Module: AI Strategy: Business Models, Competition, and Markets

Contents:

This course equips management students with the tools to design business models, navigate competition, and understand market dynamics for artificial intelligence (AI). It provides conceptual frameworks for strategic decision-making, focusing on the implications of recent breakthroughs in machine learning and generative AI (hereafter simply AI).

In particular, the course expands into:

- AI as a product: How firms can compete through AI as a product, including business models, monetization, and value capture. This analysis is grounded in economic principles of information goods, such as marginal costs, network effects, and switching costs.
- AI adoption in firms and impact on markets: How AI adoption transforms industries, using real-world case studies as a group assignment to explore business applications, automation potential, and adoption barriers. This analysis builds on frameworks for technology diffusion and impact assessment.
- Risks and ethical considerations: The broader implications of AI for business decision-making, including issues of bias, fairness, privacy, and market power.

This is a business-focused course—it does not involve programming. The course provides an introductory understanding of neural networks, reinforcement learning, and generative AI, but the emphasis of the course is on strategy, economics, and business decision-making in the context of AI and technology-driven transformation.

Learning outcomes:

After successfully completing the course, students..:

- ..can explain the conceptual foundation of generative AI, including neural networks and reinforcement learning,
- ..can explain the basic economic principles that govern AI as an information good (e.g., production costs, pricing, network effects, switching costs),
- ..can design strategies to use AI as a product, focusing on business models, monetization, and competitive strategy,
- ..can evaluate the impact of AI adoption on businesses through adoption frameworks and industry use cases,
- ..are familiar with the current understanding of the economic implications of AI, including labor replacement, technological change, and AI as a General Purpose Technology,
- ..can discuss implications of AI externalities, including bias, fairness, privacy, and market power, for businesses and policymakers.

Prerequisites: None.
Formal: None.
Recommended: None.

Obligatory registration: yes, and the course is limited to 80 participants.	**Further Information on registration:** Please register via the student portal.

Courses	**Hours per week**	**Self-study**	
Lecture	2 SWS	8 SWS	
Case study	2 SWS	5 SWS	
ECTS in total			6 ECTS

Form of assessment	• 70% of the total grade: written exam, closed book (60 mins) • 30% of the total grade: group case study (slides and presentation; 3-5 students)
Preliminary course work	None
Lecturer/Person in charge	Prof. Dr. Jens Förderer
Duration of module	1 semester
Offering	Spring semester and Fall semester
Language	English
Program-specific educational goals	CG1, CG3
Grade	graded
Range of application	M.Sc. MMM, M.Sc. Bus. Inf.