

<b>Module description: Product Development for Systems Engineering 2</b>			
<b>Module Code</b>	t.BA.ST.PM2.19HS		
<b>ECTS Credits</b>	4		
<b>Language of Instruction/Examination</b>	German		
<b>Organizational Unit</b>	IMS		
<b>Module Coordinator</b>	Michael Wüthrich		
<b>Legal Framework</b>	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.		
<b>Module Characteristic</b>	Type 4* 4 lab lessons per semester week and half-class		
<b>Module Description</b>	Students extend their skills in the field of product development, teamwork and the transfer of learned factual knowledge into experiential knowledge. This is done taking a practical example in product development from the field of mechatronics. development.		
<b>Module Content</b>	<p><b>1. Independent learning of theory with the support of lecturers:</b></p> <ul style="list-style-type: none"> <li>• - Procedure for developing mechatronic products</li> <li>• - Drafting a technical report</li> <li>• - Citing sources correctly</li> <li>• - Conducting research</li> </ul> <p><b>Situational, if needed in the project:</b></p> <ul style="list-style-type: none"> <li>• - Selection and calculation of machine elements</li> <li>• - Fundamentals of simulation of mechanical systems</li> <li>• 2. Excercises</li> <li>• - Group work: product development project from the initial idea to the final design (CAD, 3d model)</li> <li>• - Technical presentation</li> <li>• - Technical report</li> </ul>		
<b>Prerequisite Knowledge</b>	Visit of PM1		
<b>Learning Objectives (Competences)</b>	<b>Students...</b>	<b>Competencies</b>	<b>Taxonomies</b>
	Overview: Students gain a deeper understanding of the methodology applied in the development of mechatronic products by working on a practical task (project). In teams, they demonstrate their ability to work independently and to focus on the project goals.	F	K2
	(1) They apply the methodology for developing mechatronic products they learnt in the previous semester and work independently in project teams.	M, SO	K3
	(3) They are able to form and organise an effective project group, to work independently as a team on an assignment and to give appropriate feedback.	M, SO	K2
	(2) They can develop and rate project concepts from the initial idea to the final design and visualise their results with the help of drawings, simulations and CAD models.	F, M	K5

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<b>Performance Assessment</b>	<b>End-of-module exam</b>	<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Form</b>
	other			0	
	<b>Performance assessment during the semester</b>				
	<b>Performance assessment during the semester</b>	<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Form</b>
	report	Grade		70	acc. to module agreement
	Presentation	Grade		30	acc. to module agreement
<b>Classroom Attendance Requirement</b>	None Active participation in the team is required for a sufficient grade.				
<b>Learning material</b>					
<b>Comments</b>	The exact number and type of performance records (exams, reports, presentations) depends on the practical project, so there may be some adjustments to during the semester.				