

Module description: Physics 1			
Module Code	t.BA.WIP.PHY1.19HS		
ECTS Credits	4		
Language of Instruction/Examination	German		
Organizational Unit	IAMP		
Module Coordinator	Francesca Venturini		
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	Students learn to describe, experimentally investigate, analyse and model natural, technical and economic dynamic systems. They deepen their knowledge of physical and business processes, build their process thinking and analogy thinking and learn to use key computer-aided tools.		
Module Content	<ul style="list-style-type: none"> • Physics of idraulic systems (capacity, resistance, induction) • Physics of electrical systems (capacity, resistance, induction) • Energy • Physics of thermal systems • Mathamatical system science 		
Prerequisite Knowledge	https://gmppublic.zhaw.ch/GPMDocProdDPublic/2_ Studium/2_02_Grundlagen_ Studium/T_C L_Moduluspraegungen_SM2025.pdf		
Learning Objectives (Competences)	Students...	Competencies	Taxonomies
	You can apply scientific knowledge to recognize questions, to acquire new knowledge, to describe scientific / technical phenomena and to draw conclusions from evidence.	M, F	K3
	You are familiar with indirect interactions, feedback, and networks of effects.	F	K1
	You are familiar with the scientific way of working (scientific literacy).	F, M	K1
	You are able to distinguish scientific explanations and theories from other non-scientific forms of knowledge.	F, M	K1
	You can analyze and transform data sets.	M	K4
	You are able to plan and carry out your own experiments.	F	K1

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Performance Assessment	End-of-module exam	Assessment	Length (min.)	Weighting	Form	
	written exam	Grade	90	60	acc. to module agreement	
	Performance assessment during the semester					
	written exam	Grade	45	20	acc. to module agreement	
	report	Grade	0	20	acc. to module agreement	
Classroom Attendance Requirement	None Presence required for laboratory activities					
Learning material						
Comments						