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	Master
1.6 Study programme / Qualification	Software Engineering

2. Information regarding the discipline

2.1 Name of the discipline	Agile Software Development						
2.2 Course coordinator	Lect. PhD Dan Mircea Suciu						
2.3 Seminar coordinator	Lect. PhD Dan Mircea Suciu						
2.4. Year of study	**1**	2.5 Semester	**1**	2.6. Type of evaluation	**E**	2.7 Type of discipline	**Compulsory**

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

3.1 Hours per week	4	Of which: 3.2 course	2	3.3 seminar/laboratory	1sem + 1 pr
3.4 Total hours in the curriculum	56	Of which: 3.5 course	28	3.6 seminar/laboratory	28

Time allotment:	Hours
Learning using manual, course support, bibliography, course notes	20
Additional documentation (in libraries, on electronic platforms, field documentation)	10
Preparation for seminars/labs, homework, papers, portfolios and essays	15
Tutorship	2
Evaluations	3
Other activities:	-

3.7 Total individual study hours	119
3.8 Total hours per semester	175
3.9 Number of ECTS credits	7

4. Prerequisites (if necessary)

4.1. curriculum	-
4.2. competencies	-

5. Conditions (if necessary)

5.1. for the course	Video projector
5.2. for the seminar /lab activities	Video projector

6. Specific competencies acquired

Professional competencies	- Identification and understanding of basic concepts of the following specific Agile methodologies: Scrum, Extreme Programing, Kanban, Lean Software Development. - Identification and explanation of basic Agile practices
Transversal competencies	- Formal communication in organizations - Project task time and effort estimation - Change management

7. Objectives of the discipline (outcome of the acquired competencies)

7.1 General objective of the discipline	• acquiring knowledge and skills necessary for a process of management of IT projects
7.2 Specific objective of the discipline	• identifying the aspects that make Agile methodologies superior to predictive methodologies for software projects • identifying the strengths and weaknesses of each of today Agile practices • identifying the life cycle of a software project in an Agile context

8. Content

8.1 Course	Teaching methods	Remarks
1. Introduction in Agile Methodologies	• Interactive exposure • Explanation • Conversation • Didactical demonstration	
2, 3, 4. Scrum – Roles, Ceremonies, Artefacts	• Interactive exposure • Explanation • Conversation • Didactical demonstration	
5, 6. Extreme Programing	• Interactive exposure • Explanation • Conversation • Didactical demonstration	
7. Lean Software Development	• Interactive exposure • Explanation • Conversation • Didactical	

	demonstration	
8 – 9. Kanban	• Interactive exposure • Explanation • Conversation • Didactical demonstration	
10. Other Agile Methodologies: DSDM, Crystal	• Interactive exposure • Explanation • Conversation • Didactical demonstration	
11. Other Agile Methodologies: Agile Unified Process, Feature Driven Development	• Interactive exposure • Explanation • Conversation • Didactical demonstration	
12. Agile Contracts	• Interactive exposure • Conversation	
13. Risk Management in an Agile Environment	• Interactive exposure • Conversation	
14. The future of Agile	• Interactive exposure • Conversation	

Bibliography

1. Jeff Langr, Tim Ottinger - Agile in a Flash: Speed-Learning Agile Software Development, Pragmatic Bookshelf, 2011
2. Esther Derby, Diana Larsen - Agile Retrospectives: Making Good Teams Great, Pragmatic Bookshelf, 2006
3. Thomas Stober, Uve Hansmann - Agile Software Development, Best Prectices for Large Software Development Projects, Springer 2010
4. Mike Cohn - Succeeding with Agile Software Development using Scrum, Addison-Wesley, 2010
5. Gene Kim, Kevin Behr, George Spafford - The Phoenix Project: A Novel About IT, DevOps, and Helping Your Business Win, 2013
6. Darrell K. Rigby, Sarah Elk, Steven H. Berez - Doing Agile Right: Transformation Without Chaos, 2020
7. Geoff Watts - Product Mastery: From Good to Great Product Ownership, 2018
8. Mattias Skarin - Real-World Kanban: Do Less, Accomplish More with Lean Thinking, 2015

8.2 Seminar	Teaching methods	Remarks
1. Agile Problem Solving	Dialogue, debate, case studies, examples, proofs	The seminar is structured as 2 hours classes every second week
2. Self-Organizing Teams	Dialogue, debate, case studies, examples, proofs	
3, 4. Delegation and Management 3.0	Dialogue, debate, case studies, examples, proofs	
5. Agile estimation	Dialogue, debate, case studies, examples, proofs	
6. Agile Mindset	Dialogue, debate, case	

	studies, examples, proofs	
7. Optimization of development flow	Dialogue, debate, case studies, examples, proofs	

Bibliography

1. Timothy S. Hatten - Small Business Management: Creating a Sustainable Competitive Advantage, SAGE Publications, 2019
2. George S Day, Paul J H Schoemaker: See Sooner, Act Faster - How Vigilant Leaders Thrive in an Era of Digital Turbulence, MIT Press, 2019
3. Sacolick, Isaac: Driving Digital - The Leader's Guide to Business Transformation Through Technology, Amacom, 2017
4. Kouzes James - The leadership challenge: how to make extraordinary things happen in organizations, Jossey-Bass, 2017

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

10. Evaluation

Type of activity	Evaluation criteria	Evaluation methods	Share in the grade (%)
Course	- know the basic principle of the domain; - apply the course concepts - problem solving	completion of individual missions that will be activated weekly	80%
Seminar/lab activities	- assessment of soft skills and ability to make decisions in real life situations	- oral examination - role-playing games at seminars	20%
Minimum performance standards			
• The final grade should be at least grade 5 (from a scale of 1 to 10)			

Signature of course coordinator — Lect. PhD. Dan Mircea Suciu

Signature of seminar coordinator — Lect. PhD. Dan Mircea Suciu

Signature of the head of department