

Module description: Project Module 3	
Module Code	t.BA.MT.PM3.19HS
ECTS Credits	4
Language of Instruction/Examination	German
Organizational Unit	IPP
Module Coordinator	Stephan Koll
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	In project module 3, students develop and verify solutions in a team to a practical problem relating to transmission technology, plastics technology and machine technology. Creative work in a team, research, presentation and documentation, and communication are all supported.
Module Content	<p>Students will be able to...</p> <p>Discipline-specific competence (D)</p> <ul style="list-style-type: none"> • ... illustrate an idea of a concept graphically (manually & by CAD) and realize it prototypically as a product. • ... apply operation modes for functions, employment, practical uses, costs and constructional variants of engineering on plastic materials. • ... develop independently a production-oriented dimensioning in CAX-systems for purposes of simulation • ... employ transmission mechanisms with gears, can dimension" and check gears, axles, and spindles calculatorily. • ... apply manufacturing methods related to materials of the assignment. • ... estimation of costs for production of components and assembly groups. • ... apply suitable criteria to material selection. • ... compare and evaluate material properties of metals and plastics. • ... devise and run tests of materials and manufactured components. <p>Methodological competence (M)</p> <ul style="list-style-type: none"> • ... analyze and suitably narrow a task with relation to a particular target group and can envisage proper solutions. • ... evaluate ideas and concepts and substantiate claims that underly decisions relying on standard methods of engineering. • ... plan and control the implementation of projects (timeline, budget, resources, milestones ...). • ... document and present projects adequately. • ... research the state of the art, analyze professional reports and capture results in academic report. <p>Personal competence (P)</p> <ul style="list-style-type: none"> • ... recognize their own gaps in knowledge and close them independently. <p>Social competence (SO)</p> <ul style="list-style-type: none"> • ... work in teams. • ... reflect on team spirit und adopt appropriate means to actively promote team development. • ... react to unexpected challenges and develop useful solutions. • ... adopt and comply with different functions and roles in teams.

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Prerequisite Knowledge	Mastery of the subject matter of WTC, PM1-2, ME 1-2, VPE; Willingness to work in a team					
Learning Objectives (Competences)	Students...	Competencies		Taxonomies		
	Discipline-specific competence (D)	F		K3, K5		
	Methodological competence (M)	M		K3, K4, K5, K6		
	Personal competence (P)	SE		K3		
	Social competence (SO)	SO		K4, K5, K6		
Performance Assessment	End-of-module exam	Assessment	Length (min.)	Weighting	Form	
	other	Grade		0	acc. to module agreement	
	Performance assessment during the semester					
	Performance assessment during the semester	Assessment	Length (min.)	Weighting	Form	
	report	Grade		100	acc. to module agreement	
	Classroom Attendance Requirement	None				
Learning material						
Comments						