SYLLABUS

Innovation Management

University year 2025-2026

1. Information regarding the programme

1.1. Higher education institution	Babeş – Bolyai University of Cluj - Napoca	
1.2. Faculty	Computer Science	
1.3. Department	Department of Compuer Science	
1.4. Field of study	Computer Science	
1.5. Study cycle	Master	
1.6. Study programme/Qualification	Cybersecurity	
1.7. Form of education	Full time	

2. Information regarding the discipline

2.1. Name of the discipline	**Managementul inovaţei**				Discipline code	**MME9020**
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	E	2.7. Discipline regime	Mandatory

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

3.1. Hours per week	3	of which: 3.2 course		3.3 seminar/laboratory/project	1
3.4. Total hours in the curriculum	42	of which: 3.5 course	28	3.6 seminar/laboratory/project	14
Time allotment for individual study (ID) and self-study activities (SA)					**hours**
Learning using manual, course support, bibliography, course notes (SA)					30
Additional documentation (in libraries, on electronic platforms, field documentation)					30
Preparation for seminars/labs, homework, papers, portfolios and essays					40
Tutorship					10
Evaluations					4
Other activities:					10
3.7. Total individual study hours	**124**				
3.8. Total hours per semester	**175**				
3.9. Number of ECTS credits	**7**				

4. Prerequisites (if necessary)

4.1. curriculum	-
4.2. competencies	Knowledge in the field of information technology. Knowledge in the field of management.

5. Conditions (if necessary)

5.1. for the course	Course room with video projector.
5.2. for the seminar /lab activities	Seminar room equipped with video projector and projection screen, space for collaborative, creative and co-creation activities. Resources and tools for creative and innovation activities. Online resources for creative activities.

6.1. Specific competencies acquired [1]

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[1] One can choose either competences or learning outcomes, or both. If only one option is chosen, the row related to the other option will be deleted, and the kept one will be numbered 6.

Professional/essential competencies	• Understanding the specific contexts for innovation and digital innovations • Using techniques and tools specific to innovation management in the field of information technology. • Developing innovation skills in the field of information technology • Developing specific skills for product, service, process, organizational, business model and experience innovation.
Transversal competencies	• Applying principles, tools and new guidelines specific to innovation management. • Identifying the roles and responsibilities specific to innovative multidisciplinary teams and applying effective communication and work techniques within the team; • Identifying opportunities for continuous training and effectively capitalizing on learning resources and techniques for one's own development.

6.2. Learning outcomes

Knowledge	The student/graduate knows how to develop and implement an innovation strategy.
Skills	• The student/graduate is able to coordinate project management activities, using decision-making skills, critical and innovative thinking, as well as digital skills • The student/graduate develops his/her entrepreneurial spirit, leadership and negotiation skills in a socio-economic context
Responsibility and autonomy:	• The student/graduate develops the ability to translate academic knowledge into a professional, economic, social and ethical context • The student/graduate demonstrates teamwork skills and develops communication skills

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

7.1 General objective of the discipline	• Understanding concepts specific to innovation. • Understanding concepts specific to innovation management. • Mastering methods, techniques and tools necessary in innovation processes. • Students' acquisition of the skills necessary in innovation processes, including strategic innovation and digital innovation. • Developing managerial and entrepreneurial skills specific to innovation. • Leading innovative teams.
7.2 Specific objective of the discipline	• Understanding the main trends in innovation management and digital innovation, innovation and digital innovation methods and techniques. • Developing and applying innovation strategies. • Creating innovative products and services. • Developing and applying skills, competencies and abilities specific to innovation management.

8. Content

8.1 Course	Teaching methods	Remarks
1. Introduction to innovation management. The importance of innovation and specific innovation contexts.	Lecture, the heuristic conversation, the problematization.	2 hours
2. Knowledge-based economy and national systems for innovation.	Lecture, the heuristic conversation, the problematization.	2 hours
3. Innovation-specific trends and specific methods for studying the future.	Lecture, the heuristic conversation, the problematization.	2 hours
4. Market adoption and technology diffusion.	Lecture, the heuristic conversation, the problematization.	2 hours
5. Innovation typology (product innovation vs. process innovation; radical innovation vs. incremental innovation; architectural innovation vs. restricted innovation; innovation and the S-curve).	Lecture, the heuristic conversation, the problematization.	2 hours
6. Competition specific to innovative products, modularity and competition of digital platforms.	Lecture, the heuristic conversation, the problematization.	2 hours
7. Market entry and exit strategies for digital products.	Lecture, the heuristic conversation, the problematization.	2 hours
8. Marketing of innovative digital products.	Lecture, the heuristic conversation, the problematization.	2 hours
9. Disruptive innovation mechanisms.	Lecture, the heuristic conversation, the problematization.	2 hours
10. Digital service innovation and the transition to digital service-based business models.	Lecture, the heuristic conversation, the problematization.	2 hours
11. Value proposition innovation and digital business model innovation.	Lecture, the heuristic conversation, the problematization.	2 hours
12. Organizational innovation and ecosystem-based open innovation.	Lecture, the heuristic conversation, the problematization.	2 hours
13. Intellectual property management.	Lecture, the heuristic conversation, the problematization.	2 hours
14. Ethics in innovation management.	Lecture, the heuristic conversation, the problematization.	2 hours

Bibliography
1. Andersen, M., Pedersen, T. (2022), D*ata-Driven Innovation. Why the Data-Driven Model Will Be Key to Future Success*, Routledge
2. Carayannis, E. (2013), *Encyclopedia of Creativity, Invention, Innovation, and Entrepreneurship*, Springer Reference
3. Coron, C., Gilbert, P. (2020), *Technological Change*, Wiley
4. Daim, T., Meissner, D. (2020) *Innovation Management in the Intelligent World*, Springer
5. Deschamps, J.P. (2014). *Innovation Governance*: John Wiley & Sons
6. Ende, J. (2021), *Innovation Management*, Macmillan International
7. Espindola, D., Wright, M. (2021), *The Exponential Era. Strategies to Stay Ahead of he Curve an an Era of Chaotic Changes and Disruptive Forces*, Wiley
8. Galvan, R., Murray, J., Markides, C. (2008), *Strategy, Innvation and Change. Challenges for Management*: Oxford University Press
9. Genenning. S. (2020), *Realizing Digitization – Enabled Innovation*, Springer Gabler
10. Harrington, J., Voehl, F. (2020), *Total Innovative Management Excellence. The Future of Innovation*, CRC Press
11. Harrington, J., Benraouane, S. (), *Managing Innovative Projects and Programs*, Routledge

12. Joao, L. (2019), *Open Innovation Business Modeling. Gamification and Design Thinking Applications*, Springer
13. Kennard, M. (2021), *Innovation and Entrepreneurship*, Routledge
14. Kesavan, P. (2021), *Enablers of Organisational Learning, Knowledge Management, and Innovation*, Springer
15. Machado, C., Davim, P. (2022), *Organizational Innovation in the Digital Age*, Springer
16. McKelvy, B., Kaminska, R., Salmador, M., Escoffier, N. (2021), *Management in the Age of Digital Business Complexity*, Routledge
17. Meunier, F. (2020), D*ual Innovation Systems.Concepts, Tools and Methods,* Wiley
18. Pithan, D. (2022), *Corporate Research Laboratories and the History of Innovation*, Routledge
19. Rangone, A. (2020), *Managing Corporate Innovation. Determinants, Critical Issues and Success Factors*, Springer
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22. Sniukas, M. (2020), *Business Model Innovation as a Dynamic Capability*, Springer
23. Taplin, R., (2014), *Intellectual Property Valuation and Innovation. Towards global harmonisation*, Routledge
24. Trott, P. (2021), *Innovation Management and New Product Development,* Pearson Education Limited
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27. Wheelen, T.J., Hunger, J.D., Hoffman, A.N., Bamford, C.E. (2018), *Strategic Management and Business Policy. Globalization, Innovation and Sustainability, fifteents edition*: Pearson Education Limited
28. White, M.A., Bruton, G.D. (2011), *The Management of Technology and Innovation. A strategic Approach, second edition*: South-Western Cengage Learning
29. Woszczyna K. (2021), *Management Theory, Innovation and Organisation*, Routledge
30. Zhou, J., Rouse, E. (2021), *Handbook of Research on Creativity and Innovation*, Edward Elgar Publishing

8.2 Seminar / laboratory	Teaching methods	Remarks
1. Applied work session – needs identification and market research	Case study, exercise, creative methods, simulation.	2 hours
2. Applied work session – product outline	Case study, exercise, creative methods, simulation.	2 hours
3. Applied work session – product synchronization – market needs	Case study, exercise, creative methods, simulation.	2 hours
4. Applied work session – prototyping	Case study, exercise, creative methods, simulation.	2 hours
5. Applied work session – prototyping	Case study, exercise, creative methods, simulation.	2 hours
6. Applied work session – testing	Case study, exercise, creative methods, simulation.	2 hours
7. Applied work session – validation	Case study, exercise, creative methods, simulation.	2 hours

Bibliography
31. Andersen, M., Pedersen, T. (2022), D*ata-Driven Innovation. Why the Data-Driven Model Will Be Key to Future Success*, Routledge
32. Carayannis, E. (2013), *Encyclopedia of Creativity, Invention, Innovation, and Entrepreneurship*, Springer Reference
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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 content of this discipline is correlated with the innovation and research and development needs identified in the IT&C field.

10. Evaluation

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Percentage of final grade
10.4 Course	Assimilation of information received in the course. Own reasoning, critical and creative thinking on the course topics.	Exam.	20%
	Own reasoning, critical and creative thinking on the course topics.	Course interventions.	10%
10.5 Seminar/laboratory	Creating an activity plan for the development of an innovative digital product.	Project.	20%
	Creating an innovative digital product during the semester in a team.	Technical demo.	50%
10.6 Minimum standard of performance			

- Obtaining a minimum grade of 5 for promotion.

11. Labels ODD (Sustainable Development Goals)[2]

Not applicable.

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[2] Keep only the labels that, according to the *Procedure for applying ODD labels in the academic process*, suit the discipline and delete the others, including the general one for *Sustainable Development* – if not applicable. If no label describes the discipline, delete them all and write „*Not applicable.*".

Date:
8 april 2025

Signature of course coordinator

Lector univ. dr. Alexandru Roja

Signature of seminar coordinator

Lector univ. dr. Alexandru Roja

Date of approval:
…

Signature of the head of department

Assoc.prof.phd. Adrian STERCA