

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 Specialisations to choose: 1



Course Scheme Bachelor Computational Science and Engineering (IIWBS)

Consolidated Version
 for Study Cohort: WiSe18/19
 according to Decision of Academic Senate:
 25.07.2018
 and Approval of Chair from: 22.08.2018
 In Force on: 01.10.2018
 Out of Force on: 31.03.2023

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. Kasper	E-7	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, Algorithmen und Datenstrukturen / Objectoriented Programming, Algorithms and Data Structures	DE	Prof. Grigat	E-2	C	CM	6	Y	KL			
3	Mathematik III / Mathematics III	DE	Prof. Taraz	0-UNIHH	C	CM	8	Y	KL			
3	Numerische Mathematik I / Numerical Mathematics I	DE / EN	Prof. Le Borne	E-10	C	CM	6	Y	KL			

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	Module Name (German / English)	Language	Module Responsibility	Institute	C/EC (1)	CM/OM (2)	CP (4)	Grade	Examination Form(3)	Compulsory	Course Work Type	Bonus (in %)
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
3	Technische Mechanik I / Engineering Mechanics I	DE	Prof. Weltin	M-24	C	CM	6	Y	KL			
4	Eingebettete Systeme / Embedded Systems	EN	Prof. Falk	E-13	C	CM	6	Y	KL	Y	FFST	10
4	Graphentheorie und Optimierung / Graph Theory and Optimization	DE	Prof. Taraz	E-10	C	CM	6	Y	KL			
4	Signale und Systeme / Signals and Systems	DE / EN	Prof. Bauch	E-8	C	CM	6	Y	KL			
4	Technische Mechanik II / Engineering Mechanics II	DE	Prof. Weltin	M-24	C	CM	6	Y	KL			
5	Grundlagen der Regelungstechnik / Introduction to Control Systems	DE	Prof. Werner	E-14	C	CM	6	Y	KL			
5	Seminare Informatik und Mathematik / Seminars Computer Science and Mathematics	DE / EN	Prof. Zimmermann	SD-E	C	CM	6	N	RE			
6	Stochastik / Stochastics	EN	Prof. Lindner	E-10	C	CM	6	Y	KL			
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 Computer Science Compulsory Courses: 0 LP Optional Courses: 30 LP												
4	Berechenbarkeit und Komplexität / Computability and Complexity Theory	DE / EN	Prof. Zimmermann	E-13	EC	CM	6	Y	MP			
4	Betriebssysteme / Operating Systems	DE	Prof. Turau	E-17	EC	CM	6	Y	KL			
4	Mathematik IV / Mathematics IV	DE	Prof. Taraz	0-UNIHH	EC	CM	6	Y	KL			
4	Software-Engineering / Software Engineering	EN	Prof. Schupp	E-16	EC	CM	6	Y	KL	Y	ÜA	15
5	Einführung in die Informationssicherheit / Introduction to Information Security	EN	Prof. Gollmann	E-15	EC	CM	6	Y	KL			
5	Funktionales Programmieren / Functional Programming	EN	Prof. Schupp	E-16	EC	CM	6	Y	KL	Y	ÜA	15
5	Kombinatorische Strukturen und Algorithmen / Combinatorial Structures and Algorithms	DE / EN	Prof. Taraz	E-10	EC	CM	6	Y	MP			
5	Messtechnik und Messdatenverarbeitung / Measurements: Methods and Data Processing	DE	Prof. Schlaefer	E-1	EC	CM	6	Y	KL	Y	ÜA	10
5	Numerik und Computer Algebra / Numerics and Computer Algebra	DE	Prof. Rump	E-19	EC	CM	6	Y	MP			
5	Quantenmechanik für Studierende der Ingenieurwissenschaften / Quantum Mechanics for Engineers	DE	Prof. Hansen	0-UNIHH	EC	CM	6	Y	KL	N	SA	0
5	Rechnerarchitektur / Computer Architecture	DE / EN	Prof. Falk	E-13	EC	CM	6	Y	KL	N	FFST	15
5	Rechnergestützte Geometrie / Computational Geometry	DE	Dr. Batra	E-19	EC	CM	6	Y	MP			
5	Verteilte Systeme / Distributed 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	Einführung in Medizintechnische Systeme / Introduction into Medical Technology and Systems	DE	Prof. Schlaefer	E-1	EC	CM	6	Y	KL	Y	SA	10
6	Labor Cyber-Physical Systems / Lab Cyber-Physical Systems	DE / EN	Prof. Falk	E-13	EC	CM	6	Y	SA	Y	RE	10
6	Löser für schwachbesetzte lineare Gleichungssysteme / Solvers for Sparse Linear Systems	DE / EN	Prof. Le Borne	E-10	EC	CM	6	Y	MP			

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	Module Name (German / English)	Language	Module Responsibility	Institute	C/EC (1)	CM/OM (2)	CP (4)	Grade	Examination Form(3)	Compulsory	Course Work Type	Bonus (in %)
6	Mathematische Statistik / Mathematical Statistics	DE / EN	Prof. Neumeyer	0-UNIHH	EC	CM	6	Y	KL			
6	Softwareentwicklung / Software Development	EN	Prof. Schupp	E-16	EC	CM	6	Y	FFA			
Specialisation Engineering Sciences Compulsory Courses: 0 LP Optional Courses: 30 LP												
4	Mathematik IV / Mathematics IV	DE	Prof. Taraz	0-UNIHH	EC	CM	6	Y	KL			
4	Technische Thermodynamik I / Technical Thermodynamics I	DE	Prof. Schmitz	M-21	EC	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	EC	CM	6	Y	KL			
5	Elektrische Energiesysteme I / Electrical Power Systems I	DE	Prof. Becker	E-6	EC	CM	6	Y	KL			
5	Elektrotechnik III: Netzwerktheorie und Transienten / Electrical Engineering III: Circuit Theory and Transients	DE	Prof. Jacob	E-3	EC	CM	6	Y	KL			
5	Mechanik III (GES) / Mechanics III (GES)	EN	Prof. Iwankiewicz	M-13	EC	CM	6	Y	KL			
5	Messtechnik und Messdatenverarbeitung / Measurements: Methods and Data Processing	DE	Prof. Schlaefer	E-1	EC	CM	6	Y	KL	Y	ÜA	10
5	Technische Thermodynamik II / Technical Thermodynamics II	DE	Prof. Schmitz	M-21	EC	CM	6	Y	KL			
6	Algebraische Methoden in der Regelungstechnik / Algebra and Control	DE / EN	Dr. Batra	E-19	EC	CM	6	Y	MP			
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
6	Elektrische Maschinen / Electrical Machines	DE	Prof. Do	M-4	EC	CM	6	Y	KL			
6	Elektrotechnik IV: Leitungen und Forschungsseminar / Electrical Engineering IV: Transmission Lines and Research Seminar	DE / EN	Prof. Jacob	E-3	EC	CM	6	Y	KL	Y	FFST	0
6	Strömungsmechanik / Fluid Dynamics	DE	Prof. Rung	M-8	EC	CM	6	Y	KL			
6	Werkstoffe der Elektrotechnik / Materials in Electrical Engineering	DE	Prof. Eich	E-12	EC	CM	6	Y	KL			
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=Exercices, AB=Thesis

⁴CP=Credit Points

⁵VL=Lecture, SE=Seminar, 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