

<b>Module description: Product Development for Systems Engineering 1</b>			
<b>Module Code</b>	t.BA.ST.PM1.19HS		
<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 acquire basic competences in the area of product development and teamwork and in the transfer of learned factual knowledge into experiential knowledge. This is done taking a practical example in product development from the field of mechanics or mechatronics.		
<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 presentation</li> <li>- Basic principles of CAD (components, assemblies, drawings)</li> </ul> <p><b>2. Exercises</b></p> <ul style="list-style-type: none"> <li>- Requirements list, functional analysis, morphological box, evaluation, sketching</li> <li>- Group work: product development project from the initial concept to the fundamental solution</li> <li>- Technical presentation</li> </ul>		
<b>Prerequisite Knowledge</b>			
<b>Learning Objectives (Competences)</b>	<b>Students...</b>	<b>Competencies</b>	<b>Taxonomies</b>
	(5) They can draft and deliver a technical presentation.	M	K5
	(1) They know the methodology for developing mechatronic products and can apply this in practical examples.	M	K3
	(4) They can model components and create assemblies with the help of the CAD program used at the ZHAW.	M, F	K3
	(2) They can independently form a project team, organise the teamwork and work on an assignment.	SO	K3
	Overview: Students know the methodology for developing mechatronic products. They are able to work on a project assignment in groups and they acquire an understanding of how to work with a modern CAD system.	F	K3
	(6) They are able to reflect on their thoughts and actions and to derive conclusions from this. In addition they are able to receive and to react on criticism.	SO	K5
	(3) They can develop product ideas and visualise these in drawings and CAD models.	M, F	K5

# Module description: Product Development for Systems Engineering 1

<b>Performance Assessment</b>	<b>End-of-module exam</b>	<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Form</b>	
	written exam	Grade	90	50	acc. to module agreement	
	<b>Performance assessment during the semester</b>					
	report	Grade		30	acc. to module agreement	
	<i>Presentation</i>	Grade		20	acc. to module agreement	
<b>Classroom Attendance Requirement</b>	None Active participation in the project as part of a team is required.					
<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.					