

## SYLLABUS

### 1. Information regarding the programme

1.1 Higher education institution	<b>Babeş Bolyai University</b>
1.2 Faculty	<b>Faculty of Mathematics and Computer Science</b>
1.3 Department	<b>Department of Computer Science</b>
1.4 Field of study	<b>Computer Science</b>
1.5 Study cycle	<b>Master</b>
1.6 Study programme / Qualification	<b>Applied Computational Intelligence</b>

### 2. Information regarding the discipline

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

### 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

<b>Professional competencies</b>	<ul style="list-style-type: none"> <li>• Analysis and formalization of problems requiring intelligent methods and models</li> <li>• Use of computational intelligence methods in problems solving</li> <li>• Analysis, design, and implementation of software systems for computational intelligence</li> <li>• Proficient use of methodologies and tools specific to programming languages and software systems</li> </ul>
<b>Transversal competencies</b>	<ul style="list-style-type: none"> <li>• Professional communication skills; concise and precise description, both oral and written, of professional results</li> </ul>

## 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

<ul style="list-style-type: none"> <li>• The course respects the IEEE and ACM Curricula Recommendations for Computer Science studies;</li> <li>• The course exists at the major universities in Romania offering similar study programs;</li> <li>• Graduating a master program assumes experience in developing a research project</li> </ul>
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## 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. public presentation	20%
10.6 Minimum performance standards			
➤ At least grade 5 (from a scale of 1 to 10)			

Date  
20.04.2019

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

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

Date of approval  
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Signature of the head of department  
Prof. Dr. Anca Andreica