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

TUHH
Hamburg University of Technology

Course Scheme Master Materials Science (MAMS)

Consolidated Version
for Study Cohort: WiSe17/18
according to Decision of Academic Senate: 25.07.2018
and Approval of Chair from: 22.08.2018
Replaces Version from: 26.04.2017
In Force on: 01.10.2018
Out of Force on: 30.09.2020

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

Module							Examination		
Recom. Term	Module Name (German / English)	Language	Module Responsability	Institute	C/EC (1)	CM/ OM (2)	CP (4)	Grade	Examination Form(3)
Core qualification Compulsory Courses: 66 LP Optional Courses: 0 LP									
1	Materialphysik und atomare Materialmodellierung / Materials Physics and Atomistic Materials Modeling	DE / EN	Prof. Huber	M-22	C	CM	6	Y	KL
1	Mehrphasige Materialien / Multiphase Materials	DE / EN	Prof. Fiedler	M-11	C	CM	6	Y	KL
1	Ringvorlesung: Multiskalenmaterialien / Lecture: Multiscale Materials	DE	Prof. Schneider	M-9	C	CM	6	Y	RE
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	Phänomene und Methoden der Materialwissenschaften / Phenomena and Methods in Materials Science	DE / EN	Prof. Huber	M-22	C	CM	6	Y	KL
3	Moderne Funktionsmaterialien / Advanced Functional Materials	DE / EN	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 Ergänzungskurse im Master / Nontechnical Elective Complementary 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	

Module							Examination		
Recom. Term	Module Name (German / English)	Language	Module Responsability	Institute	C/EC (1)	CM/ OM (2)	CP (4)	Grade	Examination Form(3)
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	Faser-Kunststoff-Verbunde / Fibre-polymer-composites	EN	Prof. Fiedler	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	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	DE / EN	Prof. de Traglia Amancio Filho	M-11	EC	CM	6	Y	KL
Specialisation Modeling Compulsory Courses: 0 LP Optional Courses: 24 LP									
1	Werkstoffmodellierung / Material Modeling	DE / EN	Prof. Bargmann	M-15	EC	CM	6	Y	KL
2	High-Order FEM / High-Order FEM	EN	Prof. Düster	M-10	EC	CM	6	Y	KL
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
2	Skalenübergreifende Modellierung / Modeling Across The Scales	DE / EN	Prof. Bargmann	M-15	EC	CM	6	Y	MP
3	Kontinuumsmechanik / Continuum Mechanics	DE / EN	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
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	Dr. Schröder	E-9	EC	CM	2	Y	RE
2	Optoelektronik I - Wellenoptik / Optoelectronics I - Wave Optics	EN	Prof. Eich	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	Prof. Eich	E-12	EC	CM	4	Y	KL
3	Partikeltechnologie und Feststoffverfahrenstechnik / Particle Technology and Solid Matter Process Technology	DE	Prof. Heinrich	V-3	EC	CM	6	Y	KL
Thesis Compulsory Courses: 30 LP Optional Courses: 0 LP									

Module							Exami nation		
Re com. Term	Module Name (German / English)	Language	Module Responsability	Institute	C/EC (1)	CM/ OM (2)	CP (4)	Grade	Exami nation Form(3)
4	Masterarbeit / Master Thesis		Professoren der TUHH	0-TUHH	C	CM	30	Y	AB

Materials Science Seminar

Course					Exami nation			
Course Name (German / English)	Course Form LV(5)	Language (6)	SWS (7)	Sem. LV	CP (4)	Grade	Exami nation 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
[4]CP=Credit Points
[5]VL=Lecture, SE=Seminar, UE=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