

<b>Module description: Electrical Engineering</b>			
<b>Module Code</b>	t.BA.MT.ETEC.19HS		
<b>ECTS Credits</b>	4		
<b>Language of Instruction/Examination</b>	German		
<b>Organizational Unit</b>	IMS		
<b>Module Coordinator</b>	Hanna Putzi-Plesko		
<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 3b  2 lecture lessons per semester week and class+ 4 lab bi-weekly lessons per semester and half-class		
<b>Module Description</b>	In addition to the basics of simple circuits, this module focuses especially on drive technology. The dimensioning of a drive, the basic function of the most important machine types and the interaction with the power electronic controls are covered.		
<b>Module Content</b>	<p><b>Topics:</b></p> <p><b>Basics: laws, sources, measurements of DC and AC quantities.</b></p> <p><b>Passive elements: R, L, C: behavior in switching operations and in harmonic voltages.</b></p> <p><b>DC machine: laws, characteristics, operating modes, possible applications, selection of a suitable drive.</b></p> <p><b>Generation of three-phase current, transmission in three-phase network.</b></p> <p><b>Power converters and power holders: overview: applications in connection with drives, selection according to various criteria.</b></p> <p><b>Design and behavior of asynchronous machines, operating characteristics.</b></p> <p><b>Design and behavior of asynchronous machines, operating characteristics.</b></p> <p><b>Drives with frequency converters, principle and application with asynchronous and synchronous machines.</b></p>		
<b>Prerequisite Knowledge</b>			
<b>Learning Objectives (Competences)</b>	<b>Students...</b>	<b>Competencies</b>	<b>Taxonomies</b>
	You know the properties of passive and active elements in the time domain.	F, M	K1
	You can analyze direct current networks.	M, F	K3
	You know the basics for dimensioning an electric drive and can determine the required specifications and apply them in a design.	F	K3

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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>	
	written exam	Grade	60	60	acc. to module agreement	
	<b>Performance assessment during the semester</b>		<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Form</b>
	written exam		Grade		20	acc. to module agreement
	Lab Grade		Grade		20	acc. to module agreement
<b>Classroom Attendance Requirement</b>	None Attendance during the lab is a component of the lab grade.					
<b>Learning material</b>						
<b>Comments</b>						