



<b>COURSE SYLLABUS</b>
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Course title:

Study program and level	Study field	Academic year	Semester
MBA/MA Business			

Course type

University course code:

Lectures	Seminar	Tutorial	Work	Other work	Individual work	ECTS
						5-6

Lecturer:

<b>Language of the Lectures:</b>	English/ national language
<b>Language of the Tutorial:</b>	English/ national language

**Prerequisites:**

No prerequisites are needed in order to attend the course



## Content (Syllabus outline):

The course on the basic level deals with the Artificial Intelligence, by establishing the socio-cultural, political and economic context of information and communication technologies with complex cause and effect associations.

It aims to improve the way teaching is normally practiced in higher education, in population of MBA and MA Business students, who are exceptionally oriented towards business value. It offers conceptual tools stakeholders need to significantly rethink and reconstruct the set of teaching and learning activities they use.

The following topics are especially emphasized:

- **Introduction to Artificial Intelligence**

This topic covers the basics of AI, including its history, applications, and key concepts such as machine learning, natural language processing, and robotics.

- **Key success factors of modern processes**

This topic explores the factors that contribute to successful implementation of AI technologies and processes, including organizational culture, leadership, data quality, and ethics.

- **Digital transformation**

This topic focuses on the process of digital transformation and how AI is driving this change in various industries and sectors. It covers the benefits and challenges of digital transformation and the role of AI in this process.

- **Strategic ICT management for digital transformation planning**

This topic provides an overview of the key strategies and frameworks used in managing ICT for digital transformation, including enterprise architecture, data governance, and project management.



– **Doing business with the help of Artificial Intelligence**

This topic explores the ways in which AI is being used to improve business processes and create new business opportunities, encompassing examples in areas such as customer service, marketing, and supply chain management.

– **Implementation of Artificial Intelligence projects**

This topic covers the practical aspects of implementing AI projects, including project planning, data preparation, algorithm selection, and evaluation.

– **The impact of the Artificial Intelligence revolution on operations and business in the society of the future**

This topic examines the wider impact of AI on society, including its potential to transform industries, create new jobs, and change the way we work and live.

– **The role of Artificial Intelligence in the development of the business model of the future**

This topic explores how AI is shaping the future of business models, including the rise of platform-based business models, the role of data and analytics, and the impact on traditional business models

– **Good practices of Artificial Intelligence**

This topic covers the ethical and responsible use of AI, including issues such as bias, privacy, and security. It also looks at best practices for developing and deploying AI solutions.

**Competencies:**

**General competencies**

- General understanding of the digitalization of business.
- The ability to interpret business data and prepare reports based on them.



- The ability to obtain, select, evaluate and embed the new information, as well as to interpret them to solve business problems.
- The ability to find sources and obtain data for the purpose of business digitalization.
- The ability to understand and transform a real business problem into an efficient business solution.
- Critical thinking about limitations of business data, their ethical usage, their legal application and other important issues.
- Recognizing innovation in digital technology as a mean for creating a favourable business environment.
- Independent and autonomous use, monitoring and maintenance of information communication technology in the organization/business operations.
- Understanding and describing how much data is enough data for selected business model transformation and business digitalization scenario.

#### **Specific competencies**

- Identify, recognize, understand and describe AI elements.
- Choose AI solutions and application to be used for business development.
- Apply the knowledge and established methodological approaches for managing modern business systems.
- Understand cultural and social processes and the ability for their analysis for the facilitation of the AI implementation in business, describing AI Solution flexibility potential.
- Describe technical elements of Artificial Intelligence.
- Communicate with experts from various fields (economics, politics, etc. and other various groups) about the basic definitions and terminology and ideas in Artificial Intelligence and ICT solutions.
- Recognize the impact/usage of Artificial Intelligence when faced with different digital enablers, describing business challenge suitable to be tackled with AI solutions.
- Understand and describe AI solution complexity from cost/benefit perspective and time-to-value, composition and management, describing AI-models management cost and AI-models precision metrics.
- Understand and describe how to build/grow by dealing with management of risks and management of change enhanced by AI.
- Understand and describe how to build components into a self-operating AI unit/process.
- Plan long-term AI investment, mapping the company needs for AI implementation.



### Soft competencies

- Team work
- Autonomous work
- Analytic thinking
- Working under pressure
- Ability to manage time and to plan and organize the work

### Intended learning outcomes:

- Explain the basic definitions, terminology and ideas in Artificial Intelligence and ICT solutions.
- Explain the concept of Artificial Intelligence.
- Use contemporary tools and procedures creatively and constructively in order to design, plan, implement and analyse various concepts of Artificial Intelligence.
- Use fundamental legislation relevant to the field of Artificial Intelligence.
- Explain the benefits of implementing AI-solutions to business.
- Transfer the knowledge about the procedures related to implementing AI-solutions into business.
- Interpret application of AI in concrete real-life business cases.
- Interpret complex relationships among technology, society, culture, economy and politics enhanced Artificial Intelligence.
- Differentiate various problems, relying on exaggerated simplistic correlations and determinisms when dealing with the mentioned notions.
- Explain the key dilemmas (such as ethical, economic, sociologic issues) of Artificial Intelligence.
- Identify solutions based on previous critical analysis of key AI dilemmas.
- Practically implement AI projects in various business and organisational environment.



### Learning and teaching methods:

- Lectures with active participations by the students (explanation, discussion, questions, cases, problems solving);
- Seminars (reflections of the read texts and own experience, team work, discussions, reporting feedback information);
- Seminars based on project-based learning, participation in problem-based learning (independent study, discussion, explanation, observation, team work, case study, dealing with real-life business cases)
- Individual and/or groups consultations (discussion, dealing with specific issues, providing feedback for real-life business cases);
- Working in small groups, working in students' projects, etc.
- Mentorship and independent study (motivating, guiding, self-observing, self-tuning, reflection).
- Study visits to AI providers, business incubators, enterprises that implemented AI etc.
- Individual student's research (e.g., readings, research of literature and websites, essay assignment, essay argumentation, etc.)

### Readings:

#### Mandatory/optional readings

Ali, K., and B. Keskin Burcu. AI In Operations Management Applications Challenges and Opportunities. Journal of Data Information and Management 2, 2020.

Allen, Greg. Understanding AI Technology. Joint Artificial Intelligence Center JAIC The Pentagon United States, 2020.

Bin, Gu, et al. Managing Ai. MIS Quarterly, 2019.

Brian, McCarthy, and Saleh. "Building the AI-powered organization Tamim. Harvard Business Review 97 No. 4, 2019.

Canals, Jordi. The Evolving Role of General Managers in the Age of AI. The Future of Management in an AI World Redefining Purpose and Strategy in the Fourth Industrial Revolution, 2020.

Castrounis, Alex. "AI for People and Business: A Framework for Better Human Experiences and Business Success", 2019



Cubric, Marija. Drivers Barriers and Social Considerations for AI Adoption in Business and Management a Tertiary Study. Technology in Society 62, 2020.

Di, Vaio, et al. Artificial Intelligence and Business Models in the Sustainable Development Goals Perspective a Systematic Literature Review. Journal of Business Research 121, 2020.

Grzegorz, Mazurek. "Marketing and Artificial Intelligence. Central European Business Review 8 No. 2, 2019.

Katja, Hutter, et al. How AI Revolutionizes Innovation management, Perceptions and Implementation Preferences of AIbased Innovators. Technological Forecasting and Social Change 178, 2022.

Kikani, Prashant. "Demystifying Artificial intelligence: Simplified AI and Machine Learning concepts for Everyone", 2021

Ouyang, Fan, Jiao, P., McLaren B.M., Alavi A.H. "Artificial Intelligence in STEM Education The Paradigmatic Shifts in Research, Education, and Technology". 2022

Petrin, Martin. "Corporate Management in the Age of AI. ". Colum. Bus. L. Rev. 2019.

Reid, G., and Farquhar. "The road ahead for knowledge management: an AI perspective." Adam. AI Magazine 21 No. 4, 2000.

Stacy, Hobson, et al. AI For Management an Overview. The future of management in an AI world Redefining purpose and strategy in the fourth industrial revolution, 2020.

Wang, Qiankun. How to Apply AI Technology in Project Management1 2. 2019.

Yang, Lu. Study on Artificial Intelligence the State of the Art and Future Prospects. Journal of Industrial Information Integration 23, 2021.

## Evaluation

### Weight (in %)

### Assessment:

20	Assistance and active participation
50	Cases, Presentation, innovative idea
30	Written exam / case exam