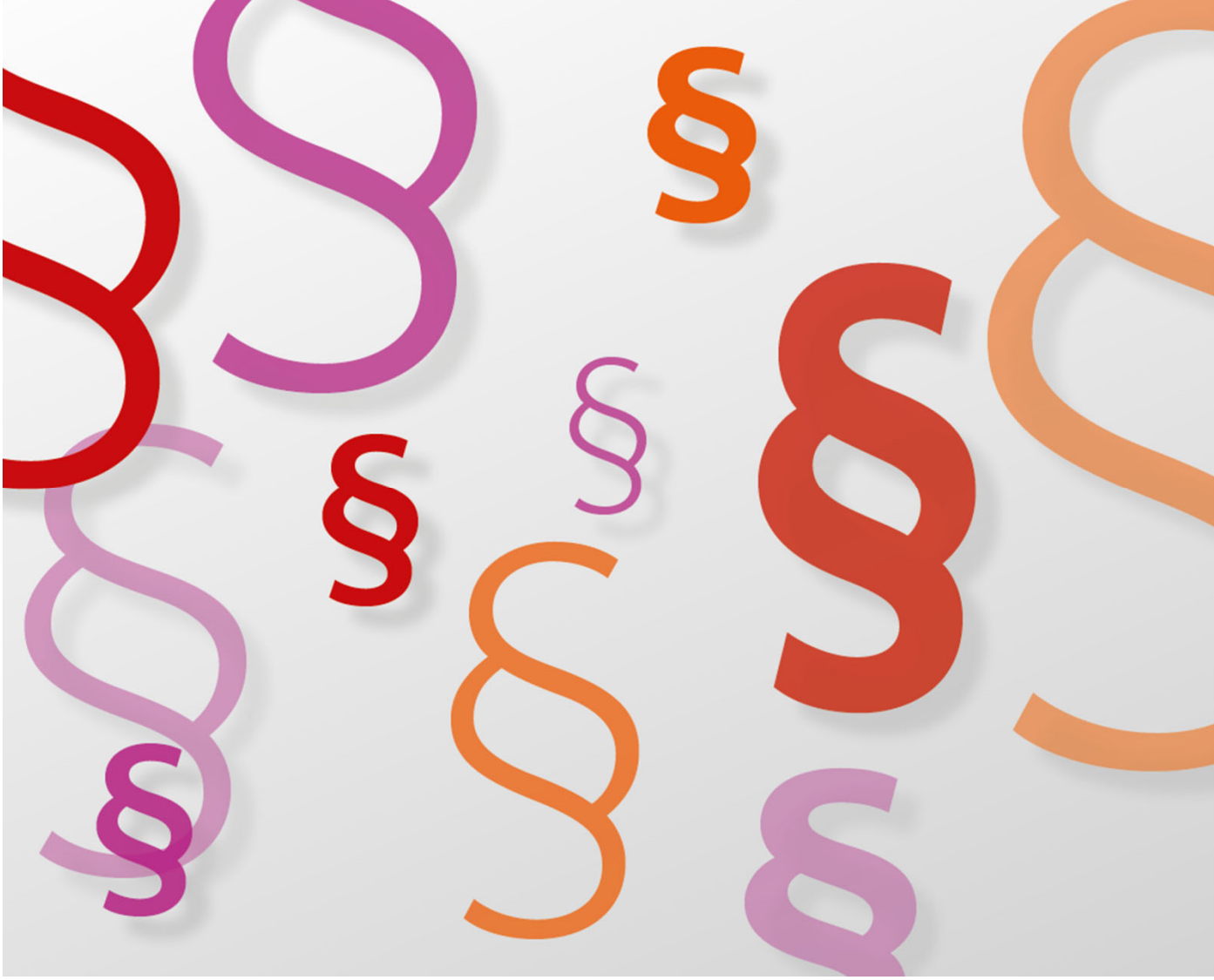

Official communication (*Amtliche Mitteilung*) 40/2023

Amendment to the examination regulations for the program Automation & IT leading to the academic degree Master of Engineering, based on the examination regulations of January 7, 2021 (*Amtliche Mitteilung* 21/2021) at the Faculty of Computer Science and Engineering Science of Technische Hochschule Köln, Gummersbach Campus

of October 26, 2023

Published on November 13, 2023

This is a translation of the original German document. For all legal purposes, only the German version of the examination regulations shall be considered binding.

Technology
Arts Sciences
TH Köln

Amendment to the examination regulations for the program Automation & IT leading to the academic degree Master of Engineering based on the examination regulations of January 7, 2021 (*Amtliche Mitteilung* 21/2021) at the Faculty of Computer Science and Engineering Science of Technische Hochschule Köln, Gummersbach Campus

of October 26, 2023

By virtue of §§ 2 (4) and 64 (1) of the North Rhine-Westphalia Higher Education Act (*Gesetz über die Hochschulen des Landes Nordrhein-Westfalen - Hochschulgesetz (HG)*) of September 16, 2014 (*Gesetz und Verordnungsblatt NRW* (GV. NRW), p. 547), in the version of the law amending the HG of July 12, 2019 (GV. NRW, p. 425), as amended by Article 1 of the law of June 30, 2022 (GV. NRW, p. 780b), Technische Hochschule Köln - University of Applied Sciences has adopted the following amendment by statute:

Article 1

The examination regulations for the Master's program Automation & IT at Technische Hochschule Köln of January 7, 2021 (*Amtliche Mitteilung* 21/2021) are to be amended as follows:

1. Annex 1 "Study plan for full-time studies" is to be amended as per Annex 1 of this amendment.

2. Annex 2 "Example study plan for part-time studies" is to be amended as per Annex 2 of this amendment.

Article 2

(1) This amendment enters into force on September 1, 2023 and will be published in Technische Hochschule Köln's official communication *(Amtliche Mitteilungen)*. It applies to all students and applicants who are enrolled or will enroll in the Master's program Automation & IT at the Faculty of Computer Science and Engineering Science at Technische Hochschule Köln.

(2) Students of the program Automation & IT at Technische Hochschule Köln, Gummersbach Campus, who started their studies before the winter semester 2023/2024, can complete their studies on the basis of the examination law valid before September 1, 2023 until the end of the winter semester 2026/2027. As of March 1, 2027, this amendment will also exclusively apply to the studies of these students. If, in individual cases, this amendment affects a student's freedom of disposition, the examination board will make separate appropriate arrangements on how to proceed in these cases.

(3) The examination regulations are published and approved on the basis of the resolution of the faculty council of the Faculty of Computer Science and Engineering Science at Technische Hochschule Köln of October 19, 2022 and after legal review by the Executive Board on October 11, 2023.

Cologne, October 26, 2023

The President
of Technische Hochschule Köln
(University of Applied Sciences)

Prof. Dr. Stefan Herzig

Annex 1: Study plan for full-time studies

Module	Submodule	Sem.	ECTS	Semester			
				1	2	3	4
Industrial Communication and Information Security in Industrial Automation	Industrial Communication	1	12	3			
	Industrial IoT	1		5			
	IT-Security	2			4		
				ECTS			
Integration of Technical and Business Information Systems	Object oriented Programming for Data Science	1	9	3			
	Relational Databases	1		3			
	Enterprise Resource Planning Systems	1			3		
Modelling and Simulation of Technical Systems	Modelling and Simulation of Continuous Systems	2	15		4		
	Modelling and Simulation of Discrete Event Systems	2			2		
	Data-driven Modelling and Model Optimization	2			5		
	Modelling and Simulation of Electrical Energy Systems	1		4			
Control of Technical Systems	Digital Signal Processing and Optoelectronics	2	14		4		
	Linear, Nonlinear and Model Predictive Control	1		5			
	Automation of Discrete Event Systems	1			2		
	Protection Automation and Control in Electrical Energy Supply	2			3		
Optimization of Technical Systems	Numerical Methods	1	10	3			
	Optimization	1		4			
	Machine Learning and AI	2			3		
Case Studies	Case Study I	3	30			10	
	Case Study II	3				10	
	Case Study III	3				10	
Master's Thesis	Thesis	4	30				20
	Final oral examination	4					10
Total ECTS			**120**	**30**	**30**	**30**	**30**

Annex 2: Example study plan for part-time studies

Module	Submodule	Sem.	ECTS	ECTS/ Semester					
				1	2	3	4	5	6
Industrial Communication and Information Security in Industrial Automation	Industrial Communication	1	12	3					
	Industrial IoT	1				5			
	IT-Security	2					4		
				ECTS					
Integration of Technical and Business Information Systems	Object oriented Programming for Data Science	1	9	3					
	Relational Databases	1				3			
	Enterprise Resource Planning Systems	1					3		
Modelling and Simulation of Technical Systems	Modelling and Simulation of Continuous Systems	2	15		4				
	Modelling and Simulation of Discrete Event Systems	2			2				
	Data-driven Modelling and Model Optimization	2			5				
	Modelling and Simulation of Electrical Energy Systems	1		4					
Control of Technical Systems	Digital Signal Processing and Optoelectronics	2	14				4		
	Linear, Nonlinear and Model Predictive Control	1		5					
	Automation of Discrete Event Systems	1					2		
	Protection Automation and Control in Electrical Energy Supply	2			3				
Optimization of Technical Systems	Numerical Methods	1	10	3					
	Optimization	1				4			
	Machine Learning and AI	2					3		
Case Studies	Case Study I	3	30			10			
	Case Study II	3						10	
	Case Study III	3						10	
Master's Thesis	Thesis	4	30						20
	Final oral examination	4							10
Total ECTS			**120**	**18**	**14**	**22**	**16**	**20**	**30**