

\*The courses listed after the modules, which are marked with an \*, are exemplary. Lectures can be included in the modules according to your own interests. However, the courses must match the superordinate module designation.

Module (German)	Responsible	Course	CP	Module (English)	Weekday	Time	Room	Bemerkung
<b>Pflichtmodule</b>								
Computational Methods, Simulations & Experimental Control	Piet Schmidt	Praktikum Computational Methods, Simulations & Experimental Control	5	Computational Methods, Simulations & Experimental Control		by arrangement		
Seminar*	Piet Schmidt, Tanja Mehstäubler	Seminar Quantum technologies with laser cooled ions and atoms	3	Seminar		introductory session on 16.04.25 at 4 p.m. (online)		The seminar accompanies the lecture 'Quantum Optics' and forms a bridge in quantum engineering for students of LUH and TUBS. Offered alternately at PTB and HiTec. HiTec Hannover and PTB Braunschweig - to be determined at the introductory event.
Fortgeschrittene Festkörperphysik	Fei Ding	VL Fortgeschrittene Festkörperphysik	5	Advanced Solid State Physics	Dienstag/Mittwoch	10:15-11:45	3701 - 268	
	Michael Zopf	Ü Fortgeschrittene Festkörperphysik			Donnerstag	12:00-14:00	3701 - 268	
<b>Wahlpflichtmodule</b>								
<b>Bereich Quantum</b>								
Introduction to Nanophysics	Fei Ding, Lin Zhang	VL Introduction to Nanophysics	10	Introduction to Nanophysics	Montag/Mittwoch	10:00-12:00/10:00-12:00	3701 - 267	
		Ü Introduction to Nanophysics			Donnerstag	10:00-12:00	3701 - 269	
Quantenstrukturbauelemente	Rolf Haug	VL Quantenstrukturbauelemente	5	Quantum Devices	Montag/Donnerstag	14:00-16:00/12:00-13:00	3701 - 268/ 3701 - 267	
		Ü Quantenstrukturbauelemente			Donnerstag	13:00-14:00	3701 - 267	
Nichtlineare Optik	Marco Jupé	VL Nichtlineare Optik	5	Nonlinear Optics	Dienstag	15:00-17:00	1101 - D326	
		Ü Nichtlineare Optik			Mittwoch	8:00-10:00	1101 - D326	
Nichtklassisches Licht und Nichtklassische Laserinterferometrie	Gerhard Heinzl	VL Laserinterferometrie	5	Nonclassical Light and Nonclassical Laserinterferometry	Mittwoch	10:00-12:00	3401 - 103	Please take this course only if you already have completed the lecture Nichtklassisches Licht by Michèle Heurs. Otherwise this module is no longer available, since the lecture Nichtklassische Laserinterferometrie doesn't exist anymore. Visiting Laserinterferometrie by Heinzl allows you to finish the module if you started it already in the lecture of Michèle Heurs.
Optische Experimente und ihre Kontrolle	Michèle Heurs	VL Elektronische Metrologie im Optiklabor	5	Optical Experiments and their Control	Dienstag	10:00-12:00	3406 - 133	\$ CP must be achieved in the entire module, therefore the lecture Laserstabilisierung und Kontrolle optischer Experimente must be attended in the winter semester
Atomoptik	Christian Ospelkaus, Silke Ospelkaus	VL Atomoptik	5	Atomoptics	Montag	11:45-12:45	1101 - D326	
		Ü Atomoptik			Montag	12:45-13:30	1101 - D326	
Computerphysik	Eric Jeckelmann	VL Computerphysik	6	Computational Physics	Freitag	8:00-10:00	3701 - 268	
		Ü Computerphysik			Donnerstag	16:00-18:00	3701 - 268	
Single Photon Sources	Ilja Gerhardt	VL Single photon sources - from basics to applications	10	Single Photon Sources	Donnerstag/Freitag	10:00-12:00/10:00-12:00	3701 - 267	
		Ü Single photon sources - from basics to applications			Freitag	12:00-14:00	3701 - 267	
Computational Photonics	Ayhan Demircan, Ihar Babushkin, Oliver Melchert	VL Computational Photonics	6	Computational Photonics	Dienstag 14tägl.	9:00-12:00	1104 - B214	
		Ü Computational Photonics			Mittwoch	14:15-15:45	1105 - 001	
Applied Photonic Quantum Technologies	Michael Kues	VL Applied photonic quantum technologies with a focus on quantum key distribution	5	Applied Photonic Quantum Technologies	Mittwoch	14:00-16:00	3201 - 122	
Quantenkommunikation*	Robert Raußendorf	VL/Ü Quanteninformation	5	Quantum Communication	Montag/Dienstag	14:00-16:00/16:00-18:00	3701 - 267	
Quantenmetrologie und -sensorik*	Bernhard Roth, Axel Günther	VL/Ü Laser Measurement Technology	6	Quantum Metrology and Sensing	Freitag	13:15-15:30	3403 - A003	
Quantensimulation*	Jens Hübner	VL/Ü Halbleiterphysik mit Python	4	Quantum Simulation	Freitag/Donnerstag	9:00-10:00/10:00-12:00	online/3701 - 268	
Spezialisierung Quantencomputing*	Nikolay Shvetsov-Shilovskiy	VL Optimale Kontrolle von Quantensystemen	3	Specialisation Quantum Computing	Dienstag	16:00-18:00	3701 - 268	
Spezialisierung Quantenphysik*	Tobias Osborne	VL/Ü Fortgeschrittene Quantentheorie	5	Specialisation Quantum Physics	Dienstag/Donnerstag	12:00-14:00/12:00-13:00	3701 - 267/3701 - 268	