

Exclosure to Subject Specific Regulations from
 25.07.2018
 for Bachelor-Programme Informatik-
 Ingenieurwesen
 at TUHH
 Programme Director: Prof. Volker Turau
 Total: 180 CP
 Number of Specilisations to choose: 3



Course Scheme Bachelor Computational Science and Engineering (IIWBS)

Consolidated Version
 for Study Cohort: WiSe19/20
 en_head_sda
 and Approval of Chair from: 24.04.2019
 In Force on: 01.10.2019
 Out of Force on: 31.03.2024

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

Re com. Term	Module						Exami nation			Course Work		
	Module Name (German / English)	Language	Module Responsibility	Institute	C/EC (1)	CM/OM (2)	CP (4)	Grade	Exami nation Form(3)	Compulsory	Course Work Type	Bonus (in %)
Core qualification Compulsory Courses: 138 LP Optional Courses: 0 LP												
1	Diskrete Algebraische Strukturen / Discrete Algebraic Structures	DE	Prof. Zimmermann	E-13	C	CM	6	Y	KL			
1	Elektrotechnik I: Gleichstromnetzwerke und elektromagnetische Felder / Electrical Engineering I: Direct Current Networks and Electromagnetic Fields	DE	Prof. Kuhl	E-9	C	CM	6	Y	KL	N	ÜA	10
1	Mathematik I / Mathematics I	DE	Prof. Taraz	E-10	C	CM	8	Y	KL			
1	Prozedurale Programmierung / Procedural Programming	DE	Prof. Rump	E-19	C	CM	6	Y	KL			
2	Automatentheorie und Formale Sprachen / Automata Theory and Formal Languages	EN	Prof. Knopp	E-5	C	CM	6	Y	KL			
2	Elektrotechnik II: Wechselstromnetzwerke und grundlegende Bauelemente / Electrical Engineering II: Alternating Current Networks and Basic Devices	DE	Prof. Becker	E-6	C	CM	6	Y	KL	N	MT	10
2	Grundlagen der Betriebswirtschaftslehre / Foundations of Management	DE	Prof. Ihl	W-11	C	CM	6	Y	FFA			
2	Mathematik II / Mathematics II	DE	Prof. Taraz	E-10	C	CM	8	Y	KL			
2	Objektorientierte Programmierung / Objectoriented Programming	DE / EN	Prof. Knopp	SD-E	C	CM	6	Y	KL			
3	Algorithmen und Datenstrukturen / Algorithms and Data Structures	DE / EN	Prof. Taraz	E-11	C	CM	6	Y	KL			
3	Mathematik III / Mathematics III	DE	Prof. Taraz	0-UNIH	C	CM	8	Y	KL			
3	Numerische Mathematik I / Numerical Mathematics I	DE / EN	Prof. Le Borne	E-10	C	CM	6	Y	KL			
3	Rechnernetze und Internet-Sicherheit / Computernetworks and Internet Security	EN	Prof. Timm-Giel	E-4	C	CM	6	Y	KL			
3	Technische Informatik / Computer Engineering	DE	Prof. Falk	E-13	C	CM	6	Y	KL	Y	ÜA	10
4	Eingebettete Systeme / Embedded Systems	EN	Prof. Falk	E-13	C	CM	6	Y	KL	Y	FFST	10

		Module					Examination			Course Work		
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4	Seminare Informatik-Ingenieurwesen / Seminars Computer Science and Mathematics	DE / EN	Prof. Turau (sgwe)	SD-E	C	CM	6	N	RE			
4	Signale und Systeme / Signals and Systems	DE / EN	Prof. Bauch	E-8	C	CM	6	Y	KL			
4	Stochastik / Stochastics	DE / EN	Prof. Lindner	E-10	C	CM	6	Y	KL			
5	Einführung in die Nachrichtentechnik und ihre stochastischen Methoden / Introduction to Communications and Random Processes	DE / EN	Prof. Bauch	E-8	C	CM	6	Y	KL			
5	Grundlagen der Regelungstechnik / Introduction to Control Systems	DE	Prof. Werner	E-14	C	CM	6	Y	KL			
5	IIW Praktikum / Practical Course IIW	DE / EN	Prof. Fey	E-13	C	CM	6	Y	FFA			
1-6	Nichttechnische Ergänzungskurse im Bachelor / Nontechnical Complementary Courses for Bachelors	DE / EN	Richter	0-TUHH	C	OM	6	Selection out of seperatly published Catalogue				

Specialisation I. Computer Science Compulsory Courses: 0 LP Optional Courses: 12 LP

5	Funktionales Programmieren / Functional Programming	EN	Prof. Schupp	E-16	EC	CM	6	Y	KL	Y	ÜA	15
5	Rechnerarchitektur / Computer Architecture	DE / EN	Prof. Falk	E-13	EC	CM	6	Y	KL	N	FFST	15
5	Verteilte Systeme / Distributed Systems	DE	Prof. Turau	E-17	EC	CM	6	Y	KL			
6	Berechenbarkeit und Komplexität / Computability and Complexity Theory	DE / EN	Prof. Zimmermann	E-13	EC	CM	6	Y	MP			
6	Betriebssysteme / Operating Systems	DE	Prof. Turau	E-17	EC	CM	6	Y	KL			
6	Compilerbau / Compiler Construction	EN	Prof. Schupp	E-16	EC	CM	6	Y	FFA			
6	Software-Engineering / Software Engineering	EN	Prof. Schupp	E-16	EC	CM	6	Y	KL	Y	ÜA	15
6	Softwareentwicklung / Software Development	EN	Prof. Schupp	E-16	EC	CM	6	Y	FFA			

Specialisation II. Mathematics & Engineering Science Compulsory Courses: 0 LP Optional Courses: 6 LP

5	Elektrische Energiesysteme I: Einführung in elektrische Energiesysteme / Electrical Power Systems I: Introduction to Electrical Power Systems	DE	Prof. Becker	E-6	EC	CM	6	Y	KL			
5	Elektronische Bauelemente / Electronic Devices	DE	Prof. Trieu	E-7	EC	CM	6	Y	KL	Y	FFST	10
5	Elektrotechnik III: Netzwerktheorie und Transienten / Electrical Engineering III: Circuit Theory and Transients	DE	Prof. Jacob	E-3	EC	CM	6	Y	KL			
5	Kombinatorische Strukturen und Algorithmen / Combinatorial Structures and Algorithms	DE / EN	Prof. Taraz	E-10	EC	CM	6	Y	MP			
5	Technische Mechanik I / Engineering Mechanics I	DE	Prof. Weltin	M-24	EC	CM	6	Y	KL			
6	Einführung in Medizintechnische Systeme / Introduction into Medical Technology and Systems	DE	Prof. Schlaefer	E-1	EC	CM	6	Y	KL	Y	SA	10
										Y	RE	10

		Module					Examination			Course Work		
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6	Halbleiterschaltungstechnik / Semiconductor Circuit Design	DE	Prof. Kuhl	E-9	EC	CM	6	Y	KL			
6	Labor Cyber-Physical Systems / Lab Cyber-Physical Systems	DE / EN	Prof. Falk	E-13	EC	CM	6	Y	SA			
6	Löser für schwachbesetzte lineare Gleichungssysteme / Solvers for Sparse Linear Systems	DE / EN	Prof. Le Borne	E-10	EC	CM	6	Y	MP			
6	Mathematik IV / Mathematics IV	DE	Prof. Taraz	0-UNIHH	EC	CM	6	Y	KL			
6	Theoretische Elektrotechnik I: Zeitunabhängige Felder / Theoretical Electrical Engineering I: Time-Independent Fields	DE	Prof. Schuster	E-18	EC	CM	6	Y	KL			
Specialisation III. Subject Specific Focus Compulsory Courses: 0 LP Optional Courses: 12 LP												
6	Technischer Ergänzungskurs für IIWBS / Technical Complementary Course for Computational Science and Engineering Bachelor		Prof. Turau (sgwe)	SD-E	EC	OM	12	according to Subject Specific Regulations				
Thesis Compulsory Courses: 12 LP Optional Courses: 0 LP												
6	Bachelorarbeit / Bachelor Thesis		Professoren der TUHH	0-TUHH	C	CM	12	Y	AB			

Explanation:

¹C=Compulsory, EC=Elective Compulsory

²CM=Compulsory Defined Module, OM=Optional Defined Module

³KL=Written exam, MT=Midterm, SA=Written elaboration, FFA=Subject theoretical and practical work, FFST=Subject theoretical and practical work, MP=Oral exam, RE=Presentation, ÜA=Excercises, AB=Thesis

⁴CP=Credit Points

⁵VL=Lecture, SE=Seminars, UE=Recitation Section (small), PBL=Project-/problem-based Learning, PR=Practical Course, PS=Project Seminar, HÜ=Recitation Section (large)

⁶DE=German, EN=English, DE/EN=German and English

⁷SWS=Contact hours