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	**Master**
1.6 Study programme / Qualification	**Applied Computational Intelligence**

2. Information regarding the discipline

2.1 Name of the discipline				**Research Project in Applied Computational Intelligence**			
2.2 Course coordinator				**Prof.Dr. Horia F. Pop**			
2.3 Seminar coordinator				**Prof.Dr. Horia F. Pop**			
2.4. Year of study	**2**	2.5 Semester	**4**	2.6. Type of evaluation	**C**	2.7 Type of discipline	**Compulsory**

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

3.1 Hours per week	3	Of which: 3.2 course	0	3.3 seminar/laboratory	3
3.4 Total hours in the curriculum	36	Of which: 3.5 course	0	3.6 seminar/laboratory	36
Time allotment:					hours
Learning using manual, course support, bibliography, course notes					24
Additional documentation (in libraries, on electronic platforms, field documentation)					24
Preparation for seminars/labs, homework, papers, portfolios and essays					36
Tutorship					24
Evaluations					6
Other activities:					-

3.7 Total individual study hours	114
3.8 Total hours per semester	150
3.9 Number of ECTS credits	6

4. Prerequisites (if necessary)

4.1. curriculum	Computer Science Research Methodology
4.2. competencies	-

5. Conditions (if necessary)

5.1. for the course	-
5.2. for the seminar /lab activities	None

6. Specific competencies acquired

Professional competencies	• Analysis and formalization of problems requiring intelligent methods and models • Use of computational intelligence methods in problems solving • Analysis, design, and implementation of software systems for computational intelligence • Proficient use of methodologies and tools specific to programming languages and software systems
Transversal competencies	• Professional communication skills; concise and precise description, both oral and written, of professional results

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

7.1 General objective of the discipline	This research project represents the individual work the student performs with the purpose to realize a scientific report on a given research topic. This research project is associated to the internship project: the research project is the scientific and experimental documentation
7.2 Specific objective of the discipline	At the completion of this course, the student should: - have documentation abilities on an established topic - be able to design the table of contents of the research report - know how to write a technical document (research report) in many iterations

8. Content

8.1 Course	Teaching methods	Remarks
8.2 Seminar / laboratory	Teaching methods	Remarks
1. Establishing the research title/topic	Conversation, debate, case studies	
2. Bibliographical documentation	Conversation, debate, case studies	
3. Table of contents: version 1.0	Conversation, debate, case studies	
4. Relevance of the bibliographical sources and their assignment to the designed structure	Conversation, debate, case studies	
5. Detecting possible original contribution; discussion and decision on experimental modelling	Conversation, debate, case studies	
6. Processing of selected documents and writing the paper – first draft of the report	Conversation, debate, case studies	
7. Final form of the research report	Evaluation	
Bibliography - to be decided by student based on his/her research topic - Internet resources on software projects and on the particular topics of the projects		

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;
- The course exists at the major universities in Romania offering similar study programs;
- Graduating a master program assumes experience in developing a research project

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	The ability to write a research report and present the obtained results.	Each of the activities has a due date and a corresponding mark, on a 10-point scale. A penalty of 1pt per week are considered for delays.	
		1. title and table of contents	10%
		2. bibliographical documentation, relevance, assignment to structure	20%
		3. full text of the report	50%
		4. final presentation	20%
10.6 Minimum performance standards			
➢ At least grade 5 (from a scale of 1 to 10)			

Date
10.04.2024

Signature of course coordinator
Prof.Dr. Horia F. Pop

Signature of seminar coordinator
Prof. Dr. Horia F. Pop

Date of approval
.....

Signature of the head of department
Assoc.Prof. Dr. Adrian Sterca