SYLLABUS

1. Information regarding the programme

1.1 Higher education institution	**Babeș-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	**Cyber Security**

2. Information regarding the discipline

2.1 Name of the discipline (en) (ro)			Elaboration of the Dissertation Thesis / Elaborarea lucrării de disertație				
2.2 Course coordinator			Assoc. Prof. Bufnea Darius				
2.3 Seminar coordinator			Assoc. Prof. Bufnea Darius				
2.4. Year of study	**2**	2.5 Semester	**4**	2.6. Type of evaluation	**VP**	2.7 Type of discipline	**Compulsory**
2.8 Code of the discipline		**MME3042**					

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

3.1 Hours per week	5	Of which: 3.2 course	0	3.3 seminar/laboratory	5
3.4 Total hours in the curriculum	60	Of which: 3.5 course	0	3.6 seminar/laboratory	60

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	10
Tutorship	5
Evaluations	5
Other activities:	-

3.7 Total individual study hours	40
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	-

6. Specific competencies acquired

Professional competencies	Analysis and formalization of problems requiring cyber security methods and models Use of cyber security methods in problems solving Analysis, design, and implementation of software systems for cyber security 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 activity represents the individual work the student performs with the purpose to finalize his/her dissertation thesis.
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 thesis title/topic 2. Bibliographical documentation 3. Table of contents: version 1.0 4. Relevance of the bibliographical sources and their assignment to the designed structure 5. Detecting possible original contribution; discussion and decision on experimental modelling 6. Processing of selected documents and writing the paper – first draft of the thesis	Conversation, debate, case studies	
7. Final form of the thesis	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. text of the thesis	50%
		4. Contributions – originality and experiments	10%
		5. final version	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

Assoc. Prof. Bufnea Darius | **Assoc. Prof. Bufnea Darius**

Date of approval | Signature of the head of department

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