

Module description: Maintenance			
Module Code	t.BA.VS.INS.19HS		
ECTS Credits	4		
Language of Instruction/Examination	German		
Organizational Unit	IDP		
Module Coordinator	Manuel Arias Chao		
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 3a 2 lecture lessons per semester week and class+ 2 lab bi-weekly lessons per semester and half-class		
Module Description	Maintenance		
Module Content	<ul style="list-style-type: none"> • - Foundations of maintenance • - Methods of maintenance • - Relationship of maintenance / reliability / detection / diagnosis • - Detection / Diagnosis / Prognosis • - Foundations of electromechanical interaction • - Condition monitoring methods • - Feature extraction methods • - Detection in signalling • - Inspection and monitoring of the undercarriage of railway vehicles • - Anomaly detection • - Fault detection methods • - Fault diagnosis methods • - Health prognosis methods • - Stationary assets for monitoring of rolling stock • - Vehicle-bound sensing and diagnosis systems regarding infrastructure • - Vehicle-bound diagnosis systems regarding vehicle • - Life cycle cost considerations 		
Prerequisite Knowledge			
Learning Objectives (Competences)	Students...	Competencies	Taxonomies
	The students know the principles of detection, diagnosis and prognosis of the remaining useful lifetime and the maintenance of transport systems.	F, M	K1
	The active participation in the module fosters the students' ability to structure and abstract problems and their ability to abstract and transfer principles from one application and situation to another.	F, M	K3
	The students are able to select the appropriate methods and apply them. They can interpret the results and assess decisions based on the results.	M, F	K2

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Performance Assessment	End-of-module exam	Assessment	Length (min.)	Weighting	Form	
	written exam	Grade	90	100	acc. to module agreement	
	Performance assessment during the semester		Assessment	Length (min.)	Weighting	Form
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Classroom Attendance Requirement	None					
Learning material						
Comments						