Module description: Project Module 2

Module Code	t.BA.MT.PM2.19HS
ECTS Credits	4
Language of Instruction/Examination	German
Organizational Unit	IPP
Module Coordinator	Gabriel Schneider
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 4* 4 lab lessons per semester week and half-class
Module Description	Students learn how to find creative solutions to an open problem in mechanical engineering and how to verify these with operating models and prototypes. Students work creatively in a team. The construction of prototypes, and programming, management and presentation technology are all encouraged.
Module Content	• Develop and communicate and innovative solution to a challenging problem Creativity, prototyping, programming • Kreativity, Prototyping, programing
Prerequisite Knowledge	

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Learning Objectives (Competences)

Students...	Competencies	Taxonomies
…are able to carry out a market evaluation and correctly classify customer needs.	F	K5
…are able to operate in accordance with their role on the team	SO	K5
…solve conflicts in the team	SO	K4
…are able to plan, execute and document experiments and tests	F	K3
…are able to independently create simple functional models by means of 3D printers, laser cutters, thermoforming machines and other production machinery with integration of drives and sensors	M	K3
…are able to independently apply knowledge from other modules in the course of study and use it correctly for the task at hand	F	K5
…independently master new software and CAD skills and apply them competently	F	K3
…are able to capitalize on ideas, designs and products fairly with respect to customers	SO	K3
…are able to discover gaps in knowledge and independently obtain the necessary information from experts, professional journals, books and companies	SO	K5
…are able to outline and implement innovative solutions	M	K4
…are able to create software programs for the control of actuators and the interpretation of sensors.	M	K3
…are able to independently research, adopt and apply the knowledge needed to formulate the problem	F	K4
…are able to collaborate and communicate productively within the team and distribute assignments fairly	SO	K4
…are able to develop creative ideas, test them with experiments and further develop them	F	K5
…are able to deal with unplanned difficulties, time pressure, setbacks and frustration and react expeditiously	SO	K6
…learn to structure an assignment and to specify a sensible approach	F	K4
…learn how to efficiently deploy methods of creativity in the team	M	K6
…are able to frame and work out designs and then develop them according to a functional pattern	F	K4

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Performance Assessment	End-of-module exam	Assessment	Length (min.)	Weighting	Form
	report	Grade		17	acc. to module agreement

	Performance assessment during the semester	Assessment	Length (min.)	Weighting	Form
		Grade		83	acc. to module agreement

Classroom Attendance Requirement	None
Learning material	
Comments	