

Module description: Physics 2					
Module Code	t.BA.XXP2.PHY2.19HS				
ECTS Credits	4				
Language of Instruction/Examination	German				
Organizational Unit	IAMP				
Module Coordinator	Christian Hilbes				
Legal Framework	The module description is part of the legal basis in addition to the general academic regulations. It is binding. During the first week of the semester a written and communicated supplement can specify the module description in more detail.				
Module Characteristic	Type 3a 2 lecture lessons per semester week and class+ 2 lab bi-weekly lessons per semester and half-class				
Module Description	The first half of the semester of the Physics 2 module covers the basics of thermodynamics and the second half of the semester covers the basics of electrodynamics.				
Module Content	<ul style="list-style-type: none"> • First law of thermodynamics, inner energy, heat exchange and mechanical work on a fluid, state changes of ideal gases, cyclic processes, Carnot process, heat engines and refrigeration machines. Heat transport phenomena, conduction, convection and radiation. Second law of thermodynamics and entropy. First law for stationary open systems. • Electric charge, Coulomb force, force-field and potential, electric field flux. Permanent magnetism, magnetic field, magnetic field of an electric current, magnetic field flux, Lorentz force, electromagnetic induction. Basics of electrical engineering, ohmic resistance, capacitor and capacity, coils and self-induction. Selected applications. 				
Prerequisite Knowledge					
Learning Objectives (Competences)	Students...		Competencies	Taxonomies	
	know the basics of thermodynamics and can apply them to solve simple problems.		M, F	K1, K2, K3	
	know the basics of electrodynamics and can apply them to solve simple problems.		F, M	K1, K2, K3	
Performance Assessment	End-of-module exam	Assessment	Length (min.)	Weighting	Form
	written exam	Grade	120	100	acc. to module agreement
	Performance assessment during the semester		Assessment	Length (min.)	Weighting
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Classroom Attendance Requirement	None				
Learning material					
Comments					