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	**Computer Sciencee**

2. Information regarding the discipline

2.1 Name of the discipline	**Research Project**				
2.2 Course coordinator	**Prof.Dr. Horia F. Pop**				
2.3 Seminar coordinator	**Prof.Dr. Horia F. Pop**				
2.4. Year of study	**3**	2.5 Semester	**5**	2.6. Type of evaluation	**C**	2.7 Type of discipline	**Optional**

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

3.1 Hours per week	2	Of which: 3.2 course	0	3.3 seminar/laboratory	2
3.4 Total hours in the curriculum	28	Of which: 3.5 course	0	3.6 seminar/laboratory	28

Time allotment:	hours
Learning using manual, course support, bibliography, course notes	3
Additional documentation (in libraries, on electronic platforms, field documentation)	10
Preparation for seminars/labs, homework, papers, portfolios and essays	5
Tutorship	2
Evaluations	2
Other activities:	-

3.7 Total individual study hours	22
3.8 Total hours per semester	50
3.9 Number of ECTS credits	2

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 computer science methods and models • Use of computer science methods in problems solving • Analysis, design, and implementation of software systems for real world applications • Proficient use of methodologies and tools specific to programming languages and software systems
Transversal	• 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.
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 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. Methodology of scientific research	Conversation, debate, case studies	
3. Draft of table of contents	Conversation, debate, case studies	
4. Bibliographical documentation	Conversation, debate, case studies	
5. Relevance of the bibliographical sources	Conversation, debate, case studies	
6. Assignment of references to the designed structure	Conversation, debate, case studies	
7. Software system design	Conversation, debate, case studies	
8. Software system implementation	Conversation, debate, case studies	
9. Document software	Conversation, debate, case studies	
10. Decision on experimental modelling	Conversation, debate, case studies	
11. Document experiments and tests	Conversation, debate, case studies	
12. First draft of the report	Conversation, debate, case studies	
13. Prepare for the final delivery	Conversation, debate, case studies	
14. Final form of the research report	Evaluation	
Bibliography - to be decided by student based on his/her research topic - Internet resources on research 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.	
		Phase 1. Docs 1, 2, 3	10%
		Phase 2. Docs 4, 5, 6	20%
		Phase 3. Docs 7, 8, 9	20%
		Phase 4. Docs 10. 11	20%
		Phase 5. Docs 12, 13	20%
		Phase 6. Final presentation	10%
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
27.04.2020	Prof.Dr. Horia F. Pop	Prof. Dr. Horia F. Pop

Date of approval

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Signature of the head of department

Prof. Dr. Anca Andreica