Official Notice
(English Reading Version)

BEUTH HOCHSCHULE
FÜR TECHNIK
BERLIN
University of Applied Sciences

38. Volume, issue 35

■ Study and Examination Regulations
for the English-language Master's programme
Information and Communications Engineering
of Department VII
of Beuth Hochschule für Technik Berlin

as of 2 May 2017

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as of 2 May 2017

Pursuant to § 23 section 1 no. 3 of the General Regulations of Beuth Hochschule für Technik Berlin as of 26 March 2007 (Official Notice 20/2011, BeuthHS-GrO) in conjunction with § 7 a and § 71of the Berlin Higher Education Law (BerlHG) in the new version issued on 26 July 2011 (GVBl. p. 378), and most recently amended by law on 30 June 2017 (GVBl. p. 338), the faculty council of Department VII of Beuth Hochschule für Technik Berlin has confirmed the following study and examination regulations for the English-language Master's programme Information and Communications Engineering of Department VII of Beuth Hochschule für Technik Berlin on 2 May 2017. The Academic Senate has expressed its approval pursuant to § 13 section 1 no. 5 BeuthHS-GrO in conjunction with § 7 a and § 61 BerlHG on 26 October 2017. The regulations were confirmed by the school management on 1 November 2017, pursuant to § 90 section 1 BerlHG.

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Part A: Study Regulations

§ 1 Scope

(1) These regulations apply for all students of the Master's programme "Information and Communications Engineering", who are taking up their studies in the first curriculum semester from the winter semester of 2018/19 onward.

(2) Students of the previous Master's programme "Kommunikations- und Informationstechnik", who took up their studies before these regulations became effective, or who are classified for higher semesters due to crediting of academic achievements, will complete their course according to the specifications of the old programme regulations that were valid at the time they took up studies, no later than by the end of the summer semester of 2021. Students who took up their studies according to the previously valid regulations and who do not complete their programme successfully by the end of the summer semester of 2021, will be transferred to the programme "Information and Communications Engineering" as of 2 May 2017 by the examination board, based on the valid equivalence list.

(3) The old study regulations are gradually phased out starting in the winter semester of 2018/19. The equivalence arrangements provided for in the equivalence list apply for discontinued modules. As an alternative in individual cases and upon request by the students, students of the previous programme "Kommunikations- und Informationstechnik" may be assigned German language modules from other programmes at Beuth Hochschule für Technik Berlin by the Dean. These modules are recognised to replace the modules indicated in the old curriculum. The student is informed by the Dean of Department VII in writing, in such a case. The process is handled by the recognition officer.

(4) The equivalence list (Attachment Equivalence List) is part of these regulations.

§ 2 Applicability of general regulations and women's advancement plan

(1) The provisions of the General Study and Examination regulations of Beuth Hochschule für Technik Berlin in their respective valid version are part of these regulations.

(2) The valid women's advancement plan of Department VII must be observed.

§ 3 Study objective

(1) The objective of the Master's programme "Information and Communications Engineering" is to deepen the knowledge of students in a practical and application-oriented manner, based on their broad foundation of specialist knowledge gained

in a suitable Bachelor's programme, through relevant and largely freely selectable topical subject areas of information and communication technology.

(2) In addition to basic theoretical knowledge, profound specialist knowledge, and methodical-analytic skills, students will gain general skills relating to scientific work in the areas mentioned above. Graduates obtain proficiency in systematic scientific thinking and working methods and the ability to gain and classify scientific findings in professional practice. Gained knowledge is reinforced through immediate application in the corresponding projects available, methodical expertise is increased, and the ability to detect and solve practical problems in the field of information and communication technology is strengthened. Students of the English-language programme gain professional and problem-solving skills, as well as the required language skills that are necessary for highly skilled jobs in the field. Students are also prepared for an international professional environment.

(3) Existing strong links to companies, institutions, and other organisations that are relevant to the programme's areas of study, enable students to base their thesis on practical problems, and allow for practical application. Graduates of the programme are therefore suited for a wide range of areas of work in development and research departments of companies, as well as in scientific facilities in the field of information and communication technology.

§ 4 Admission requirements

(1) The admission requirements pursuant to the respective valid regulations regarding admission rules and enrolment at Beuth Hochschule für Technik Berlin (OZI) apply.

(2) Participation in the programme requires English skills that enable the student to follow the courses and to take exams in this language. Pursuant to § 3 para 5 of the OZI, the required level of language skills for the "Information and Communications Engineering" programme, for which evidence must be provided, is Level B2 (GER).

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§ 5 Structure and contents of the programme

(1) The standard period of study of the Master's programme is 3 semesters. The programme comprises 90 credits.

(2) The programme is designed assuming that to complete the course within the standard period, students must possess the level of knowledge imparted in the programmes Electrical Engineering (focussing on communication technology and electronic systems) or Computer Engineering - Embedded Systems of Beuth Hochschule für Technik Berlin or in other similar programmes at other higher education institutions.

(3) Students are generally accepted to begin their 1st curriculum semester in the winter semester. In the summer semester, students may be accepted to enter the 2nd curriculum semester if there are any vacant places that were not filled in the previous winter semester. Each module is held once a year according to the curriculum. This rule does not apply for required elective modules.

(4) If studies are taken up in the 2nd curriculum semester, the modules of the 2nd curriculum semester are taken before those of the 1st curriculum semester.

(5) The programme is structured according to the curriculum. The Attachment Curriculum is part of these regulations.

(6) Upon application, students may choose up to two modules from another programme of Beuth Hochschule für Technik Berlin to replace required elective modules from their own programme, provided that these do not correspond to required modules of their own programme. The application must be approved by the Dean of the department.

(7) The Attachment English Module Titles is part of these regulations.

(8) 300 credits, including credit gained in the first qualifying university degree, are required for obtaining the Master's degree. For Bachelor's degrees comprising less than 210 credits, the Dean will specify additional modules that must be completed successfully to apply for submission of the Master's Thesis. The applicant is informed about this by the Dean of Department VII in writing.

(9) The faculty council of Department VII determines the subject-specific and organisational design of the modules and the corresponding examination modalities in the module descriptions. The module descriptions are part of these regulations and are published on the website of Beuth Hochschule für Technik Berlin.

(10) The teaching language of the programme is English, with the exception of general studies.

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Part B: Examination Regulations

§ 6 Master's Thesis

The period for preparing the Master's Thesis is 5 months, unless determined otherwise by the examination board.

§ 7 Examination language

(1) Exams may be held in German, if agreed upon by the candidates and examiners.

(2) Written work and presentations or the Master's thesis may be prepared in German, if agreed upon by the candidates and examiners.

§ 8 Academic degree

Upon successful completion of the programme, students are awarded the professionally qualifying degree

Master of Engineering

M.Eng.

§ 9 Special arrangements

Students may apply to have an additional required elective module recognised to replace module M04 "Master Colloquium A" or module M09 "Master Colloquium B". The process is handled by the recognition officer.

§ 10 Entry into effect

These regulations will come into effect with the winter semester of 2018/19, upon publication of the Official Notice by Beuth Hochschule für Technik Berlin.

Berlin on 2 May 2017

Beuth Hochschule für Technik Berlin

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Attachment Curriculum

Module no.	Module name	Curriculum semester	SU SWS	Ü SWS	Assessment D / U / I	Weight	CP	Weight	R / RE	Teaching unit (department / cluster)
Master's Programme Information and Communications Engineering			**Class type**		**Unit**		**Module**			
M01	Advanced Signal Processing Methods	1					5	5	R	Intern programme
M01.1	Advanced Signal Processing Methods		2		D	50%				
M01.2	Advanced Signal Processing Methods Tutorial			1	D	50%				
M02	Advanced Signal Transmission Technologies	1					5	5	R	Intern programme
M02.1	Advanced Signal Transmission Technologies		2		D	50%				
M02.2	Advanced Signal Transmission Technologies Tutorial			1	D	50%				
M03	Stochastic Modelling and Optimization	1	4		D	100%	5	5	R	Intern programme
M04	Master Colloquium A	1		1	D	100%	5	5	R	Intern programme
M05	Required-Elective Module I	1		4			5	5	RE	Intern programme
M06	Required-Elective Module II	1		4			5	5	RE	Intern programme
M07	Network Engineering	2	3		D	100%	5	5	R	Intern programme
M08	Software Engineering	2					5	5	R	Department VII
M08.1	Software Engineering		3		D	50%				
M08.2	Software Engineering Tutorial			1	D	50%				

Master's Programme Information and Communications Engineering		Curriculum semester	Class type		Unit		Module			Teaching unit (department / cluster)
Module no.	Module name		SU SWS	Ü SWS	Assessment D / U / I	Weight	CP	Weight	R / RE	
M09	Master Colloquium B	2		1	D	100%	5	5	R	Intern programme
M10	General Studies I	2	2		D	100%	2.5	2.5	RE	Department I
M11	General Studies II	2		2	D	100%	2.5	2.5	RE	Department I
M12	Required-Elective Module III	2		4			5	5	RE	Intern programme
M13	Required-Elective Module IV	2		4			5	5	RE	Intern programme
M14	Final Examination Module	3					30	30	R	Intern programme
M14.1	Master's Thesis				D		25	25	R	Intern programme
M14.2	Oral Final Examination				D		5	5	R	Intern programme
Total							**90**	**90**		

Required-Elective Modules (RE)			Class type		Unit		Module			
Module no.	Module name	Curriculum semester	SU SWS	Ü SWS	Assessment D / U / I	Weight	CP	Weight	R / RE	Teaching unit (department / cluster)
WP01	Digital Radio Systems	1/2		4	D	100%	5	5	RE	Intern programme
WP02	Model-Based Digital Communication Systems Design	1/2		4	D	100%	5	5	RE	Intern programme
WP03	Network Security and Cryptography	1/2		4	D	100%	5	5	RE	Intern programme
WP04	Advanced Switching and Routing	1/2		4	D	100%	5	5	RE	Intern programme
WP05	Photonic Communication Systems	1/2		4	D	100%	5	5	RE	Intern programme
WP06	Multimedia Broadcast Systems	1/2		4	D	100%	5	5	RE	Intern programme
WP07	Machine Learning	1/2		4	D	100%	5	5	RE	Intern programme
WP08	Distributed Systems and Services	1/2		4	D	100%	5	5	RE	Intern programme
WP09	External Module I	1		4	D	100%	5	5	RE	Other higher education institution
WP10	External Module II	1		4	D	100%	5	5	RE	Other higher education institution
WP11	External Module III	2		4	D	100%	5	5	RE	Other higher education institution
WP12	External Module IV	2		4	D	100%	5	5	RE	Other higher education institution

Information regarding required-wlective Modules:

The specific required-elective Modules available are regularly determined and published by the faculty council of Department VII. The faculty council may choose to specify further required-elective Modules.

SU:	Seminaristischer Unterricht - Seminar
Ü:	Übung – Laboratory Work
SWS:	Semesterwochenstunden - Number of weekly class hours
D:	Differentiated assessment (grade 1.0 - ... - 5.0)
U:	Undifferentiated assessment (mit Erfolg (m.E., completed successfully), o.E. (ohne Erfolg, not completed successfully))
I	Integrated module with joint differentiated assessment for both units (grade 1.0 - ... - 5.0). For didactic reasons, it is mandatory that the units are taken and studied in parallel in the same semester.
Unit/module:	max. two units per module
Unit weight:	Weight (in %) of the unit for the overall module grade. The following weighting options are possible for the units in a module. Unit 1/Unit 2: a) 100/0%, b) 50/50%, c) 0/100%
	In line with the curriculum, no weighting is applied to the units of integrated modules; for these modules, where 100/0% or 0/100% is indicated, this refers to a formal allocation of the module grade in the registration.
CP:	Module credit points (1 credit = 30 hours workload)
Module weight:	Weighting (in credits) of the module in the overall final mark
R/RE:	Required Module/Required-Elective Module
Cluster:	Department or study area that provides the course

Attachment English Module Titles

Module no.	Module name	English module name
M01	Fortgeschrittene Methoden der Signalverarbeitung	Advanced Signal Processing Methods
M02	Fortgeschrittene Technologien der Signalübertragung	Advanced Signal Transmission Technologies
M03	Stochastische Modellierung und Optimierung	Stochastic Modeling and Optimization
M04	Master-Kolloquium A	Master Colloquium A
M05	Wahlpflichtmodul I	Required-Elective Module I
M06	Wahlpflichtmodul II	Required-Elective Module II
M07	Netzwerktechnik	Network Engineering
M08	Softwaretechnik	Software Engineering
M09	Master-Kolloquium B	Master Colloquium B
M10	Studium Generale I	General Studies I
M11	Studium Generale II	General Studies II
M12	Wahlpflichtmodul III	Required-Elective Module III
M13	Wahlpflichtmodul IV	Required-Elective Module IV
M14	Abschlussprüfung	Final Examination Module
M14.1	Master-Arbeit	Master's Thesis
M14.2	Mündliche Abschlussprüfung	Oral Final Examination
WP01	Digitale Funksysteme	Digital Radio Systems
WP02	Modellbasierter Entwurf digitaler Kommunikationssysteme	Model-Based Digital Communication Systems Design
WP03	Netzwerksicherheit und Kryptografie	Network Security and Cryptography
WP04	Fortgeschrittene Methoden des Switching und Routing	Advanced Switching and Routing
WP05	Photonische Kommunikationssysteme	Photonic Communication Systems
WP06	Multimedia-Rundfunksysteme	Multimedia Broadcast Systems
WP07	Maschinelles Lernen	Machine Learning

Module no.	Module name	English module name
WP08	Verteilte Systeme und Dienste	Distributed Systems and Services
WP09	Externes Modul I	External Module I
WP10	Externes Modul II	External Module II
WP11	Externes Modul III	External Module III
WP12	Externes Modul IV	External Module IV

Attachment Equivalence List

Module no.	Module name	Semester	SU SWS	Ü SWS	CP	R/ RE	Module no.	Module name	Semester	SU SWS	Ü SWS	CP	R/ RE
Old curriculum Official Notice, no. 47/2009 Master's Programme Communication and Information Technology							**New curriculum Official Notice, no. 35/2017** Master's Programme Information and Communications Engineering						
MKI 1	Mathematical Principles of Stochastic Signals and Systems	1	4		5	R	M03	Stochastic Modelling and Optimization	1	4		5	R
MKI 2	Advanced Signal Processing Methods	1	3	1	5	R	M01	Advanced Signal Processing Methods	1	2	1	5	R
MKI 3	Multimedia Communication Systems	2	2	2	5	R	WP06	Multimedia Broadcast Systems	1/2		4	5	RE
MKI 4	Distributed Communication Platforms and Services	1	3	1	5	R	WP08	Distributed Systems and Services	1/2		4	5	RE
MKI 5	Communication System Modelling and Testing	2	3	1	5	R	M08	Software Engineering	2	3	1	5	R
MKI 6	Digital Radio Systems	1	4		5	R	M02	Advanced Signal Transmission Technologies	1	2	1	5	RE
MKI 7	Network Engineering	1	3	1	5	R	M07	Network Engineering	2	3		5	R
MKI 8	Embedded Signal Processing	2	2	2	5	R	WP02	Model-Based Digital Communication System Design	1/2		4	5	RE
MKI 9	Photonic Communication Systems	2	2	2	5	R	WP05	Photonic Communication Systems	1/2		4		RE
MKI 10	Specialized Project	2		2	5	R	M04	Master Colloquium A	1		1	5	R
MKI 11	Advanced Switching and	2	2	2	5	RE	WP04	Advanced Switching and	1/2		4	5	RE

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Old curriculum Official Notice, no. 47/2009 Master's Programme Communication and Information Technology							New curriculum Official Notice, no. 35/2017 Master's Programme Information and Communications Engineering						
Module no.	Module name	Semester	SU SWS	Ü SWS	CP	R/ RE	Module no.	Module name	Semester	SU SWS	Ü SWS	CP	R/ RE
	Routing							Routing					
MKI 12	Network Security and Cryptography	2	2	2	5	RE	WP03	Network Security and Cryptography	1/2		4	5	RE
MKI 13	AVV Module (General Studies)	1	2	2	5	RE	M10	General Studies I	2	2		2.5	RE
							M11	General Studies II	2		2	2.5	RE
MKI 14	Master's Thesis	3			25	R	M14.1	Master's Thesis	3			25	R
MKI 15	Colloquium	3			5	R	M14.2	Oral Final Examination	3			5	R