue below				
3	Optoelektronik II - Quantenoptik / Optoelectronics II - Quantum Optics	EN	Dr. Petrov	E-12	EC	CM	4	Y	KL			
3	Partikeltechnologie und Feststoffverfahrenstechnik / Particle Technology and Solid Matter Process Technology	DE / EN	Prof. Heinrich	V-3	EC	CM	6	Y	KL	Y	SA	0
Thesis Compulsory Courses: 30 LP Optional Courses: 0 LP												
4	Masterarbeit / Master Thesis		Professoren der TUHH	0-TUHH	C	CM	30	Y	AB			

Materials Science Seminar

Course					Examination			
Course Name (German / English)	Course Form LV(5)	Language (6)	SWS (7)	Sem. LV	CP (4)	Grade	Examination Form(3)	Additional information
Seminar keramische Hochleistungsmaterialien / Seminar Advanced Ceramics	SE	DE/EN	2	WiSe/SoSe	3	Y	RE	
Seminar Metallische Nanomaterialien / Seminar	SE	DE/EN	2	WiSe/SoSe	3	Y	RE	
Seminar Verbundwerkstoffe / Seminar Composites	SE	DE/EN	2	WiSe/SoSe	3	Y	RE	
Seminar zu grenzflächenbestimmten Materialien / Seminar on interface-dominated materials	SE	DE/EN	2	WiSe/SoSe	3	Y	RE	

Explanation:
[1]C=Compulsory, EC=Elective Compulsory
[2]CM=Compulsory Defined Module, OM=Optional Defined Module
[3]KL=Written exam, SA=Written elaboration, 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)
[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