

Embedded Computing Systems TUK Curriculum

The elective program suggests directions and courses for further studies beyond the core topics. You may also check in lecture catalogs and the KIS system for other courses that you may be interested in. Additionally, independent project work is possible in all areas.

Elective Program						
	Code	Title	Credit points	Semester	Instructor	Language
Embedded Systems	EIT-RTS-541	Real-Time Systems II	4	Fall	Fohler	English
	EIT-RTS-446	Real Time Systems Lab	5	Fall	Fohler	English
	EIT-EIS-560	Verification of Digital Systems (with Lab)	5	Fall	Kunz	English
	INF-61-51	Biologically motivated robot systems	6	Fall	Berns	English
	INF-61-33	Autonomous Mobile Robots	8	Spring	Berns	English
	INF-61-81	Lab/Project: Service Robots and Assistance Systems	8	Spring	Berns	English
	INF-31-31	Software Project and Process Management	4	Spring	Rombach	English
	INF-31-53	Empirical Model Building & Methods	4	Spring	Rombach	English
	INF-14-52	Service-Oriented Architectures	4	Spring	Müller	English
	INF-14-51	Grid Computing	4	Fall	Müller	English
Alternating with INF-42-55	INF-42-52	Network Security	4	Fall	Schmitt	English
Alternating with INF-42-52	INF-42-55	Protocols and Algorithms for Network Security	4	Fall	Schmitt	English
	INF-42-51-V-7	Stochastic Analysis of Distributed Systems	4	Fall	Schmitt	English

	INF-42-56-V-7	Worst-Case Analysis of Distributed Systems	4	Fall	Schmitt	English
	INF-62-54	Parallel Computing	4	Spring	Schneider	English
	INF-62-36	HW/SW Systems	8	Fall	Schneider	English
	INF-41-31	Protocol Engineering	4	Spring	Gotzhein	English
	INF-41-53	Algorithms in Ad-hoc Networks	4	Spring (every second year)	Gotzhein	English
	INF-33-31	Safety and Reliability of Embedded Systems	4	Fall	Liggesmeyer	English
	INF-65-51	Power-Aware Embedded Systems	4	Fall	Grimm	English
	INF-65-52	Virtual Prototyping and HW/SW Co-Design	6	Spring	Grimm	English
	EIT- to be determined	'Introduction to Data Science'	3	Spring	Kienle	English
Communication and Signal Processing	EIT-FUN-405	Wireless and Multimedia Systems	3	Fall	Schotten	English
	EIT-FUN-402	Wireless Communications	5	Spring	Schotten	English
	EIT-NAT-305	Nachrichtentechnik (für Nichtvertiefer)	5	Spring	Urbansky	German
	EIT-NAT-301	Einführung in Kommunikationsnetze	4	Spring	Urbansky	German
	EIT-DSV-531	Digitale Signalverarbeitung	4	Fall	Potchinkov	German
	n.n.	Digital Signal Processing	4	Spring	Achilles	English
	EIT-DSV-532	Digitale Filter	3	Spring	Potchinkov	German
	EIT-DSV-534	Digital Signal Processing: Algorithms and their implementation	3	Spring	Potchinkov	English
	EIT-DEK-538	Multirate Signal Processing	5	Fall	Achilles	English

Automation & Control	EIT-LRS-504	Linear Control Systems	5	Fall	Liu	German (DVD in English)
	EIT-LRS-432	Computer-Aided-Engineering in Control Design	4	Fall	Liu	English
	EIT-LRS-429	Robust Control	3	Fall	Liu	English
	EIT-LRS-437	Optimal Control	3	Spring	Liu	English
	EIT-LRS-426	Robot and Motion Control	4	Spring	Liu	English
	EIT-AUT-452	Prozessautomatisierung	3	Spring	Zhang	To be determined
	EIT-AUT-457	Grundlagen der Automatisierung	5	Spring	Zhang	To be determined
	EIT-AUT-453	Methods of Soft Control	3	Fall	Zhang	English
Micro-electronics / Microsystems	EIT-ISE-110	Neurocomputing	4	Fall	König	English
	EIT-ISE-112	Sensor Signal Processing	5	Fall	König	English
	EIT-ISE-651	Technology and Design of Integrated Mixed-Signal Circuits and Systems	5	Spring	König	English
	EIT-ISE-650	Fabrication Methods and Design of Integrated Sensor Systems	5	Fall	König	English
	EIT-EMS-655	Microelectronic Circuit and System Design II	5	Spring	Wehn	English
	EIT-EMS-657	Synthesis and Optimization of Microelectronic Systems I	4	Fall	Wehn	English
	EIT-EIS-660	Synthesis and Optimization of Microelectronic Systems II	3	Spring	Kunz	English

	./.	Energy efficient many-core processor architectures for IoT applications	3	Fall 2017 only	Tom Kazmierski (Guest)	English
	EIT-EMS-732-V-7	FPGA-Based Hardware Accelerators and Hybrid Systems	4	Spring	De Schryver	English