

Module description: Facility and Fleet Management	
Module Code	t.BA.MO.AFM.24HS
ECTS Credits	4
Language of Instruction/Examination	German
Organizational Unit	IDP
Module Coordinator	Thomas Herrmann
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 2a 4 consecutive lecture lessons per semester week and class
Module Description	Participants are taught the basic skills and knowledge required to effectively manage facilities and fleets in the public transport sector and in road infrastructure management. Participants learn how to optimise costs, plan maintenance work and extend the useful life of facilities and vehicles.
Module Content	<p>Triangle: Supply - Infrastructure - Vehicles</p> <p>Requirements from the service concept for vehicles and infrastructure</p> <p>Financing investments and maintenance of infrastructure and rolling stock</p> <p>Rolling stock for passenger and freight transport by rail and road</p> <p>Economic parameters of the rolling stock</p> <p>Rolling stock life cycle, fleet policy and procurement planning</p> <p>Procurement processes (tendering, offers, evaluation, procurement and project), legal framework conditions</p> <p>Management of the systems, including a number of instruments such as cost-benefit analyses</p> <p>Rolling stock deployment planning and key figures from operations</p> <p>Maintenance of rolling stock (influencing factors, maintenance organisation and facilities)</p> <p>Optimisation of maintenance, life cycle cost engineering and cost optimisation</p> <p>Infrastructure maintenance and maintenance organisation</p> <p>Utilisation of the infrastructure (with links to network access, management, train path allocation and train path price)</p> <p>Optimisation projects and quality management</p>
Prerequisite Knowledge	Additional documents partly in English

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Learning Objectives (Competences)	Students...	Competencies	Taxonomies		
	The students know: - the most important types of vehicles in passenger and freight transport and their counterparts on the road, - the development history, elements and characteristics of the infrastructure and its significance (rail+road), - the interfaces between infrastructure, operation, services and marketing, - the principles for the management of facilities (investment, operation and maintenance), - the important economic parameters, - the basis for life cycle cost analyses, - the basis for cost-benefit analyses in the transport sector, - the necessary tools for quantitative and qualitative analyses - current trends in asset and fleet management; e.g. energy strategies, - internal and external processes for infrastructure and rolling stock owners and operators.	F	K2, K3		
	The students are able to - draw conclusions from their analyses and justify and explain them - correctly apply the tools of the analysis and improvement processes, - explain trends in infrastructure and fleet management and their correlation with higher-level corporate objectives.	SO, F, SE, M	K2, K3, K4, K5		
	Students can tender for simple vehicle procurement services or infrastructure renewals. They can: - draw up a functional or specific specification, - evaluate offers, - make and justify a procurement decision.	M, F	K3, K4, K5, K6		
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	<ul style="list-style-type: none"> • Field trip • Literature specified in the teaching materials or will be provided • Set of slides, board sketches, audio/video recordings 				
Comments					