Master of Science (M.Sc.)

„Business Informatics“

University of Mannheim

– Module catalog –

Appendix

Academic Year

HWS 2025/ FSS 2026

The following modules were added to the course program after the publication of the module catalogue.

1. Overview

C. Specialization Courses

iii. IS-Courses

Module no.	Name of Module	Offered	Language	ECTS
IS 608	Analytics for Digital Markets	HWS/ SS	E	6
IS 609	AI Strategy: Business Models, Competition, and Markets	HWS/ FSS	E	6
IS 617	Large Language Models for the Economic and Social Sciences	HWS	E	6
IS 618	Social Media Data Analysis	FSS	E	6

iv. International Courses & other Specialization Courses

Module no.	Name of Module	Offered	Language	ECTS
	Unwrapping the mind: knowledge, cognition, and AI	HWS	E	5

D. Projects and Seminars

iii. Seminars

Module no.	Name of Module	Offered	Language	ECTS
IS 703	Master Seminar „AI, Platforms, and the Digital Economy"	Irregular	E	4
IS 704	Data Science III: Social Data Science	Irregular	E	4

*For a detailed description please use the module catalog of the „Mannheim Master in Management":
https://www.bwl.uni-mannheim.de/en/programs/master/mmm/module-catalogs-2011-2020/

2. Detailed descriptions

C. Specialization Courses

iii. IS-Courses

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iv. International Courses & other Specialization Courses

	Unwrapping the mind: knowledge, cognition, and AI
Form of module	Lecture
Type of module	Elective
Level	Master
ECTS	5
Workload	Hours per semester present: 28 h (2 SWS)
	Self-study: 112 h per semester
Prerequisites	None
Aim of module	With the rise of AI models like GPT-4, machines seem capable of mimicking human cognitive processes—thinking, perceiving, learning, and even making decisions. Hence, the question what the core of “human cognition” actually is, has become a focus of interest. In this lecture series, experts in cognitive science will explore different questions, for example what makes human cognition exceptional (if at all), how AI challenges our understanding of intelligence, and what we might gain from integrating AI into cognitive research. We will also address how insights from human cognition can help develop more efficient, interpretable AI models and examine the ethical considerations that come with their use.

	The perspective of psychology will approach human cognition using both experiments and formal modeling. Lectures will tackle human judgment and decision making, memory processes and memory strategies developing across the life-span, categorization and estimation as well as metacognition - the knowledge about one's own cognitive processes. . From the linguistic perspective, we will focus on language acquisition and processing, as well as on the question how language relates to other domains of cognition. We will present both experimental results and historical corpus data to showcase how language is represented and processed in the mind and how learners acquire language along the dimension of time. From a computational and AI-driven standpoint, the series will cover the modeling of cognitive processes, investigating how human judgment and decision-making are represented in computational frameworks. We will also explore the inner workings of AI language models, discussing how they process and generate language and how they can be extended through multimodal learning and interaction with users. The philosophy lectures will explore what it means to say that something or someone "thinks" or "feels". We examine whether attributing mental states to artificial machines differs fundamentally from doing so to humans or non-human animals. We hope that this will also shed light on the broader implications of AI for our general understanding of mind and agency. Bringing together research from psychology, linguistics, computational science, and philosophy, this series offers a rich and interdisciplinary exploration of intelligence, learning, and perception—both human and artificial.
Learning outcomes and qualification goals	Expertise: Students will acquire knowledge of current research on language and the mind at the crossroads of linguistics, natural language processing, psychology and philosophy. (MK1, MK2, MK3)
	Methodological competence: Students learn to understand and summarize the state of the art in a certain area and discuss achievements and open problems. (MF2, MKO2)
	Personal competence: -
Media	Slides, Research Papers

Literature	Recommended Papers from invited speakers
Methods	Lectures, independent study
Form of assessment	Written examination
Admission requirements for assessment	-
Duration of assessment	90 Minutes
Language	English
Offering	Fall semester
Lecturer	Prof. Dr. Arndt Bröder, Prof. Dr. Beatrice Kuhlmann, Prof. Dr. Carola Trips, Prof. Dr. Nicole Altvater-Mackensen, Prof. Dr. Simone Paolo Ponzetto, Prof. Dr. Wolfgang Freitag, Invited Speakers
Person in charge	Prof. Dr. Arndt Bröder, Prof. Dr. Beatrice Kuhlmann, Prof. Dr. Carola Trips, Prof. Dr. Nicole Altvater-Mackensen, Prof. Dr. Simone Paolo Ponzetto, Prof. Dr. Wolfgang Freitag
Duration of module	1 Semester
Further modules	-
Range of application	M.Sc. Wirtschaftsinformatik, MMDS, MMSDS
Semester	2.-4.

D. Projects and Seminars

iii. Seminars

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