UNIVERSITATEA BABEŞ-BOLYAI
BABEŞ-BOLYAI TUDOMÁNYEGYETEM
BABEŞ-BOLYAI UNIVERSITÄT
BABEŞ-BOLYAI UNIVERSITY
TRADITIO ET EXCELLENTIA

FACULTATEA DE BUSINESS IN PARTNERSHIP
Facultatea de Business

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Cluj-Napoca, 400174
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SYLLABUS
Academic year 2024-2025

1. Information regarding the programme

1.1. Higher education institution	Universitatea Babeş-Bolyai
1.2. Faculty	Faculty of Business
1.3. Department	Business
1.4. Field of study	Business Administration
1.5. Study cycle	Master
1.6. Study programme / Qualification	International Business Administration (English)

2. Information regarding the course

2.1. Name of the lecture	Business Data Analytics						
2.2. Code	IME0062						
2.3. Course coordinator	Ioan Alin NISTOR, PhD						
2.4. Seminar coordinator	Ioan Alin NISTOR, PhD						
2.5. Year of study	2	2.6. Semester	1	2.7. Type of evaluation	C	2.8. Type of course	elective

3. Total estimated time (hours/semester of didactic activities)

3.1. Hours per week	2	Of which: 3.2. lecture	1	3.3 seminar/laboratory	1
3.4. Total hours in the curriculum	28	Of which: 3.5. lecture	14	3.6. seminar/laboratory	14

Time allotment:	hours
Learning using manual, course support, bibliography, course notes	14
Additional documentation (in libraries, on electronic platforms, field documentation)	10
Preparation for seminars/labs, homework, papers, portfolios and essays	11
Tutorship	2
Evaluations	2
Other activities:	8
3.7. Total individual study hours	47
3.8. Total hours per semester	75
3.9. Number of ECTS credits	3

4. Prerequisites (if necessary)

4.1. curriculum	-
4.2. competencies	-

5. Conditions (if necessary)

5.1. for the lecture	classroom with computer and projector;
5.2. for the seminar /lab activities	classroom with computer and projector;

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6. Specific competencies acquired

Professional competencies	• C1 - in-depth knowledge and systematic use of the set of information resulting from the theoretical, methodological, legislative, and practical developments specific to business administration at international level • C2 - higher ability to substantiate and assess strategies and decision alternatives, as well as their selection and implementation in business administration at international level/ within multinational corporations
Transversal competencies	• CT2. Identification of roles and responsibilities in a team and their application within companies • CT3. Using the opportunities offered by life-long learning for continuous adaptation to changes in the business environment.

7. Objectives of the course (outcome of the acquired competencies)

7.1. General objective of the course	Understanding key concepts of Artificial Intelligence Provide students with an understanding of the AI ecosystem and how it influences the business environment of a company.
7.2. Specific objective of the course	Identify key technologies that will enable a rational and objective management of a company in the current technological context; Understanding and managing risks derived from over or under estimating the usage of AI; Usage of evaluation methodology; Determining key performance indicators; This lecture will help students understand the impact of AI in augmenting our capabilities both as private persons and as business leaders. Although the lecture emphasizes corporate-AI related concepts, students will find that the fundamental technological principles discussed in the course are useful for navigating the AI environment for personal or startup decisions as well.

8. Content

8.1. Course		Teaching Method	Remarks
1.	State of AI in 2022	Presential course	• Explain how AI is used in real businesses and why it acts as a force multiplier • Reveal AI trends in 2022
2.	General AI and ML crash course	Presential course	• Explain what AI/ML is under the hood: types of ML algorithms, Deep Learning, Tech stack and Data Science roles, • Examples of ML applications
3.	Challenges and approach for AI adoption	Presential course	• AI adoption is challenging. This sessios focuses on the different aspects of AI adoption and presents a framework

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4.	Language models: GPT-3 experiments	Presential course	• Large language models landscape • The amazing capabilities of LLMs • TaskMate, a virtual assistant with GPT-3 muscles – a project powered by Endava and UBB
5.	Text to image generators	Presential course	• Text to image generators: the rising star in 2022 • Models, principles and examples • Hot topics: The debate about IP rights, Open source vs closed source, Licensing and other aspects to consider when using such models in business
6.	AI running at the edge	Presential course	• Principles of Edge computing, Cognitive Computing and IoT • Desktop based vs edge illustrated by the dichotomy of computer vision: traditional computer vision vs new trends. Deep dive in: Mesh vs Nerfs, Camera calibration and Stereoscopy vs Monocular Depth, Inpainting • Real-life applications
7.	Non-technical aspects of AI usage in business	Presential course	• Focus on aspects to consider in using AI models
Bibliography	Will be offered for each course and contains links to the latest relevant news.		

8.2. Seminar/laboratory		Teaching Method	Remarks
1.	State of AI in 2022	interactive discussion, applications, case studies	1 seminar
2.	General AI and ML crash course	interactive discussion, applications, case studies	1 seminar
3.	Challenges and approach for AI adoption	interactive discussion, applications, case studies	1 seminar
4.	Language models: GPT-3 experiments	interactive discussion, applications, case studies	1 seminar
5.	Text to image generators	interactive discussion, applications, case studies	1 seminar

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6.	AI running at the edge	interactive discussion, applications, case studies	1 seminar
7.	Non-technical aspects of AI usage in business	interactive discussion, applications, case studies	1 seminar
Bibliography	Is being offered for each course and contains links to the latest relevant news.		

9. Corroborating the content of the course with the expectations of the community, professional associations and representative employers within the field of the program

- The content of the lecture is very much linked with what is being taught in other universities in Romania and around the word and in Business Schools that are accredited by the NIBS and AACSB.
- The content of the curricula has been discussed with corporate partners, consulting companies, representatives from multinational companies but also with university colleagues from abroad.

10. Evaluation

- **The same evaluation criteria hold for all exams sessions;**
- **In order to be able to cumulate the points obtained during the semester, it is mandatory to obtain minimum 5 (five) in the final exam.**

Type of activity	Evaluation criteria	Evaluation method	Share in the grade (%)
Lecture	Written test. Applications, case studies, multiple choice questions	Final exam	80%
Seminar	Written project	Projects, reports	20%

10.1. Minimum requirements

- Knowledge of the fundamental concepts and their applications in case studies, questions;
- Basic understanding and interpretation of the different AI techniques.
- It is mandatory to get the minimum mark of 5 (five) in the written exam in order to be able to get credit for the additional points from the written project.
- The evaluation criteria stay the same for all exams (normal, resit, or scheduled at different time)

Date	Course coordinator	Seminar coordinator
02.04.2024	Cadru didactic asociat	Cadru didactic asociat,PhD

Date of approval
17.04.2024

Head of department
Prof. dr. Ioan Cristian CHIFU