

Module	Advanced Materials	
Semester	WPF	
Duration	1 Semester	
Method of Examination	Wahlpflichtfach	
ECTS	5	
Student's Workload	60 h compulsory attendance + 90 h self-study	
Entry Requirements (MPO)		
Recommended Requirements		
Applicability	MaTMeng	
Type/Duration of Assessment	written exam 2h	
Teaching Method	Lecture	
Module Coordinator	M. Görlich	
Aims and Objectives	<p>Understanding the basic techniques for preparation and characterization of nanostructures; Acquire basic knowledge about the characteristics of the most important, nanoscale semiconductor devices and on applications of nanotechnology in various fields; Ability to apply the acquired knowledge to solve basic tasks;</p>	
Course content	<p>Nanofabrication technology (top-down , bottom-up); Nanostructure and surface characterization; Semiconductor-based, nano electronic components; Applications of nanotechnology in electronics, optoelectronics, sensor technology, new materials, chemistry, analytics, biotechnology, healthcare;</p>	
Literature	<p>Amretashis Sengupta und Chandan Kumar Sarkar: Introduction to Nano: Basics to Nanoscience and Nanotechnology (Engineering Materials), Springer Verlag, 2015 Horst-Günter Rubahn: Basics of Nanotechnology, Wiley-VCH Verlag, 2008</p>	
Courses		
Lecturer	Course Title	SPPW
M. Görlich	Basics of Nanotechnology	4