Business PF
Business School
Fakultät für Wirtschaft und Recht
Hochschule Pforzheim

HS PF

Syllabus
DBM6106 Dive in Technologies
Prof. Dr. Mario Boßlau
Winter Semester 2025/2026

Level	Master	
Credits	3	
Student Contact Hours	2	
Workload	90h	
Prerequisites	-	
Time	Tuesday, 15:30 – 18:45	
Room	W2.2.12 (Labor)	
Start Date	Tuesday, 7.10.2024	
Lecturer(s)	**Name**	Prof. Dr. Mario Boßlau
	Office	W2.2.23
	Virtual Office	MS Teams
	Office Hours	Link – Please book in advance.
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Summary

The course DBM6106 Dive in Technologies equips non-technical business students and professionals with practical knowledge of key digital technologies and their business impact. Focusing on both evaluation and application, students will explore technologies such as Generative AI, Blockchain, Workflow Automation, and Low-Code/No-Code platforms. Rather than providing purely theoretical coverage, the course emphasizes interactive exercises, case studies, and group projects to build hands-on skills.

Participants will learn how to assess emerging technologies, understand their strategic relevance for business models, and apply them in real-world contexts. Special attention is given to practical experimentation with tools and platforms that enable rapid prototyping and process innovation, preparing students to critically evaluate and implement digital trends within organizations.

Outline of the Course

1. **Fundamentals of Digital Technology Management**
   - 1.1. Basic concepts and terminology
   - 1.2. Strategic and operational perspectives
   - 1.3. Technology life cycle models
   - 1.4. Digitalization across application domains
2. **Methods and Instruments for Digital Technology Evaluation**
   - 2.1. Core tasks of technology management
   - 2.2. Technology portfolio methods
   - 2.3. Application in group work
3. **Digital Trends and Technologies**
   - 3.1. Artificial Intelligence (focus on Generative AI)
   - 3.2. Workflow Automation & Robotic Process Automation (RPA)
   - 3.3. Low-Code/No-Code development platforms (LCNC)
   - 3.4. Blockchain
   - 3.5. **Excursion:** Broader emerging technologies (IoT, Process Mining, Cloud Computing, Additive Manufacturing, etc.) – *short overview, not in-depth*
4. **Assessing Digital Technologies in a Business Model Context**
   - 4.1. Criteria and frameworks for technology assessment
   - 4.2. Linking technologies to business model innovation
   - 4.3. Tools and methods for evaluating relevance and impact
5. **Interactive Applications and Case Studies**
   - 5.1. Generative AI – use cases and group exercises
   - 5.2. Low-Code/No-Code prototyping – business scenarios
   - 5.3. Workflow Automation – process innovation examples
   - 5.4. Blockchain applications – selected industry cases

Course Intended Learning Outcomes and their Contribution to Program Intended Learning Outcomes / Program Goals

Program Intended Learning Outcomes		Course Intended Learning Outcomes	Assessment Method
	After completion of the program the students will be able…	After completion of the course the students will be able…	Essay
			100%
			Individual
1	**Responsible Leadership in Organizational Contexts**		
1.1	…to demonstrate their sound knowledge of Digital Business Management theories and concepts.	...to demonstrate solid knowledge of digital technologies and technology management/evaluation methods.	x
1.3	…to critically reflect Digital Business Management theories and concepts.	...to critically reflect on the opportunities and risks of applying digital technologies in business contexts.	x
1.5	...to make ethical decisions in complex organizational contexts.	...to evaluate ethical and societal implications of adopting new technologies such as GenAI and Blockchain.	x
2	**Creative Problem-Solving Skills in a Complex Business Environment**		
2.1	…to identify challenges for Digital Business Management.	...to identify opportunities and challenges of applying emerging digital technologies in organizations.	x
2.2	…to analyze problems of Digital Business Management.	...to analyze the relevance of different technologies for business models and digital transformation.	x
2.3	…to develop and evaluate creative solutions to complex problems of Digital Business Management.	...to design and evaluate technology-enabled solutions using GenAI, LCNC, Workflow Automation, and Blockchain.	x
2.5	… to utilize digital tools and technologies to solve complex business problems.	...to apply interactive tools and platforms (LCNC, automation, GenAI prototypes) to develop practical business solutions.	x
3	**Applied Research Skills**		
3.1	…to explain different research methods of Digital Business Management.	...to explain and apply methods for technology evaluation (e.g. scenario analysis, technology portfolio).	x
3.2	…to competently apply relevant research methods of Digital Business Management.	...to evaluate technologies systematically and apply methods to real-world case studies.	x
3.3	…to generate novel and goal oriented insights for Digital Business Management through empirical research or data analysis.	...to generate insights on technology adoption and impact through projects, interactive exercises, and case studies.	x
3.4	...to effectively present and discuss research findings in professional settings.	...to present and defend technology evaluations and their implications for business models in a professional manner.	x
4	**Interdisciplinary and agile working**		
4.1	…to know the requirements in interdisciplinary teams (e.g. marketing, sales and IT) and to contribute their expertise in Digital Business Management.	...to collaborate effectively in interdisciplinary teams when evaluating and implementing emerging technologies.	x
4.3	...to continuously improve and adapt to emerging digital trends and technologies.	...to stay updated and adapt to fast-moving trends in GenAI, automation, and other digital technologies.	x

Teaching and Learning Approach

The course combines lectures, case studies, group discussions, and practical exercises to provide a comprehensive understanding of technology management and evaluation. Active student participation is encouraged through project work and presentations. The teaching approach focuses on practical application, allowing students to relate theoretical knowledge to real-world scenarios.

Literature and Course Materials

Banta, D. (2009). *What is Technology Assessment?* International Journal of Technology Assessment in Health Care, 25(S1), 7-9. doi:10.1017/S0266462309090333

Briggs, J., & Kodnani, D. (2023). *Global Economics Analyst: The Potentially Large Effects of Artificial Intelligence on Economic Growth.* Goldman Sachs. Retrieved from https://www.gspublishing.com/content/research/en/reports/2023/03/27/d64e052b-0f6e-45d7-967b-d7be35fabd16.html

Davenport, T. H. (2018). Artificial intelligence for the real world. *Harvard Business Review, 96*(1), 108–116.

Grundwald, A. (2019). *Technology Assessment in Practice and Theory*. Routledge.

Thien A. Tran, Tugrul Daim (2008). *A Taxonomic Review of Methods and Tools Applied in Technology Assessment*, Technological Forecasting and Social Change, 75(9), 1396-1405. https://doi.org/10.1016/j.techfore.2008.04.004

Wirtz, B. W. (2024). *Digital Business and Electronic Commerce: Strategy, Business Models and Technology*. Springer International Publishing. https://doi.org/10.1007/978-3-031-50289-7

Additional Resources:

- Further literature will be announced in the course depending on the technologies covered.
- Lecture notes and slides
- Selected journal articles and case studies

Assessment

The assessment is an **individual essay (100%)**.The essay is designed as a progressive project, developed step by step during the semester. Instead of being written in one block at the end, students will gradually build their essay through smaller deliverables connected to the course topics.

- **Progressive work:** For selected technologies (e.g., Generative AI, Low-Code/No-Code, Workflow Automation, Blockchain), students create a small applied artefact (such as a workflow scenario, a prototype, or a concept sketch) and document their reflections (1–2 pages each).
- **Final essay submission:** At the end of the course, these deliverables are synthesized into a **coherent essay (approx. 8–10 pages)**. The essay combines the artefacts and reflections into a structured argument, demonstrating both practical experimentation and critical evaluation of the technologies in relation to business models and digital transformation.

Assessment criteria

1. Ability to apply digital technologies in practice through artefacts.
2. Critical evaluation of opportunities, risks, and business model relevance.
3. Creativity and originality in developed solutions.
4. Evidence of continuous learning and reflection across the semester.
5. Clarity, coherence, and professionalism of the final essay synthesis.

Schedule

The following schedule provides a **general outline** of the course. It serves as a **rough planning framework** and may be adjusted as needed depending on class progress, discussion dynamics, and selected technologies. More details will be provided on the first day of class and will be available on the online course platform for reference throughout the semester.

- **Session 1: Fundamentals of Technology Management**
  - Core concepts, technology life cycles, and management perspectives
  - Introduction of course project & essay structure (progressive deliverables)
- **Session 2: Methods for Technology Evaluation**
  - Technology portfolios, evaluation frameworks (Pfeiffer Technology Portfolio, criteria models)
  - **Deliverable 1:** Short reflection on one evaluation method (1–2 pages)
- **Session 3: Generative AI & Applications**
  - Capabilities, risks, and business relevance of GenAI
  - Hands-on exercise with prompt design and small prototypes
  - **Artefact 1:** Mini GenAI use case + reflection
- **Session 4: Low-Code/No-Code Platforms**
  - Rapid prototyping, business apps, and innovation potential
  - Case study and tool exploration (e.g., Power Apps)
  - **Artefact 2:** LCNC prototype (screenshot or demo) + reflection
- **Session 5: Workflow Automation & RPA**
  - Business process automation, orchestration with tools (e.g., Make.com, UIPath)
  - **Artefact 3:** Workflow automation scenario + reflection
- **Session 6: Blockchain & Selected Technologies (Excursion)**
  - Blockchain basics and use cases
  - Overview of further trends (IoT, Cloud, Process Mining, Additive Manufacturing)

  - **Artefact 4:** Blockchain application sketch (concept + reflection)

- **Session 7: Synthesis and Presentation**
  - Linking technologies to business model innovation and evaluation
  - Peer exchange of artefacts and key learnings
  - Guidance for final essay synthesis (integrating artefacts into a coherent 8–10 page essay)

Academic Integrity and Student Responsibility

Students are expected to uphold the highest standards of academic integrity. This includes abstaining from plagiarism, cheating, and any other forms of academic dishonesty. Assignments and assessments should reflect individual and group efforts appropriately. Violations will be taken seriously and may result in disciplinary action.

Code of Conduct for online Teaching

Students must maintain professionalism and respect in online interactions. Participation in online discussions should be constructive and supportive, contributing positively to the learning environment.

Link to the Code of Conduct for online Teaching

Teaching Philosophy

The teaching philosophy is grounded in the conviction that the most impactful learning occurs through direct, in-person engagement. The course is structured around on-site sessions that facilitate interactive discussions, collaborative problem-solving, and real-time feedback, which are essential for developing a nuanced understanding of the course topics. To augment this experience and accommodate various learning preferences, we integrate supplementary online elements such as video lectures. These resources are specifically designed to support asynchronous learning, allowing students to review complex concepts at their own pace and prepare more effectively for assessments such as presentations and essays. The goal is to create a dynamic and flexible educational environment that respects the traditional virtues of classroom teaching while embracing the advantages that digital enhancements provide.

Additional Information

Students are encouraged to regularly check the online learning platform for updates and additional resources. Office hours will be available for students seeking further discussion or clarification on course content. Feedback is highly valued, and students are welcome to provide suggestions for improving the course throughout the semester.