

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)	Digital Economy Principles						
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	1	2.6. Type of evaluation	E	2.7 Type of discipline	Mandatory
2.8 Code of the discipline	MME9021						

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	1 sem +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					30
Additional documentation (in libraries, on electronic platforms, field documentation)					30
Preparation for seminars/labs, homework, papers, portfolios and essays					40
Tutorship					9
Evaluations					10
Other activities:					25
3.7 Total individual study hours	144				
3.8 Total hours per semester	200				
3.9 Number of ECTS credits	8				

4. Prerequisites (if necessary)

4.1. curriculum	<ul style="list-style-type: none"> • Innovation management
4.2. competencies	<ul style="list-style-type: none"> • Knowledge in the field of information technology.

	<ul style="list-style-type: none"> • Knowledge in the field of organisational management.
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5. Conditions (if necessary)

5.1. for the course	<ul style="list-style-type: none"> • Classroom with video-projector and internet connection.
5.2. for the seminar /lab activities	<ul style="list-style-type: none"> • Room with video-projector, collaborative activities spaces for students.

6. Specific competencies acquired

Professional competencies	<ul style="list-style-type: none"> • Understanding the specific contexts of the digital economy. • Understanding the principles on which the digital economy is based. • Understanding how value is created in the new digital paradigm. • Understanding the specific contexts of organizations in the digital economy.
Transversal competencies	<ul style="list-style-type: none"> • Applying the principles, tools and new methods specific to the digital economy. • Understanding the implications of information technology and new trends in the digital economy. • Identifying opportunities and capitalizing on them in the digital economy.

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

7.1 General objective of the discipline	<ul style="list-style-type: none"> • Understanding the concepts of the digital economy. • Familiarizing students with the main paradigm shifts, dimensions and trends that govern the economy based on innovation and digital technologies. • Learning methods, techniques and tools for investigating the digital economy. • Students' acquisition of specific skills in the digital economy.
7.2 Specific objective of the discipline	<ul style="list-style-type: none"> • Learning methods and tools for understanding the main trends of the digital economy. • Understanding the factors and driving forces behind the digital economy. • Understanding the indicators specific to the digital economy. • Understanding the competitiveness factors specific to the digital economy. • Understanding the distinctive aspects digital economy organizations.

8. Content

8.1 Course	Teaching methods	Remarks
1. Introduction to digital economy.	Lecture, heuristic conversation,	2 hours

	problematization.	
2. Strategic trends on digital economy.	Lecture, heuristic conversation, problematization.	2 hours
3. Technics, methods and instruments to analyse digital economy particularities.	Lecture, heuristic conversation, problematization.	2 hours
4. Roles of data, information, knowledge in digital economy paradigm. Information economy. Network economy. Platform economics.	Lecture, heuristic conversation, problematization.	2 hours
5. Growth methods at micro (organizations), and meso (business sectors) specific to digital economy.	Lecture, heuristic conversation, problematization.	2 hours
6. Growth models at macroeconomic level specific to digital economy.	Lecture, heuristic conversation, problematization.	2 hours
7. Capabilities and capacities specific to digital enterprises and organizations in digital economy.	Lecture, heuristic conversation, problematization.	2 hours
8. New organizational management principles for digital economy. New business models specific of digital economy.	Lecture, heuristic conversation, problematization.	2 hours
9. Roles of technologies and digital innovations in the new paradigm of digital economy.	Lecture, heuristic conversation, problematization.	2 hours
10. New digital value, intangible resources roles and digital strategies in digital economy.	Lecture, heuristic conversation, problematization.	2 hours
11. Digital change and transformation management.	Lecture, heuristic conversation, problematization.	2 hours
12. Digital organizations (architectures, processes, governance principles)	Lecture, heuristic conversation, problematization.	2 hours
13. Digitalization and digital economy strategic impact.	Lecture, heuristic conversation, problematization.	2 hours
14. Competitive redefinition in new paradigm of digital economy, and new ecosystemic approaches.	Lecture, heuristic conversation, problematization.	2 hours

Bibliography

1. Aalst, W., Mylopoulos, J., Rosemann, M., Shaw, M., Szyperski, C. (2018), *Digital Economy. Emerging Technologies and Business Innovation*, Springer
2. Ashmarina, S., (2021), *Digital Transformation of the Economy: Challenges, trends and New Opportunities*, Springer
3. Brzozowska, A., Bubel, D., Nekrasenko, L. (2022), *Organisation Management in the Digital Economy*, CRC Press
4. Buchaev, Y., Abdulmanapov, S., Abdulmanapov, A., Khachatryan, A. (2021), *State and Corporate Management of Regions Development in the Conditions of the Digital Economy*, Springer

5. Chamoux, J. (2019), *The Digital Era 2. Political Economy Revisited*, Wiley
6. Chandler, J. (2020), *Innovation, Social, Networks, and Service Ecosystems. Managing Value in the Digital Economy*, Palgrave MacMillan
7. Chase, C. (2021), *Consumption-Based Forecasting and Planning. Predicting Changing Demand Patterns in the New Digital Economy*, Wiley
8. Codagnine, C., Karatzogiani, A., Matthews, J. (2019), *Platform Economics. Rhetoric and Reality in the „Sharing Economy”*, Emerald Publishing
9. Elliffe, C. (2021), *Taxing the Digital Economy. Theory, Policy and Practice*, Cambridge
10. Filippov, V., Chursin, A., Ragulina, J., Popkova, E. (2019), *The Cyber Economy*, Springer
11. Gottlieb, B. (2018), *Digital Materialism. Origins, Philosophies, Prospects*, Emerald Publishing
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15. Lundqvist, B., Gal, M. (2019), *Competition Law For The Digital Economy*, Edward Elgar
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21. Petit, N. (2020), *Big Tech & the Digital Economy*, Oxford
22. Popkova, E., Sergi, B. (2020), *Digital Economy: Complexity and Variety vs. Rationality*, Springer
23. Popkova, E. (2022), *Imitation Market Modeling in Digital Economy: Game Theoretic Approaches*, Springer
24. Rodinov, D., Kudryavtseva, T., Skhvediani, A., Berawi, M. (2021), *Innovations in Digital Economy*, Springer
25. Sledziewska, K., Wloch, R. (2021), *The Economics of Digital Transformation. The Disruption of Markets, Production, Consumption, and Work*, Routledge
26. Suki, N., Suki, N. (2020), *Leveraging Consumer Behavior and Psychology in the Digital Economy*, IGI Global
27. Sussna, J., (2015), *Designing Delivery. Rethinking IT in the Digital Service Economy*, Oreilly
28. Tapscott, D. (2015), *The Digital Economy*, McGrawHill

8.2 Seminar / laboratory	Teaching methods	Remarks
1. Case study and debate: „Impact of main technological trends in new digital economy paradigm”.	Case study, debate	2 hours
2. Case study and debate: „Roles of data, information and knowledge in digital economy. Information economy. Network effects. Platform economics.	Case study, debate	2 hours
3. Case study and debate: „Examples of growth models for digital economy”.	Case study, debate	2 hours
4. Case study and debate: „Organizational capabilities and capacities for competitiveness in digital economy”.	Case study, debate	2 hours
5. Case study and debate: „Emergent and competitive technologies in the new paradigm of digital economy”.	Case study, debate	2 hours
6. Case study and debate: „Organizational digital	Case study, debate	2 hours

transformation examples!		
7. Case study and debate: „redefining competitive advantage for digital economy and new ecosystemic approaches!	Case study, debate	2 hours

Bibliography

1. Aalst, W., Mylopoulos, J., Rosemann, M., Shaw, M., Szyperski, C. (2018), *Digital Economy. Emerging Technologies and Business Innovation*, Springer
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28. Tapscott, D. (2015), *The Digital Economy*, McGrawHill

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

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10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the grade (%)
10.4 Course	Acquiring the information received during the course. Own reasoning, critical and creative thinking on the topics of the course.	Exam.	60%
	Own reasoning, critical and creative thinking on the topics of the course.	Interventions and debates at the courses.	10%
10.5 Seminar/lab activities	Active engagement and participation in study cases debates.	Practical activities at seminars.	30%
10.6 Minimum performance standards			
➤ Minimum grade of 5 for promotion.			

Date

26.05.2022

Signature of course coordinator

Lector univ. dr. Alexandru Roja

Signature of seminar coordinator

Lector univ. dr. Alexandru Roja

Date of approval

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Signature of the head of department

Prof. PhD. Laura Dioşan