V Field of specialization 12: Photonics

Below you find a list of recommended elective modules from the immediate environment of the specialization. If you would like to broaden your knowledge further, other modules than those can be chosen as well in consultation with the program consultants. In this respect, it is strongly recommended to consult the program consultant already at the beginning of the Master's program in order to discuss your individual study plan.

Recommended elective modules:

	WS		SS	
Recommended elective modules for the specialization	**SWS**	**LP**	**SWS**	**LP**
Adaptive Optics	2	3		
Applied Information Theory	3+1	6		
Antennas and Beamforming	2+1	4		
Channel Coding Graph-Based Codes	3+1	6		
Communication Systems and Protocols			2+1	5
Analog Circuit Design	2	4		
Digital Circuit Design			2+1	4
Digital Signal Processing in Optical Communications – with Practical Exercises			2+2	6
Field Propagation and Coherence	2+1	4		
Funkempfänger	2	3		
Introduction to Microsystem Technology I	2+2	4		
Hardware Modeling and Simulation	2+1	4		
Laser Physics	2+1	4		
Machine Learning and Optimization in Communications			2+1	4
MMIC Design Laboratory	4	6	4	6
Modern Radio Systems Engineering	3+1	6	3+1	6
Optical Engineering and Machine Vision	2+2	6		
Optical Systems in Medicine and Life Science			2	3
Optoelektronische Messtechnik			2	3
Physics, Technology and Applications of Thin Films	2+1	4		
Praktikum Entwurf digitaler Systeme/ Digital Hardware Design Laboratory			4	6
Microwave Engineering Lab	4	6	4	6
Quantum Detectors and Sensors	3+1	6		
Radar Systems Engineering	3+1	6		
Radio Frequency Integrated Circuits and Systems			2+2	6
Multivariable Control Systems	3+1	6		
Satellite Communications			2	3
Signal Processing Methods	2+2	6		
Signal Processing with Nonlinear Fourier Transforms and Koopman Operators			2+2	6
Signal Processing for Communication Receivers			3+1	6
Single-Photon Detectors	2+1	4		
Spaceborne Radar Remote Sensing			3+1	6
Technische Optik	2+1	5		
Verfahren zur Kanalcodierung			2	3