

## 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>Component Based Programming</b>

### 2. Information regarding the discipline

2.1 Name of the discipline (en) (ro)	<b>Research Project in Component Based Programming Proiect de Cercetare in Programarea Bazata pe Componente</b>						
2.2 Course coordinator	<b>Assoc. Prof. Eng. Florin Craciun</b>						
2.3 Seminar coordinator	<b>Assoc. Prof. Eng. Florin Craciun</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>DS</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					10
Additional documentation (in libraries, on electronic platforms, field documentation)					10
Preparation for seminars/labs, homework, papers, portfolios and essays					24
Tutorship					10
Evaluations					10
Other activities: .....					-
3.7 Total individual study hours	64				
3.8 Total hours per semester	100				
3.9 Number of ECTS credits	4				

### 4. Prerequisites (if necessary)

4.1. curriculum	<ul style="list-style-type: none"> <li>• Computer Science Research Methodology</li> </ul>
4.2. competencies	<ul style="list-style-type: none"> <li>•</li> </ul>

### 5. Conditions (if necessary)

5.1. for the course	

### 6. Specific competencies acquired

<b>Professional competencies</b>	<ul style="list-style-type: none"> <li>• Analysis, design, and implementation of software systems</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	<ul style="list-style-type: none"> <li>• The research project activity represents the individual work the student performs with the purpose to realize a scientific report on a given topic.</li> </ul>
7.2 Specific objective of the discipline	<p>At the completion of this course, the student should:</p> <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 research project</li> <li>- know how to write a technical document (research paper) in many iterations</li> </ul>

## 8. Content

8.1 Course	Teaching methods	Remarks
8.2 Laboratory and Project	Teaching methods	Remarks
1. Project 1 and Lab1: research topic	Conversation, debate, case studies	
2. Project2: Bibliographical documentation	Conversation, debate, case studies	
3. Project3 and Lab2: Bibliographical documentation		
4. Project 4: Bibliographical documentation		
5. Project5 and Lab3: research title		
6. Project 6: Table of content		
7. Project 7 and Lab4: Table of content		
8. Project 8: Relevance of the bibliographical sources and their assignment to the designed structure		
9. Project 9 and Lab5: Detecting possible original contribution; discussion and decision on practical part		

10. Project 10: Detecting possible original contribution; discussion and decision on practical part		
11. Project 11 and Lab6: Translation of selected documents and writing the paper		
12. Project 12: Final form		
Bibliography – to be decided by student based on his/her research topic		

**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 Software Engineering studies;
- The content of the course is considered by the software companies as important for average software development skills

**10. Evaluation**

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the grade (%)
Project /lab activities	Presentation, results evaluation and importance of the results	-research project	100.00%
10.6 Minimum performance standards			
➤ At least grade 5 (from a scale of 1 to 10) at both written exam and laboratory work.			

Date  
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Signature of course coordinator  
Assoc. Prof. En. Florin CRACIUN

Signature of seminar coordinator  
Assoc. Prof. Eng. Florin CRACIUN

Date of approval  
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Signature of the head of department  
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