

Master Electrical Engineering (MSE) PO 20191

Module für alle Vertiefungen

3- und 4-semestriger Studiengang (971+972)

	CP	Pnr.	Modul/Prüfung	Fach-sem.	Art	Bemerkungen	LV im
M01	5	1100	Technical Management	1/2	M		WS
		1110	Project Management / Engineering Responsibility	1/2	PL	2 Vorlesungen / Modulprüfung	
M02	5	1200	Team Project	1/2	M		SS
		1210	Team Project	1/2	PL		
M04	30	80010	Master Module	3/4	M	ACHTUNG: Nicht im Pool PEE	
		80011	Thesis	3/4	PL	Voraussetzungen: 972: 80 CP, M03 abgeschlossen, 2. Deutschkurs mit mindestens Level A2 971: 50 CP, abweichend: Studierende im 2. FS, wenn im 1. Semester mind. 25 CP erreicht wurden.	
		80012	Colloquium	3/4	PL		

Nur 4-semestriger Studiengang (972)

M03	30	7000	Industrial Project (ACHTUNG: NICHT IM POOL)		M	BE (mEt)	
		7001	German Classes	1/2	T	Deutsch: 1. Kurs A1 oder höher	
		7002	Preliminary seminar	1-3	T		
		7003	Practical Part	3	PL		

Pflichtmodule: Major Automation

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MA01	5	2100	Safety in Industrial Automation		M		WS
		2110	Safety in Industrial Automation	1/2	PL		
		2120	Safety in Industrial Automation - Lab	1/2	L		
MA02	5	2200	Adaptive Control, Modeling and Identification		M		WS
		2210	Adaptive Control, Modeling and Identification	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		2220	Adaptive Control, Modeling and Identification - Lab	1/2	L		
MA03	5	2300	Computer Vision		M		WS
		2310	Computer Vision	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		2320	Computer Vision - Lab	1/2	L		
MA04	5	2430	Advanced Programming Techniques		M		WS
		2440	Advanced Programming Techniques	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		2450	Advanced Programming Techniques - Lab	1/2	L	20% der Modulnote	
MA05	5	2530	Industry 4.0 / IIoT and the Digital Factory		M		SS
		2540	Industry 4.0 / IIoT and the Digital Factory	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		2550	Industry 4.0 / IIoT and the Digital Factory - Lab	1/2	L		
MA06	5	2600	Industrial Robotics		M		SS
		2610	Industrial Robotics	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		2620	Industrial Robotics - Lab	1/2	L		
MA07	5	2700	State Space Control Design		M		SS
		2710	State Space Control Design	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		2720	State Space Control Design - Lab	1/2	L		
MWP01	5	2810	Elective 1	1/2	M	5 CP aus dem Katalog MAWP	WS/SS
MWP02	5	2820	Elective 2	1/2	M	5 CP aus dem Katalog MAWP	WS/SS
MWP03	5	2830	Elective 3	1/2	M	5 CP aus dem Katalog MAWP	WS/SS

Pflichtmodule: Major Communications

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MC01	5	3100	Advanced Digital Signal Processing	1/2	M		WS
		3110	Advanced Digital Signal Processing	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3120	Advanced Digital Signal Processing - Lab	1/2	L		
MC02	5	3200	Advanced Modulation	1/2	M		SS
		3210	Advanced Modulation	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3220	Advanced Modulation - Lab	1/2	L		
MC03	5	3300	Microwave Components and Systems	1/2	M		WS
		3310	Microwave Components and Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3320	Microwave Components and Systems - Lab	1/2	L		
MC04	5	3400	Advanced Software Design and Development	1/2	M		WS
		3410	Advanced Software Design and Development	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3420	Advanced Software Design and Development - Lab	1/2	L		
MC05	5	3500	System Driven Hardware Design	1/2	M		SS
		3510	System Driven Hardware Design	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3520	System Driven Hardware Design - Lab	1/2	L		
MC06	5	3600	Fields, Waves and Antennas	1/2	M		SS
		3610	Fields, Waves and Antennas	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3620	Fields, Waves and Antennas - Lab	1/2	L		
MC07	5	3700	Information Networks	1/2	M		SS
		3710	Information Networks	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		3720	Information Networks - Lab	1/2	L		
MWP01	5	3810	Elective 1	1/2	M	5 CP aus dem Katalog MCWP	WS/SS
MWP02	5	3820	Elective 2	1/2	M	5 CP aus dem Katalog MCWP	WS/SS
MWP03	5	3830	Elective 3	1/2	M	5 CP aus dem Katalog MCWP	WS/SS

Pflichtmodule: Major Embedded and Microelectronics

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MM01	5	4130	Advanced Programming Techniques	1/2	M		WS
		4140	Advanced Programming Techniques	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4150	Advanced Programming Techniques - Lab	1/2	L	20% der Modulnote	
MM02	5	4200	VLSI Design and Testing	1/2	M		WS
		4210	VLSI Design and Testing	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4220	VLSI Design and Testing - Lab	1/2	L		
MM03	5	4300	Advanced Microcontroller Systems and Embedded Operating Systems	1/2	M		WS
		4310	Advanced Microcontroller Systems and Embedded Operating Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4320	Advanced Microcontroller Systems and Embedded Operating Systems - Lab	1/2	L		
MM04	5	4400	FPGA-based System on Chip Design	1/2	M		WS
		4410	FPGA-based System on Chip Design	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4420	FPGA-based System on Chip Design - Lab	1/2	L	25% der Modulnote	
MM05	5	4500	Embedded Architectures and Applications	1/2	M		SS
		4510	Embedded Architectures and Applications	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4520	Embedded Architectures and Applications - Lab	1/2	L		
MM06	5	4600	System Driven Hardware Design	1/2	M		SS
		4610	System Driven Hardware Design	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4620	System Driven Hardware Design - Lab	1/2	L		
MM07	5	4700	Embedded Signal Processing Systems	1/2	M		SS
		4710	Embedded Signal Processing Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		4720	Embedded Signal Processing Systems - Lab	1/2	L	25% der Modulnote	
MWP01	5	4810	Elective 1	1/2	M	5 CP aus dem Katalog MMWP	WS/SS
MWP02	5	4820	Elective 2	1/2	M	5 CP aus dem Katalog MMWP	WS/SS
MWP03	5	4830	Elective 3	1/2	M	5 CP aus dem Katalog MMWP	WS/SS

Pflichtmodule: Major Power Engineering

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MP01	5	5100	Advanced High Voltage Technology	1/2	M		WS
		5110	Advanced High Voltage Technology	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		5120	Advanced High Voltage Technology - Lab	1/2	L		
MP02	5	5200	Power System Operation	1/2	M		WS
		5210	Power System Operation	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		5220	Power System Operation - Lab	1/2	L	20 % der Modulnote	
MP03	5	5300	Renewable Energy Systems	1/2	M		WS
		5310	Renewable Energy Systems	1/2	PL		
MP04	5	5430	Embedded Programming & Design of Real-Time Control Systems	1/2	M		WS
		5440	Embedded Programming & Design of Real-Time Control Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		5450	Embedded Programming & Design of Real-Time Control Systems - Lab	1/2	L	25% der Modulnote	
MP05	5	5500	Power Electronics for Drives and Energy Systems	1/2	M		SS
		5510	Power Electronics for Drives and Energy Systems	1/2	PL		
MP06	5	5600	Advanced Control of Electrical Drives	1/2	M		SS
		5610	Advanced Control of Electrical Drives	1/2	PL		
MP07	5	5730	Model-Based Design, HiL & PiL Systems	1/2	M		SS
		5740	Model-Based Design, HiL & PiL Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		5750	Model-Based Design, HiL & PiL Systems - Lab	1/2	L	25% der Modulnote	
MWP01	5	5810	Elective 1	1/2	M	5 CP aus dem Katalog MPWP01 (Software)	WS/SS
MWP02	5	5820	Elective 2	1/2	M	5 CP aus dem Katalog MPWP	WS/SS
MWP03	5	5830	Elective 3	1/2	M	5 CP aus dem Katalog MPWP	WS/SS

Wahlpflichtmodule: Major Automation (MAWP)

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MAwp01	5	28100	Model-based Real-time Simulation of Mechatronic Systems	1/2	TM		WS
		28101	Model-based Real-time Simulation of Mechatronic Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28102	Model-based Real-time Simulation of Mechatronic Systems - Lab	1/2	L		
MAwp02	5	28200	High Level Language Frameworks	1/2	TM		WS
		28201	High Level Language Frameworks	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28202	High Level Language Frameworks - Lab	1/2	L		
MAwp03	2,5	28300	Human Machine Interfaces (HMI)	1/2	TM		WS/SS
		28301	Human Machine Interfaces (HMI)	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
MAwp04	5	28400	Autonomous Mobile Robots	1/2	TM		WS/SS
		28401	Autonomous Mobile Robots	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28402	Autonomous Mobile Robots - Lab	1/2	L		
MAwp05	2,5	28500	Advanced Graphical Programming of Control Systems	1/2	TM		WS/SS
		28501	Advanced Graphical Programming of Control Systems	1/2	PL		
		28502	Advanced Graphical Programming of Control Systems – Lab	1/2	L		
MAwp06	2,5	28600	Advanced Sensors for the Internet of Things	1/2	TM		WS/SS
		28601	Advanced Sensors for the Internet of Things	1/2	PL		
MCwp01	2,5	38100	Digital Signal Processing Applications	1/2	TM		WS/SS
		38101	Digital Signal Processing Applications	1/2	PL		
MCwp02	2,5	38200	Wireless Systems (Technologies)	1/2	TM		WS/SS
		38201	Wireless Systems (Technologies)	1/2	PL		
MCwp03	2,5	38300	Network Security	1/2	TM		WS/SS
		38301	Network Security	1/2	PL		
MCwp04	2,5	38400	Mobile Communications	1/2	TM		WS/SS
		38401	Mobile Communications	1/2	PL		
MCwp05	2,5	38500	Optical Communications	1/2	TM		WS/SS
		38501	Optical Communications	1/2	PL		
MCwp06	2,5	38600	(I)IoT and Cloud Networking	1/2	TM		WS
		38601	(I)IoT and Cloud Networking	1/2	PL		
MCwp08	2,5	38800	Image and Video Processing	1/2	TM		WS/SS
		38801	Image and Video Processing	1/2	PL		
MMwp02	2,5	48200	Safety in Embedded Control Systems	1/2	TM		SS
		48201	Safety in Embedded Control Systems	1/2	PL		
MMwp04	5	48400	Advanced Software Design Techniques	1/2	TM		SS
		48401	Advanced Software Design Techniques	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48402	Advanced Software Design Techniques - Lab	1/2	L		
MMwp05	2,5	48500	Security in Connected Embedded Systems	1/2	TM		Ws
		48501	Security in Connected Embedded Systems	1/2	PL		
MMwp07	5	48700	Advanced Driver Assistance Systems and Automated Driving	1/2	TM		WS/SS
		48701	Advanced Driver Assistance Systems and Automated Driving	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48702	Advanced Driver Assistance Systems and Automated Driving - Lab	1/2	L	FBR-Beschluss Januar 2024	
MPwp02	2,5	58200	Automotive Electrical Power Train	1/2	TM		WS/SS
		58201	Automotive Electrical Power Train	1/2	PL		
MPwp03	5	58300	Stationary & Mobil Energy Storage Systems	1/2	TM	2 Vorlesungen: Stationary Energy Storage Systems / Mobile Energy Storage Systems	SS
		58301	Stationary & Mobil Energy Storage Systems	1/2	PL		
MPwp05	2,5	58500	Switch Gear	1/2	TM		WS/SS
		58501	Switch Gear	1/2	PL		
MPwp06	5	58600	Power Systems Planning	1/2	TM		WS/SS
		58601	Power Systems Planning	1/2	PL		
MPwp09	2,5	58900	Hydrogen Technique and Fuel Cells	1/2	TM		WS/SS
		58901	Hydrogen Technique and Fuel Cells	1/2	PL		
MGwp01	2,5	68100	Research Project	1/2	TM		WS/SS
		68101	Research Project	1/2	PL		
MGwp02	2,5	68200	Selected Research Topics	1/2	TM		WS/SS
		68201	Selected Research Topics	1/2	PL		
MGwp03	2,5	68300	Engineering Ethics	1/2	TM		WS/SS
		68301	Ethics, Engineering, and Ecology	1/2	PL		
MGwp04	2,5	68400	Legal English for Engineers	1/2	TM		WS/SS
		68401	Legal English for Engineers	1/2	PL		
MMwp06	2,5	48600	Digital Signal Processing Chain	1/2	TM		WS/SS
		48601	Digital Signal Processing Chain	1/2	PL		

Wahlpflichtmodule: Major Communications (MCWP)

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MCwp01	2,5	38100	Digital Signal Processing Applications	1/2	TM		WS/SS
		38101	Digital Signal Processing Applications	1/2	PL		
MCwp02	2,5	38200	Wireless Systems (Technologies)	1/2	TM		WS/SS
		38201	Wireless Systems (Technologies)	1/2	PL		
MCwp03	2,5	38300	Network Security	1/2	TM		WS/SS
		38301	Network Security	1/2	PL		
MCwp04	2,5	38400	Mobile Communications	1/2	TM		WS/SS
		38401	Mobile Communications	1/2	PL		
MCwp05	2,5	38500	Optical Communications	1/2	TM		WS/SS
		38501	Optical Communications	1/2	PL		
MCwp06	2,5	38600	(I)IoT and Cloud Networking	1/2	TM		WS
		38601	(I)IoT and Cloud Networking	1/2	PL		
MCwp07	2,5	38700	Smart Home	1/2	TM		WS/SS
		38701	Smart Home	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		38702	Smart Home - Lab	1/2	L		
MCwp08	2,5	38800	Image and Video Processing	1/2	TM		WS/SS
		38801	Image and Video Processing	1/2	PL		
MAwp03	2,5	28300	Human Machine Interfaces (HMI)	1/2	TM		WS/SS
		28301	Human Machine Interfaces (HMI)	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
MAwp06	2,5	28600	Advanced Sensors for the Internet of Things	1/2	TM		WS/SS
		28601	Advanced Sensors for the Internet of Things	1/2	PL		
MMwp02	2,5	48200	Safety in Embedded Control Systems	1/2	TM		SS
		48201	Safety in Embedded Control Systems	1/2	PL		
MMwp05	2,5	48500	Security in Connected Embedded Systems	1/2	TM		WS/SS
		48501	Security in Connected Embedded Systems	1/2	PL		
MMwp07	5	48700	Advanced Driver Assistance Systems and Automated Driving	1/2	TM		WS/SS
		48701	Advanced Driver Assistance Systems and Automated Driving	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48702	Advanced Driver Assistance Systems and Automated Driving - Lab	1/2	L	FBR-Beschluss Januar 2024	
MPwp01	2,5	58100	Lab Module on Power Electronics	1/2	TM		WS/SS
		58101	Lab Module on Power Electronics	1/2	PL		
		58102	Lab Module on Power Electronics - Lab	1/2	PL		
MPwp02	2,5	58200	Automotive Electrical Power Train	1/2	TM		SS
		58201	Automotive Electrical Power Train	1/2	PL		
MPwp03	5	58300	Stationary & Mobil Energy Storage Systems	1/2	TM	2 Vorlesungen	WS/SS
		58301	Stationary & Mobil Energy Storage Systems	1/2	PL		
MPwp05	2,5	58500	Switch Gear	1/2	TM		WS/SS
		58501	Switch Gear	1/2	PL		
MPwp06	5	58600	Power Systems Planning	1/2	TM		WS/SS
		58601	Power Systems Planning	1/2	PL		
MPwp08	5	58800	Applied Programming	1/2			WS/SS
		58801	Applied Programming	1/2	PL	Voraussetzung: erfolgreiche Teilnahme an Übung	
		58802	Applied Programming - Exercises	1/2	Ü		
MPwp09	2,5	58900	Hydrogen Technique and Fuel Cells	1/2	TM		SS
		58901	Hydrogen Technique and Fuel Cells	1/2	PL		
MGwp01	2,5	68100	Research Project	1/2	TM		WS/SS
		68101	Research Project	1/2	PL		
MGwp02	2,5	68200	Selected Research Topics	1/2	TM		WS/SS
		68201	Selected Research Topics	1/2	PL		
MGwp03	2,5	68300	Engineering Ethics	1/2	TM		WS/SS
		68301	Ethics, Engineering, and Ecology	1/2	PL		
MGwp04	2,5	68400	Legal English for Engineers	1/2	TM		WS/SS ?
		68401	Legal English for Engineers	1/2	PL		
MMwp06	2,5	48600	Digital Signal Processing Chain	1/2	TM		WS/SS
		48601	Digital Signal Processing Chain	1/2	PL		

Wahlpflichtmodule: Major Embedded and Microelectronics (MMWP)

Modul-Nr.	CP	Pnr.	Modul-Name	Fachsem.	Art	Bemerkung	LV im
MMwp01	5	48100	CMOS Analog Circuits	1/2	TM		WS
		48101	CMOS Analog Circuits	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48102	CMOS Analog Circuits - Lab	1/2	L	30% der Modulnote	
MMwp02	2,5	48200	Safety in Embedded Control Systems	1/2	TM		SS
		48201	Safety in Embedded Control Systems	1/2	PL		
MMwp03	5	48300	Digital System Design	1/2	TM		SS
		48301	Digital System Design	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48302	Digital System Design - Lab	1/2	L		
MMwp04	5	48400	Advanced Software Design Techniques	1/2	TM		SS
		48401	Advanced Software Design Techniques	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48402	Advanced Software Design Techniques - Lab	1/2	L		
MMwp05	2,5	48500	Security in Connected Embedded Systems	1/2	TM		Ws
		48501	Security in Connected Embedded Systems	1/2	PL		
MMwp06	2,5	48600	Digital Signal Processing Chain	1/2	TM		WS/SS
		48601	Digital Signal Processing Chain	1/2	PL		
MMwp07	5	48700	Advanced Driver Assistance Systems and Automated Driving	1/2	TM		SS
		48701	Advanced Driver Assistance Systems and Automated Driving	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48702	Advanced Driver Assistance Systems and Automated Driving - Lab	1/2	L		
MAwp01	5	28100	Model-based Real-time Simulation of Mechatronic Systems	1/2	TM		WS
		28101	Model-based Real-time Simulation of Mechatronic Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28102	Model-based Real-time Simulation of Mechatronic Systems - Lab	1/2	L		
MAwp02	5	28200	High Level Language Frameworks	1/2	TM		WS
		28201	High Level Language Frameworks	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28202	High Level Language Frameworks - Lab	1/2	L		
MAwp03	2,5	28300	Human Machine Interfaces (HMI)		TM		WS/SS
		28301	Human Machine Interfaces (HMI)	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
MAwp05	2,5	28500	Advanced Graphical Programming of Control Systems	1/2	TM		WS/SS
		28501	Advanced Graphical Programming of Control Systems	1/2	PL		
		28502	Advanced Graphical Programming of Control Systems - Lab	1/2	L		
MAwp06	2,5	28600	Advanced Sensors for the Internet of Things	1/2	TM		WS/SS
		28601	Advanced Sensors for the Internet of Things	1/2	PL		
MCwp01	2,5	38100	Digital Signal Processing Applications	1/2	TM		WS/SS
		38101	Digital Signal Processing Applications	1/2	PL		
MCwp02	2,5	38200	Wireless Systems (Technologies)	1/2	TM		WS/SS
		38201	Wireless Systems (Technologies)	1/2	PL		
MCwp03	2,5	38300	Network Security	1/2	TM		WS/SS
		38301	Network Security	1/2	PL		
MCwp04	2,5	38400	Mobile Communications	1/2	TM		WS/SS
		38401	Mobile Communications	1/2	PL		
MCwp05	2,5	38500	Optical Communications	1/2	TM		WS/SS
		38501	Optical Communications	1/2	PL		
MCwp06	2,5	38600	(I)IoT and Cloud Networking	1/2	TM		WS
		38601	(I)IoT and Cloud Networking	1/2	PL		
MCwp07	2,5	38700	Smart Home	1/2	TM		WS/SS
		38701	Smart Home	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		38702	Smart Home - Lab	1/2	L		
MCwp08	2,5	38800	Image and Video Processing	1/2	TM		WS/SS
		38801	Image and Video Processing	1/2	PL		
MPwp01	2,5	58100	Lab Module on Power Electronics	1/2	TM		WS/SS
		58101	Lab Module on Power Electronics	1/2	PL		
		58102	Lab Module on Power Electronics - Lab	1/2	PL		
MPwp02	2,5	58200	Automotive Electrical Power Train	1/2	TM		SS
		58201	Automotive Electrical Power Train	1/2	PL		
MPwp03	5	58300	Stationary & Mobil Energy Storage Systems	1/2	TM	2 Vorlesungen	WS/SS
		58301	Stationary & Mobil Energy Storage Systems	1/2	PL		

MPwp05	2,5	58500	Switch Gear	1/2	TM		WS/SS
		58501	Switch Gear	1/2	PL		
MPwp06	5	58600	Power Systems Planning	1/2	TM		WS/SS
		58601	Power Systems Planning	1/2	PL		
MPwp09	2,5	58900	Hydrogen Technique and Fuel Cells	1/2	TM		WS/SS
		58901	Hydrogen Technique and Fuel Cells	1/2	PL		
MGwp01	2,5	68100	Research Project	1/2	TM		WS/SS
		68101	Research Project	1/2	PL		
MGwp02	2,5	68200	Selected Research Topics	1/2	TM		WS/SS
		68201	Selected Research Topics	1/2	PL		
MGwp03	2,5	68300	Engineering Ethics	1/2	TM		WS/SS
		68301	Ethics, Engineering, and Ecology	1/2	PL		
MGwp04	2,5	68400	Legal English for Engineers	1/2	TM		WS/SS
		68401	Legal English for Engineers	1/2	PL		

Wahlpflichtmodule: Major Power Engineering (MPWP)

Modul-Nr.	CP	Pnr.	Modul-Name	Fach-sem.	Art	Bemerkung	LV im
MPwp01	2,5	58100	Lab Module on Power Electronics	1/2	TM		WS/SS
		58101	Lab Module on Power Electronics	1/2	PL		
		58102	Lab Module on Power Electronics - Lab	1/2	PL		
MPwp02	2,5	58200	Automotive Electrical Power Train	1/2	TM		WS/SS
		58201	Automotive Electrical Power Train	1/2	PL		
MPwp03	5	58300	Stationary & Mobil Energy Storage Systems	1/2	TM	2 Vorlesungen	WS/SS
		58301	Stationary & Mobil Energy Storage Systems	1/2	PL		
MPwp04	2,5	58410	Lab Module on Electrical Drives	1/2	TM	1 SWS Labor	WS/SS
		58411	Lab Module on Electrical Drives	1/2	PL		
		58412	Lab Module on Electrical Drives - Lab	1/2	L		
MPwp05	2,5	58500	Switch Gear	1/2	TM		WS/SS
		58501	Switch Gear	1/2	PL		
MPwp06	5	58600	Power Systems Planning	1/2	TM		WS/SS
		58601	Power Systems Planning	1/2	PL		
MPwp07	5	58700	Smart Grids	1/2	TM		WS/SS
		58701	Smart Grid Technology - Lecture	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		58702	Smart Grid Technology - Lab	1/2	L	10% der Modulnote	
MPwp08	5	58800	Applied Programming	1/2			WS/SS
		58801	Applied Programming	1/2	PL	Voraussetzung: erfolgreiche Teilnahme an Übung	
		58802	Applied Programming - Exercises	1/2	Ü		
MPwp09	2,5	58900	Hydrogen Technique and Fuel Cells	1/2	TM		WS/SS
		58901	Hydrogen Technique and Fuel Cells	1/2	PL		
MPwp10	2,5	58910	Power Systems Protection	1/2	TM		WS/SS
		58911	Power Systems Protection	1/2	PL		
		58912	Power Systems Protection - Lab	1/2	L		
MAwp01	5	28100	Model-based Real-time Simulation of Mechatronic Systems	1/2	TM		WS/SS
		28101	Model-based Real-time Simulation of Mechatronic Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28102	Model-based Real-time Simulation of Mechatronic Systems - Lab	1/2	L		
MAwp04	5	28400	Autonomous Mobile Robots		TM		WS/SS
		28401	Autonomous Mobile Robots	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28402	Autonomous Mobile Robots - Lab	1/2	L		
MAwp05	2,5	28500	Advanced Graphical Programming of Control Systems	1/2	TM		WS/SS
		28501	Advanced Graphical Programming of Control Systems	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		28502	Advanced Graphical Programming of Control Systems - Lab	1/2	L		
MAwp06	2,5	28600	Advanced Sensors for the Internet of Things	1/2	TM		WS/SS
		28601	Advanced Sensors for the Internet of Things	1/2	PL		
MCwp01	2,5	38100	Digital Signal Processing Applications	1/2	TM		WS/SS
		38101	Digital Signal Processing Applications	1/2	PL		
MCwp02	2,5	38200	Wireless Systems (Technologies)	1/2	TM		WS/SS
		38201	Wireless Systems (Technologies)	1/2	PL		
MCwp03	2,5	38300	Network Security	1/2	TM		WS/SS
		38301	Network Security	1/2	PL		
MCwp04	2,5	38400	Mobile Communications	1/2	TM		WS/SS
		38401	Mobile Communications	1/2	PL		
MCwp05	2,5	38500	Optical Communications	1/2	TM		WS/SS
		38501	Optical Communications	1/2	PL		
MCwp06	2,5	38600	(I)IoT and Cloud Networking	1/2	TM		WS
		38601	(I)IoT and Cloud Networking	1/2	PL		
MCwp07	2,5	38700	Smart Home	1/2	TM		WS/SS
		38701	Smart Home	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		38702	Smart Home - Lab	1/2	L		
MCwp08	2,5	38800	Image and Video Processing	1/2	TM		WS/SS
		38801	Image and Video Processing	1/2	PL		
MMwp02	2,5	48200	Safety in Embedded Control Systems	1/2	TM		WS/SS
		48201	Safety in Embedded Control Systems	1/2	PL		
MMwp04	5	48400	Advanced Software Design Techniques	1/2	TM		WS/SS
		48401	Advanced Software Design Techniques	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48402	Advanced Software Design Techniques - Lab	1/2	L		
MMwp05	2,5	48500	Security in Connected Embedded Systems	1/2	TM		Ws
		48501	Security in Connected Embedded Systems	1/2	PL		

MMwp07	5	48700	Advanced Driver Assistance Systems and Automated Driving	1/2	TM		WS/SS
		48701	Advanced Driver Assistance Systems and Automated Driving	1/2	PL	Voraussetzung: erfolgreiche Teilnahme am Labor	
		48702	Advanced Driver Assistance Systems and Automated Driving - Lab	1/2	L		
MGwp01	2,5	68100	Research Project	1/2	TM		WS/SS
		68101	Research Project	1/2	PL		
MGwp02	2,5	68200	Selected Research Topics	1/2	TM		WS/SS
		68201	Selected Research Topics	1/2	PL		
MGwp03	2,5	68300	Engineering Ethics	1/2	TM		WS/SS
		68301	Ethics, Engineering, and Ecology	1/2	PL		
MGwp04	2,5	68400	Legal English for Engineers	1/2	TM		WS/SS ?
		68401	Legal English for Engineers	1/2	PL		
MMwp06	2,5	48600	Digital Signal Processing Chain	1/2	TM		WS/SS
		48601	Digital Signal Processing Chain	1/2	PL		