

Choice of elective subjects for Master's in Electrical Engineering and Information Technology

Elective subjects amounting to a minimum of 15 ECTS points need to be taken. Students changing their specialisation compared to their Bachelor's degree at DIT need to choose the harmonisation courses along with an additional subject amounting to at least 5 ECTS. Courses that you have taken in other Faculties are subject to the assessment criteria laid down in the Examination Regulations of the Faculty in question. They are adopted for these courses by the Exam Board responsible for the Master's in Electrical Engineering and Information Technology. Please note: High Frequency Electronics, Communications Technology 2, Power Electronics and Control Engineering 2 may only be chosen as elective subjects provided you have not already taken the subject in question for your Bachelor's degree.

PO	No.	Module/subject	ECTS	Language	From following study programme	Sem.
84/ET/20132	4010/ 4310	Harmonisation Course ENS (only mandatory if Bachelor's specialisation was not NT or TE) Subjects: High Frequency Electronics and Communications Technology 2	5+5	GERMAN	Bachelor's in Electrical Engineering and Information Technology	SS
	3110/ 2710	Harmonisation Course AT (only mandatory if Bachelor's specialisation was not AUT or EAT) Subjects: Power Electronics and Control Engineering 2	5+5	GERMAN		SS
	4010	High Frequency Electronics as an elective subject	5	GERMAN		SS
	4310	Communications Technology 2 as an elective subject	5	GERMAN		SS
	3110	Power Electronics as an elective subject	5	GERMAN		SS
	2710	Control Engineering 2 as an elective subject	5	GERMAN		SS
90/MET/20121	960	Selected Topics in Microelectronics and Nanoelectronics (only for VR AT)	5	ENGLISH	Master's in Electrical Engineering and Information Technology	WS
	970	Selected Topics in Optoelectronics and Laser Technology (only for VR AT)	5	ENGLISH		SS
	980	High Frequency and Radio Technology Systems (only for VR AT)	5	ENGLISH		WS
	990	Special Modules and Switches (only for VR AT)	5	ENGLISH		WS
	1010	Communications Technology Signals and Systems (only for VR AT)	5	ENGLISH		WS
	910	Higher Modelling and Simulation (only for VR ENS)	5	ENGLISH		SS
	920	Selected Topics in Control Engineering (only for VR ENS)	5	ENGLISH		WS
	940	Automotive and Industrial Electric Motor Systems (only for VR ENS)	5	ENGLISH		WS
	512	Advanced Automation Technology (only for VR ENS)	5	ENGLISH		WS
_ /MET/0	510	Project for Electrical Engineering 1 - Requirement: topic agreed with lecturer	5		Pool for Master's in Electrical Engineering and Information Technology	SS/WS
	511	Project for Electrical Engineering 2 - Requirement: topic agreed with lecturer	5			SS/WS
	515	Digital Television and Radio Technology	5	GERMAN/ ENGLISH		WS
	516	Advanced Circuits Lab (Circuitry Hands-On Training) (only for international students)	5	ENGLISH		SS/WS
	517	Power Supply Circuits	5	ENGLISH		WS
	950	Renewable Energies (PO2012 solely for VR ENS)	5	ENGLISH		WS
		Batteries and Supercaps	5	ENGLISH		WS
		Product Development for Engineers	5	ENGLISH		SS
90/MTP/200 83	810	Advanced Audio Production Topics	5	GERMAN	Master's in Media Technology	WS
	910	Hearing and Psychoacoustics	5	GERMAN		WS
	110	Soft Skills for Media Technicians	3	GERMAN		SS
	410	Web Engineering	5	GERMAN		SS

	610	Special Computer Science Tools	5	GERMAN		SS
	510	Visualisation Methods	5	GERMAN		SS
	1810	Modern Internet Technologies	5	GERMAN		WS
90/MAI/_	110	Module: Theoretical Computer Science Semantics, Computability and Complexity Theory/Formal Languages and Compiler Construction	8	ENGLISH	Master's in Applied Computer Science	SS
	210	Module: Practical Computer Science Subjects: Advanced Software Engineering/Formal Languages and Compiler Construction II/Programming Exercise	8	ENGLISH		SS
	310	Module: Selected Topics in Embedded Software Development 1 Subjects: Embedded Safety / Embedded Connectivity	5	ENGLISH		SS
	410	Selected Topics in Embedded Software Development 2	5	ENGLISH		WS
	1110	FPGA Programming	5	ENGLISH		SS
90/AID/2021	AID-01	Artificial Intelligence and Software Development	5	ENGLISH	Master's in Artificial Intelligence and Data Science	SS
	AID-02	Theoretical Fundamentals of Artificial Intelligence	8	ENGLISH		SS
	AID-03	Advanced Machine Learning	5	ENGLISH		SS
90/MCS/218	MCS-1	Modules: Cyber Physical Systems MCS 1101 Structure and Functions of Cyber Physical Systems (4 ECTS) MCS 1102 Business Models for CPS (2 ECTS)	6	ENGLISH	Master Mechatronics and Cyber Physical Systems	SS
	MCS-3	Modules: Advanced Simulation Systems MCS 1106 Advanced Modelling and Simulation (4 ECTS) MCS 1107 Case Study Mechatronic System Simulation (6 ECTS)	10	ENGLISH		WS
	MCS-7	Modules: Functional Safety Principles of Functional Safety (4 ECTS) Design of Safe Systems (2 ECTS)	6	ENGLISH		SS
_ / IA / 0	1019	Java Programming	5	GERMAN	Bachelor 's in AI	SS/WS
	1020	Principles of Driver Assistance Systems	5	GERMAN		SS/WS
	1022	C in Automotive Software Development	5	GERMAN		SS/WS
90/MMB/20151	105	Higher Mathematics	7	GERMAN	Master's in Mechanical Engineering	SS
	205	Technical Databases	5	GERMAN		WS
	305	Fluid/Thermodynamics	6	GERMAN		SS
	405	Dynamic Systems	5	GERMAN		SS
	505	FEM/MKS	7	GERMAN		SS
	605	Numerical Methods	7	GERMAN		WS
	705	Drive Systems	5	GERMAN		WS
	805	CAD/CAM/Rapid Prototyping	7	GERMAN		WS
	905	Virtual Testing	6	GERMAN		WS
	1005	Innovation Management	5	GERMAN		SS
90/MTE/20152	105	Corporate Innovation – Subjects: Project Management 2/Business Development and Market Research - Innovation Tools	2+4	GERMAN	Master's in Technology Management	WS
	130	Corporate Innovation – Subject: Case Study Innovation (PstA)	6	GERMAN		WS
	205	Corporate Leadership – Subjects: Hot Topics in Economics/Corporate Legal Issues	4+4	GERMAN		WS
	310	Product Planning – Subject: Specification and FMEA	4	GERMAN		WS
	320	Product Planning – Subject: Case Study Specification and FMEA (PstA)	6	GERMAN		WS
	405	Corporate Engineering – Subjects: Tools for Development/Quality and Controlling II	4+4	GERMAN		SS
	430	Corporate Engineering – Subject: Case Study Engineering (PstA)	3	GERMAN		SS
	505	Production Engineering – Subjects: Selected Topics on Production/Logistics	4+2	GERMAN		SS
	530	Production Engineering: Subject: Case Study Production Engineering (PstA)	5	GERMAN		SS

	610	Corporate Statistics	4	GERMAN		SS
	805	Sustainability – Subjects: Values and Strategic Development/Process Control and Optimisation Methods	2+4	GERMAN		WS
90/MBU/ 20161	1710	Recycling and Disposal	5	GERMAN	Master's in Construction/ Environment	WS
	2710	Renewable Energies 2	5	GERMAN		WS