

## SYLLABUS

### 1. Information regarding the programme

1.1 Higher education institution	<b>Babes 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>Data analysis and modelling</b>

### 2. Information regarding the discipline

2.1 Name of the discipline	<b>Adatelemzés és modellezés kutatási projekt / Proiect de cercetare in analiza datelor si modelare / Research Project in Data analysis and modelling</b>						
2.2 Course coordinator	<b>Lehel CSATÓ</b>						
2.3 Seminar coordinator	<b>Lehel CSATÓ</b>						
2.4. Year of study	<b>2</b>	2.5 Semester	<b>4</b>	2.6. Type of evaluation	<b>E</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					26
Additional documentation (in libraries, on electronic platforms, field documentation)					18
Preparation for seminars/labs, homework, papers, portfolios and essays					-
Tutorship					12
Evaluations					4
Other activities: .....					-
3.7 Total individual study hours					60
3.8 Total hours per semester					100
3.9 Number of ECTS credits					4

### 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: <ul style="list-style-type: none"> <li>- have documentation abilities on an established topic</li> <li>- be able to design the table of contents of the research report</li> <li>- know how to write a technical document (research report) in many iterations</li> </ul>

### 8. Content

8.1 Course	Teaching methods	Remarks
8.2 Seminar / laboratory	Teaching methods	Remarks
1. Establishing the research title/topic - due week 2	Conversation, debate, case studies	
2. Bibliographical documentation - due week 4	Conversation, debate, case studies	
3. Table of contents: version 1.0 - due week 5	Conversation, debate, case studies	
4. Relevance of the bibliographical sources and their assignment to the designed structure - due week 7	Conversation, debate, case studies	
5. Detecting possible original contribution; discussion and decision on experimental modeling – due week 8	Conversation, debate, case studies	
6. Processing of selected documents and writing the paper – first draft of the report – due week 10	Conversation, debate, case studies	
7. Final form of the research report – due week 12	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	Each of the activities has a due date and a corresponding mark, on a 10-point scale.	Portfolio, research report	
	1. title (10%)		10%
	2. bibliographical documentation (10%)		10%
	3. table of contents v1.0 (10%)		10%
	4. assigning sources to structure (20%)		20%
	5. original contribution + experimental (10%)		10%
	6. final version of the research report (40%)		40%
10.6 Minimum performance standards			
➤ At least grade 5 (from a scale of 1 to 10)			

Date	Signature of course coordinator	Signature of seminar coordinator
2020.04.18	Prof.Dr. Lehel CSATÓ	Prof. Dr. Lehel CSATÓ

Date of approval	Signature of the head of department
2020.04.21	Conf. Dr. Szilárd ANDRÁS