Elective modules

Module number	Module name	1st semester	2nd semester	3rd semester	Credits
		Lecture (Lecturer) (L/E/Se/La/P)	*Lecture* (Lecturer) (L/E/Se/La/P)	*Lecture* (Lecturer) (L/E/Se/La/P)	
NES-30 GLC-14.1	**German Language and Culture**	*German Language and Culture* TUDIAS (0/0/0/4/0)			4
NES-12 12 01-14.1	**Materials for Nanoelectronics and Vacuum Technology**	*Vacuum Technology* (Bartha) (2/0/0/0/0) *Materials for Nanotechnology* (Richter)(2/0/0/0/1)			6
NES-INF-DSE-20-M-SE1	**Foundations of Systems Engineering**	*Systems Engineering 1* (Fetzer) (2/2/0/0/0)			5
NES-12 09 01-14.1	**Stochastic Signals and Systems**	*Stochastic Signals and Systems* (Jorswieck) (2/2/0/0/0)			6
NES-10 01 01-14.1	**Investing in a Sustainable Future**		*Investing in a Sustainable Future* (Prof. Günther) (1/0/2/0/0)		4
NES-13 14 03	**Nanotechnology and Material Science**		*Nanostructured Materials* (Cuniberti) (2/2/0/0/2) *Nanotechnology* (Eng) (2/0/0/0/0)		12
NES-12 10 05-20.1	**Antennas and Radar Systems**		*Antennas and Radar Systems* (Prof. Plettemeier) (4/2/0/0/0)		7
NES-12 10 02-14.1	**Communications**		*Communications* (Fettweis) (2/1/0/0/0)		3
NES-INF-DSE-20-E-SFT	**Foundations of Software-Fault Tolerance**		*Software Fault Tolerance* (Fetzer) (2/2/0/0/0)		6
NES-11 06 04-14.1	**Wireless Sensor Networks**		*Wireless Sensor Networks* (Dargie)(2/0/2/0/0)		6
NES-12 10 06-14.1	**Integrated Photonic Devices for Communications and Signal Processing**		*Integrated Photonic Devices for Communications and Signal Processing* (Jamshidi) (4/0/0/0/2)		7
NES-DSE-14-E14	**Embedded Hardware Systems Design**		*Embedded Hardware Systems Design (Kumar) (2/2/0/0/0)*		6
NES-12 08 07	**Neuromorphic VLSI Systems**		*Neuromorphic VLSI Systems* (Mayr) (4/2/0/0/0)		7
NES-12 08 07	**VLSI Processor Design**		*VLSI Processor Design* (Mayr) (2/2/0/0/2)		7
NES-12 08 26	**Modeling and characterization of nanoelectronic devices**		*Characterization of micro and nanoelectronic devices* (Schröter) (2/0/0/0/1) *Modeling of nanoelectronic devices* (Schröter) (2/1/0/0/0)		7
NES-11 20 19	**Design and Programming of Embedded Multicore Architectures**		*Design and Programming of Embedded Multicore Architectures* (Göhringer) (2/2/0/0/0)		6
NES-12 06 01-14.1	**Materials for the 3D System Integration**		*3D System Integration and 3D Technologies* (Panchenko) (2/0/0/0/0)	*Micro-/Nanomaterials and Reliability Aspects* (Panchenko) (2/0/0/0/1)	7
NES-12 12 03-14.1	**Memory Technology**		*Memory Technology 1* (Mikolajick) (2/0/1/0/0)	*Memory Technology 2* (Mikolajick) (2/0/1/0/0)	7
NES-12 12 07-14.1	**Innovative Semiconductor Devices**			*Innovative Semiconductor Devices* (Mikolajick) (2/1/0/0/0)	4
NES-13 14 02-14.1	**Molecular Electronics**			*Molecular Electronics* (Cuniberti/Moresco) (2/2/0/0/0)	6
NES-12 12 05-14.1	**Optoelectronics**			*Optoelectronic Devices and Systems* (Lakner) (2/1/0/0/0) *Nanooptics* (Eng) (2/0/0/0/0)	7
NES-02 04 01	**Quantum Mechanics for Nanoelectronics**			*Semiconductor Quantum Structures* (Helm) (2/0/0/0/0) *Quantum and solid state physics* (Scholz) (3/1/0/0/0)	7
NES-12 10 20	**Communication Networks 3**			*Communication Networks 3* (Fitzek) (3/0/0/0/0) *CN-Actual Topics-Problem based*	7

				learning (Fitzek)(1/2/0/0/0)	
NES-11 06 05-14.1	**Real-Time Systems** ***currently not offered!***			*Real-Time Systems* (Härtig) (2/1/0/0/0)	6
NES-12 08 01-20.1	**Future Computing Strategies in Nanoelectronic Systems**			*Future Computing Strategies in Nanoelectronic Systems* (Tetzlaff) (2/1/0/0/0)	4
NES-11 06 07-14.1	**Ubiquitous Systems**			*Distributed Systems* (Schill) (2/2/0/0/0) *Mobile Communication and mobile computing* (Schill) (2/0/0/0/0)	7
NES-12 10 04-14.1	**Hardware/Software Codesign Lab**			*HW/SW Codedesign Lab* (Fettweis) (0/0/0/0/2)	4
NES-11 20 20	**Hardware Modelling and Simulation**			*Hardware Modelling and Simulation* (Göhringer) (2/2/0/0/0)	6
NES-12 10 08	**Introduction to Optical Nonclassical Computing: Concepts and Devices**			*Introduction to Optical Nonclassical Computing: Concepts and Devices* (Jamshidi) (4/2/0/0/0)	7
NES-12 12 04-14.1	**Electromechanical Networks**			*Electromechanical Networks* (Marschner) (2/1/0/0/0)	4
NES-12 08 04-14.1	**Integrated Circuits for Broadband Optical Communications**			*Integrated Circuits for Broadband Optical Communications* (Ellinger) (3/1/0/0/2)	7

Last updated: 02, 2022

L Lecture
E Exercise
Se Seminar
La Language course
P Practical lab course

Key areas:

Technology
Design
Applications