

<b>Module code</b> (1.)	<b>Module description</b> (2.)	<b>Category</b> (3.)
MBI 1520 Stand: 06.10.2021	Pavement Maintenance	Int. Master
	<b>Degree program</b> (4.)	Sustainable Engineering of Infrastructure
	<b>Faculty</b> (5.)	Civil Engineering and Conservation / Restoration

<b>Module supervisor</b> (6.)	Prof. Dr.-Ing. Steffen Riedl
<b>Type of module</b> (7.)	P (obligatory)
<b>Frequency</b> (8.)	Annually
<b>Standard semester of study</b> (9.)	1st semester
<b>Credits (ECTS)</b> (10.)	5 ETCS
<b>Assessment</b> (11.)	Written examination (90 minutes)
<b>Language of instruction</b> (12.)	English
<b>Admission requirements</b> (13.)	-
<b>Module is a requirement for</b> (14.)	-
<b>Module duration</b> (15.)	1 semester
<b>Mandatory registration</b> (16.)	No
<b>Applicability of module</b> (17.)	Civil Engineering

<b>Course</b> (18.)	<b>Lecturer</b> (19.)	<b>Type</b> (20.)	<b>No. of students (max.)</b> (21.)	<b>No. of courses per week</b> (22.)	<b>Contact hours per week</b> (23.)	<b>Workload</b>		
						<b>Face-to-face</b> (24.)	<b>Self-study</b> (25.)	
<b>1</b> Pavement Maintenance	Prof. Dr. Riedl	Lecture / tutorial	25	1	4	60	60	
<b>2</b> Pavement Maintenance	Prof. Dr. Riedl	Home assignment / oral exam	25			15	15	
<b>Total</b>						<b>4</b>	<b>75</b>	<b>75</b>
<b>Workload for the module</b> (26.)							<b>150</b>	

<b>Learning objectives</b> (27.)	After successful participation in the module, the students will understand and have mastered the basics and the tools to successfully record and assess the condition of roads and create targeted concepts for road maintenance strategies. The students will also be taught about the most important maintenance methods used in asphalt and concrete construction and the use of bituminous binders (in particular bitumen emulsions). Furthermore, particular emphasis will be placed on the rudiments of excavation work and the use of recycled building materials in conservation measures.
<b>Course contents</b> (28.)	Road maintenance

	<ul style="list-style-type: none"> <li>• recording and assessing the condition of roads (ZEB)</li> <li>• maintenance and repair methods in asphalt and concrete construction</li> <li>• bituminous binders</li> <li>• development of targeted maintenance strategies</li> </ul> <p>Recycling:</p> <ul style="list-style-type: none"> <li>• legal aspects</li> <li>• properties of recycled building materials and industrial by-products</li> <li>• technical integration of recycled building materials in systems engineering</li> </ul>
<p><b>Preliminary exam requirements and assessment</b></p> <p style="text-align: right;">(29.)</p>	<ul style="list-style-type: none"> <li>• Preliminary examination requirement: coursework</li> <li>• Final 90-minute examination</li> <li>• Assessment of the exam using grades 1-5</li> <li>• Module grade is included in the overall grade in proportion to the number of credits earned</li> </ul>
<p><b>Literature</b></p> <p style="text-align: right;">(30.)</p>	<ul style="list-style-type: none"> <li>• National and international standards</li> <li>• Literature recommended during the lectures</li> </ul>