

Organisation

Lecturer	Marc Pudelski
Lecture (4 SWS)	Wednesday 17:00-20:00 weekly campus/remote
Credits	6 LP
Prerequisites	None, open to all master students
Exam method	Project & Presentation
Language	English

Key learnings of this course

After this course you will have learnt...

- **Understand Agentic AI in industry:** grasp the fundamentals and key concepts of Agentic AI in Industry 4.0
- **Master multi-dimensional analysis:** assess AI initiatives across technology, use cases, data infrastructure, operating model, skills, and regulatory requirements (e.g. EU AI Act).
- **Think and act strategically:** apply core strategy concepts (problem diagnosis, strategic leverage, competitive advantage, game theory) to AI adoption.
- **Design AI-enabled solution:** build AI prototypes with Vibe Coding and AI agents
- **Use AI tools effectively:** learn to move from basic AI usage (“AI answers my questions”) to agentic behaviours (“AI does the work for me”) in your scientific research and studies

The lecture includes a company visit and guest lectures from industry practitioners.

Prerequisites for attending

This course is open to all master students. An interdisciplinary mix is encouraged. There are no formal prerequisites, but a high proficiency in English and an openness to learn beyond your domain are expected. No coding background required, but curiosity is a must.

Quotes from former students about similar courses

“A well-structured, clearly defined course with practical insights from both the lecturer and industry guests.”

“I enjoyed the interactive style and the mix of strategic thinking with technical implementation.”

“Hands-on experience with AI tools and industrial applications – the prototyping assignment was a game-changer.”

“Bridging theory and practice through guest lectures made the content feel highly relevant.”