



Valid from 2026.HS

Module description: Collaborate with AI Systems	
Module Code	w.MA.XX.CWAS.26HS
ECTS Credits	3
Language of Instruction/Examination	English
Module Description	The course builds on Human-Centred Interaction. Human-Centred Interaction introduces modalities, manifestations, embodiment, lenses, and theory-based scenario design. Collaborate with AI Systems introduces collaboration support as the new design object: several humans collaborate, and AI becomes an intervention layer in that collaboration.
Organizational Unit	Institut für Wirtschaftsinformatik
Module Coordinator	Thomas Keller
Deputy Module Coordinator	Alexandre de Spindler
Legal Framework	Academic Regulations MSc in Business Information Technology dated 22.08.2019, Appendix to the Academic Regulations for the degree program in Business Information Technology, first adopted on 10.07.2012
Module Category	Module Type Compulsory Elective
Prerequisite Knowledge	Completion of the required Human-Computer Interaction (CHI) module in the first semester
Contribution to Learning Objectives (by the concerned Module)	<ul style="list-style-type: none"> • Professional Competence • Methodological Competence • Social Competence • Self-Competence
Contribution to Learning Objectives	<p>Professional Competence</p> <ul style="list-style-type: none"> • Knowing and Understanding Content of Theoretical and Practical Relevance • Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance • Evaluate Content of Theoretical and Practical Relevance <p>Methodological Competence</p> <ul style="list-style-type: none"> • Problem-Solving & Critical Thinking • Scientific Methodology • Work Methods, Techniques, and Procedures • Information Literacy • Creativity & Innovation <p>Social Competence</p> <ul style="list-style-type: none"> • Written Communication • Oral Communication • Teamwork & Conflict Management • Intercultural Insight & Ability to Change Perspective <p>Self-Competence</p> <ul style="list-style-type: none"> • Self-Management & Self-Reflection • Ethical & Social Responsibility • Learning & Change

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Module Learning Objectives	<p>Students...</p> <ul style="list-style-type: none"> • identify meaningful problems in multi-human collaboration that can plausibly benefit from AI support. • ground collaboration-support ideas in relevant theory, such as shared understanding, trust, coordination, decision quality, learning, conflict reduction, social presence, or shared mental models. • analyse roles, delegation, oversight, authority, accountability, and human-in-the-loop or human-on-the-loop structures in group settings. • design AI interventions for multi-human collaboration, including when to listen, what to detect, when to intervene, and how to intervene. • compare virtual-world and robot-mediated manifestations of AI support. • specify system requirements, data and context signals, safety constraints, and controllability needs. • define intended impact, variables, metrics, measurement instruments, and empirical validation formats. • communicate a collaboration-support concept, rationale, and validation design in a professional presentation. 																																	
Module Content	<ul style="list-style-type: none"> • The course uses a compressed seven-week rhythm: • seven weeks of in-person teaching. • doubled weekly contact time compared with a regular 14-week course. • short theory and design impulse each week. • group work in pairs and coaching with week-specific output. • each output contributes to the final collaboration-support presentation. • The first three weeks use Spatial.io as the main design context. The following three weeks use Reachy Mini as the main design context. Week 7 integrates both experiences into a final concept and presentation. • Students do not need to implement a fully functional AI system. They should design a credible support solution, articulate the required system capabilities, and define how its intended effect could be investigated. 																																	
Digital Learning Resources	<ul style="list-style-type: none"> • Reader • Teaching Videos • Teaching Materials • Practice and Application Exercises (with Key) • Case Studies (with Key) • Multiple Choice Tests 																																	
Methods of Instruction	<ul style="list-style-type: none"> • Exercises • Problem-Oriented Teaching • Explorative Learning • Application Tasks • Project Work 	Social Settings Used: <ul style="list-style-type: none"> • Pair Work • Group Work 																																
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Classroom Attendance Requirement	<p>None</p> <p>VR equipment and robots are available during contact hours.</p>																																	

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Comments

Supplementary examinations may not be set, and assessed work may not be resubmitted.