SYLLABUS

1. Information regarding the programme

1.1 Higher education institution	**Babeş-Bolyai University**
1.2 Faculty	**Mathematics and Computer Science**
1.3 Department	**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)	Thematic Project with Innovation Challenge Proiect thematic inovativ					
2.2 Course coordinator	Lector univ. dr. Alexandru Roja					
2.3 Seminar coordinator	Lector univ. dr. Alexandru Roja					
2.4. Year of study	**1**	2.5 Semester	**2**	2.6. Type of evaluation	**C**	2.7 Type of discipline	Compulsory
2.8 Code of the discipline	MME8205					

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	42	Of which: 3.5 course	0	3.6 seminar/laboratory	42
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					23
Tutorship					15
Evaluations					-
Other activities:					-

3.7 Total individual study hours	58
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 - Innovation management

4.2. competencies	• Knowledge in the field of Information technology.
	• Knowledge in the field of management and entrepreneurship.
	• Creative and critical thinking

5. Conditions (if necessary)

5.1. for the course	• Classroom with video-projector and internet connection.
5.2. for the seminar /lab activities	• Room with video-projector, collaborative activities spaces for creation and co-creation. Resources and instruments for creative and innovative activities. Online resources and spaces for creation and collaboration.

6. Specific competencies acquired

Professional competencies	• Analysis and formalization of complex problems
	• Use of cybersecurity knowledge in problems solving.
	• Analysis, design, and implementation of software systems in the field of cybersecurity.
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	• Understanding specific needs and problems
	• Development of innovative Proof of Concepts or MVPs
7.2 Specific objective of the discipline	• Understanding specific needs and problems.
	• Product and / or service innovation
	• Understand how to translate problems and challenges into innovative products frameworks
	• Understanding the markets and opportunities
	• Development of Proof of Concept / MVP roadmaps
	• Development of scientific and experimental documentation

8. Content

8.1 Course	Teaching methods	Remarks
8.2 Seminar / laboratory		
1. Product vision	Lecture, heuristic conversation, problematization, debates, case study	3 hours
2. Product strategy and objectives	Lecture, heuristic conversation,	3 hours

	problematization, debates, case study		
3. Product roadmap	Lecture, heuristic conversation, problematization, debates, case study	3 hours	
4. Problem research	Lecture, heuristic conversation, problematization, debates, case study	3 hours	
5. Solution creation and validation	Lecture, heuristic conversation, problematization, debates, case study	3 hours	
6. Product growth strategies	Lecture, heuristic conversation, problematization, debates, case study	3 hours	
7. Product metrics	Lecture, heuristic conversation, problematization, debates, case study	3 hours	
Bibliografie			

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 studie;
- The course exists at the major universities in Romania offering similar study program;
- 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	Project evaluation.	The project is evaluated based on complexity and originality.	100%
10.6 Minimum performance standards			
At least grade 5 (from 1 to 10).			

Date	Signature of course coordinator	Signature of seminar coordinator
22.04.2024	Lector univ. dr. Alexandru Roja	Lector univ. dr. Alexandru Roja

Date of approval   Signature of the head of department

....   Conf. univ. dr. Adrian Sterca