

Valid from 2026.HS

<b>Module description: Visualisation and Data Science Storytelling</b>			
<b>Module Code</b>	t.BA.DS.VDSS.20HS		
<b>ECTS Credits</b>	4		
<b>Language of Instruction/Examination</b>	German		
<b>Organizational Unit</b>	IDS		
<b>Module Coordinator</b>	Manuel Dömer		
<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 3f  2 asynchronous lessons per semester week for each yearly starting-class + 2 weekly lab lessons per semester week in half-class groups		
<b>Module Description</b>	This module provides basic knowledge on data visualization and data science storytelling. In practical exercises, you will learn how to a) visualize data with appropriate software and tools and b) communicate effectively with data visualizations.		
<b>Module Content</b>	<ul style="list-style-type: none"> <li>• Visual elements and visualization types</li> <li>• Development of personas</li> <li>• Application and impact of data visualizations</li> <li>• Design of data visualizations</li> <li>• Analysis, interpretation and evaluation of data visualizations and data science stories</li> <li>• Tools and the programming of data visualisations</li> </ul>		
<b>Prerequisite Knowledge</b>	<ul style="list-style-type: none"> <li>• Basic programming knowledge in Python</li> </ul>		
<b>Learning Objectives (Competencies)</b>	<b>Students...</b>	<b>Competencies</b>	<b>Taxonomies</b>
	can analyze data visualizations and evaluate their strengths and weaknesses.	M, F	K4, K5, K6
	are able to select the right visualization type for your message.	F	K3, K4, K5
	are able to describe the target group of their data visualization.	SO, M	K3
	are able to visualize data by using tools and appropriate software.	M	K3
	can estimate possible impacts.	M, F	K4, K5, K6
	can design data visualizations and critically reflect on the result.	M, SE, F	K3, K4, K5, K6
	are familiar with the visual repertoire of data visualizations and visualization types.	F	K1, K2
	understand the interrelationship between data visualization and storytelling. You can apply this knowledge in the appropriate communication context.	F, M, SO	K2, K3, K4, K5

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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>Social Form</b>	<b>Scenario/Format</b>
	oral exam	Grade	15	70%	acc. to module agreement	
		<b>Assessment</b>	<b>Length (min.)</b>	<b>Weighting</b>	<b>Social Form</b>	<b>Scenario/Format</b>
	written exam	Grade		15%	acc. to module agreement	
	written exam	Grade		15%	acc. to module agreement	
<b>Classroom Attendance Requirement</b>	None					
<b>Learning material</b>	<ul style="list-style-type: none"> <li>• Wilke, C. (2019). Fundamentals of Data Visualization. A Primer on Making Informative and Compelling Figures. Sebastopol, CA: O'Reilly. ISBN 978-1492031086.</li> <li>• Nussbaumer, K. (2015). Storytelling with data. Hoboken: Wiley. ISBN 978-1119002253.</li> </ul>					