ISM UNIVERSITY OF MANAGEMENT AND ECONOMICS

APPROVED BY
THE STUDY COMMISSION
Minutes No. 02-12-2025-13
as of 26th August 2025

ELEMENTS OF ARTIFICIAL INTELLIGENCE

Course code	*IT106*
Compulsory in the programmes	*Entrepreneurship and innovation*
Level of studies	*Undergraduate*
Number of credits and	*6 ECTS (48 contact hours + 2 consultation hours, 112 individual work hours)*
Course coordinator (title and name)	*Assoc. prof. dr. Eigirdas Žemaitis, Mahdi Shariff*
Prerequisites	*None*
Language of instruction	*English*

THE AIM OF THE COURSE:

This course will focus on equipping entrepreneurship students with a practical understanding of AI applications and tools relevant to their ventures. The structure combines online and in-person learning, with an emphasis on hands-on activities and projects.

MAPPING OF COURSE LEVEL LEARNING OUTCOMES (OBJECTIVES) WITH DEGREE LEVEL LEARNING OBJECTIVES (See Annex), ASSESMENT AND TEACHING METHODS

Course level learning outcomes (objectives)	**Degree level learning objectives (Number of LO)**	**Assessment methods**	**Teaching methods**
CLO1 To be able to define Artificial intelligence and provide a typology of AI.	BLO 1.1.	Final exam, in-class contributions	Reflection and discussions
CLO2 To be able to understand AI technologies and its application for digital business development and societal development.	BLO 1.1. BLO 1.2	Group task presentation	Lectures, Group project Discussions
CLO3 To able understand main AI principles and its working elements	BLO 1.1	Final exam, in-class contributions	Lectures Reflecting, and discussions
CLO4 To be able to analyze societal and company problems and identify AI technologies to tackle them.	BLO 4.1	Group task presentations, and in-class contributions	Group project, prototyping concept development
CLO5. Will be able to understand ethical considerations, bias, and the importance of regulation in the context of AI.	BLO 2.1	Final exam. Group task presentations	Individual study Practicing, reflecting, and discussions
CLO6. Develop critical thinking ability and problem-solving skills through experiential learning.	BLO 4.2	Group-task presentation	Lectures, seminars, group project

ACADEMIC HONESTY AND INTEGRITY

The ISM University of Management and Economics Code of Ethics, including cheating and plagiarism are fully applicable and will be strictly enforced in the course. Academic dishonesty, and cheating can and will lead to a report to the ISM Committee of Ethics. With regard to remote learning, ISM remind students that they are expected to adhere and maintain the same academic honesty and integrity that they would in a classroom setting

COURSE OUTLINE

Topic	In-class hours	Readings
Introduction to AI ○ Demystifying AI: What it is and what it isn't (avoid technical jargon) ○ Understanding the different types of AI (supervised, unsupervised, reinforcement learning) ○ Real-world examples of AI applications in various industries	5	**Potential Activity:** Students research and present on successful AI implementations in their chosen field
AI for Entrepreneurs ○ How AI can empower startups and small businesses ○ Identifying business problems where AI can provide solutions (e.g., customer segmentation, marketing automation) ○ Different roles that AI can play (Knowledge bases, Task Automation, Experts etc) ○ Exploring ethical considerations of AI in business practices	5	**Case Study Analysis:** Students analyze a successful AI-powered startup and identify key factors for success
AI Tools and Platforms ○ Introduction to user-friendly AI tools that they can easily access and deploy and platforms (avoid low-code focus.	6	Hands-on exploration of building basic AI models using chosen platforms (e.g., Google Cloud AI Platform, Amazon Machine Learning)
Putting AI into Action (8 hours) ○ Group brainstorming and ideation of an AI-powered solution for a chosen business challenge ○ Introduction to user-centered design principles in the context of AI ○	8	**Project Workshop:** Students work in teams to refine their ideas and develop a basic prototype of their AI solution
Prototyping and Validation ○ Hands-on use of chosen platform to build a functional prototype of their AI solution ○ Introduction to data collection and analysis techniques for AI models	8	**Prototype Development Session:** Students receive guidance and support in building their prototypes
Pitching and Evaluation Refining and preparing pitches for their AI solution ○	8	Investor simulation: Each team pitches their solution to a mock investor panel (faculty can play the role & Erik if he's available)

	Total: 48 hours	
CONSULTATIONS	2	
FINAL EXAM	2	

FINAL GRADE COMPOSITION

Type of assignment	**%**
Group Components 60%	
Group project	60
Individual Components 40%	
Individual participation	30
Online quizzes	10
Total:	**100**

Evaluation:

- **Group Project (60%):** Assessed on the creativity, feasibility, and functionality of the AI solution prototype, as well as the quality of the investor pitch.
- **Individual Participation (30%):** Based on online module activities, case study analysis, class participation, and the reflection paper.
- **Online Quizzes (10%):** Short quizzes after each online module to assess understanding of key concepts.

Additional Resources:

- Provide students with a curated list of online resources for further learning on AI.
- Utilize an AI for online module access and resource sharing and wider support

Additional Budget Considerations:

- It would be helpful to allocate a portion of the budget towards subscriptions to an OpenAI API Key for the students to reduce the barrier to test out their ideas
- For a group of 30 students an additional $500 of credit should be sufficient for for all students for during the course

RETAKE POLICY

If final (cumulative) mark of the course, including final exam score, is insufficient, students will be allowed to exercise their right of retake. The retake exam will cover all lectures and case-discussion topics discussed in class during the course. It will replace the 30 % of individual participation. Acquired scores from all assignments will be summed up and the final (cumulative) grade will be given. The lecturer reserves the right to choose the form of the exam (multiple choice/ open answer questions/ essay).

REQUIRED READINGS

The required readings for each class will be provided by the lecturer.

ADDITIONAL READINGS

Iansiti, M., & Lakhani, K. R. (2020). Competing in the age of AI: strategy and leadership when algorithms and networks run the world. Harvard Business Press.

Agrawal, A., Gans, J., & Goldfarb, A. (2018). Prediction machines: the simple economics of artificial intelligence. Harvard Business Press.

Daugherty, P. R., & Wilson, H. J. (2018). Human+ machine: Reimagining work in the age of AI. Harvard Business Pres

Joseph Byrum. 2020. Leading the Intelligent Enterprise. MIT Sloan Management review. https://sloanreview.mit.edu/article/leading-the-intelligent-enterprise/

Joseph Byrum. 2021. Progress Toward the Intelligent Enterprise MIT Sloan Management review. https://sloanreview.mit.edu/article/progress-toward-the-intelligent-enterprise/

O'Neil, C. (2017). Weapons of math destruction. Penguin Books.

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ANNEX

DEGREE LEVEL LEARNING OBJECTIVES

Learning objectives for the Bachelor of Business Management
Programmes:
International Business and Communication,
Business Management and Marketing,
Finance,
Industrial Technology Management,
Entrepreneurship and Innovation

Learning Goals	Learning Objectives
Students will be critical thinkers	BLO1.1. Students will be able to understand core concepts and methods in the business disciplines
	BLO1.2. Students will be able to conduct a contextual analysis to identify a problem associated with their discipline, to generate managerial options and propose viable solutions
Students will be socially responsible in their related discipline	BLO2.1. Students will be knowledgeable about ethics and social responsibility
Students will be technology agile	BLO3.1. Students will demonstrate proficiency in common business software packages
	BLO3.2. Students will be able to make decisions using appropriate IT tools
Students will be effective communicators	BLO4.1. Students will be able to communicate reasonably in different settings according to target audience tasks and situations
	BLO4.2. Students will be able to convey their ideas effectively through an oral presentation
	BLO4.3. Students will be able to convey their ideas effectively in a written paper

Learning objectives for the Bachelor of Social Science
Programmes:
Economics and Data Analytics,
Economics and Politics

Learning Goals	Learning Objectives
Students will be critical thinkers	ELO1.1. Students will be able to understand core concepts and methods in the key economics disciplines
	ELO1.2. Students will be able to identify underlying assumptions and logical consistency of causal statements
Students will have skills to employ economic thought for the common good	ELO2.1.Students will have a keen sense of ethical criteria for practical problem-solving
Students will be technology agile	ELO3.1. Students will demonstrate proficiency in common business software packages
	ELO3.2. Students will be able to make decisions using appropriate IT tools
Students will be effective communicators	ELO4.1.Students will be able to communicate reasonably in different settings according to target audience tasks and situations
	ELO4.2.Students will be able to convey their ideas effectively through an oral presentation
	ELO4.3. Students will be able to convey their ideas effectively in a written paper