

SYLLABUS

1. Information regarding the programme

1.1 Higher education institution	Babeş-Bolyai University
1.2 Faculty	Faculty of Mathematics and Computer Science
1.3 Department	Department of Computer Science
1.4 Field of study	Computer Science
1.5 Study cycle	Bachelor
1.6 Study programme / Qualification	Artificial Intelligence

2. Information regarding the discipline

2.1 Name of the discipline (en) (ro)	Research project with intelligent methods						
2.2 Course coordinator	-						
2.3 Laboratory coordinator	Assoc. Prof. Bocicor Maria Iuliana						
2.4. Year of study	3	2.5 Semester	5	2.6. Type of evaluation	C	2.7 Type of discipline	optional
2.8 Code of the discipline	MLE5212						

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

3.1 Hours per week	1	Of which: 3.2 course	0	3.3 seminar/laboratory	1
3.4 Total hours in the curriculum	14	Of which: 3.5 course	0	3.6 seminar/laboratory	14
Time allotment:	hours				
Learning using manual, course support, bibliography, course notes	3				
Additional documentation (in libraries, on electronic platforms, field documentation)	20				
Preparation for seminars/labs, homework, papers, portfolios and essays	9				
Tutorship	2				
Evaluations	2				
3.7 Total individual study hours	36				
3.8 Total hours per semester	50				
3.9 Number of ECTS credits	2				

4. Prerequisites (if necessary)

4.1. curriculum	<ul style="list-style-type: none"> Research methodology in computer science
4.2. competencies	-

5. Conditions (if necessary)

5.1. for the course	-
5.2. for the seminar /lab activities	-

6. Specific competencies acquired

Professional competencies	<ul style="list-style-type: none"> • Analysis and formalization of problems for which artificial intelligence knowledge is required • Using computer science methods in solving problems • Analysis, design and implementation of software systems for solving real problems using artificial intelligence methods • Use of methodologies and tools specific to programming languages
Transversal competencies	<ul style="list-style-type: none"> • Professional communication skills; concise and precise written and oral description of professional results.

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

7.1 General objective of the discipline	This research activity represents the individual work that the student does with the aim of producing a scientific report on a specific topic.
7.2 Specific objective of the discipline	Upon completion of this course the student must: <ul style="list-style-type: none"> - Have documentation skills on a specific topic - Be able to make a research report content - Know how to write a research report in several iterations

8. Content

8.1 Course	Teaching methods	Remarks
8.2 Seminar / laboratory	Teaching methods	Remarks
1. Establishing the research theme	Conversation, debate, case studies	
2. Scientific research methodology	Conversation, debate, case studies	
3. Outline of the paper	Conversation, debate, case studies	
4. Bibliographical documentation	Conversation, debate, case studies	
5. Relevance of bibliographic sources	Conversation, debate, case studies	
6. Correlation of references with the structure of the paper	Conversation, debate, case studies	
7. Software application design	Conversation, debate, case studies	
8. Software application implementation	Conversation, debate, case studies	
9. Software application documentation	Conversation, debate, case studies	
10. Decision on experimental design	Conversation, debate, case studies	
11. Experiments and tests documentation	Conversation, debate, case studies	
12. First draft of the research paper	Conversation, debate, case studies	
13. Preparation of final research paper	Conversation, debate, case studies	
14. Final version of the research paper	Evaluation	
Bibliography <ul style="list-style-type: none"> - It is decided by the student depending on the topic. - Internet resources about research projects and particular topics about these. 		

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

- The course respects the IEEE and ACM Curricula Recommendations for Computer Science Studies.
- This course exists in the academic curricula of major universities in Romania and abroad.

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the grade (%)
10.4 Course			
10.5 Seminar/lab activities	Ability to write a research report and present the obtained results.	Each activity has a deadline and a corresponding grade (between 1 and 10). Delays are penalized with 1 point per week. Phase 1: Doc 1, 2, 3 Phase 2: Doc 4, 5, 6 Phase 3: Doc 7, 8, 9 Phase 4: Doc 10, 11 Phase 5: Doc 12, 13 Phase 6: Final presentation	10% 20% 20% 20% 20% 10%
10.6 Minimum performance standards			
➤ It is necessary to obtain the minimum grade 5.			

Date

26.04.2023

Signature of course coordinator

Signature of seminar coordinator

Assoc. Prof. Bocicor Maria Iuliana

Date of approval

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Signature of the head of department

Prof. PhD Dioşan Laura