



# Blockchain Technology in a Modern Enterprise Syllabus

<b>1. Module Title</b>	Blockchain Technology in a Modern Enterprise	<b>2. Module Code</b>	
<b>3. Academic Year, Semester, Mode of Studies</b>	2022/2023 academic year Semester 2, Full-time Studies		
<b>4. Aims and Learning Outcomes</b>	<p><b>Aims</b> To acquaint students with the basics of blockchain technology, its security and applications in modern enterprises with the ability to design independently min. one implementation.</p> <p><b>Learning Outcomes</b> Having completed this module student:</p>		
<b>Knowledge</b>	<b>Code</b>		<b>Assessment</b>
	<b>Subject</b>	<b>Field</b>	
The student knows the technical databases, knows their pros and cons and performs the basic characteristics of distributed systems	EP-1	K_W10 K_W11	Final exam
The student has in-depth knowledge of various examples of the use of blockchain technology in enterprises	EP-2	K_W10	Final exam
Student knows the basics of security while using blockchain technology	EP-3	K_W10	Final exam
<b>Skills</b>	<b>Code</b>		<b>Assessment</b>
	<b>Subject</b>	<b>Field</b>	
Student knows how to design the concept of at least one implementation of blockchain technology in enterprises	EP-4	K_U03 K_U19	Project
Student knows how to use digital currency wallets	EP-5	K_U05 K_U06	Project
Is able to use elements of gamification in remote education of the organization's staff description and presentation, interpret them and infer on their basis.	EP-6	K_U19	Project
The student is able to present in an attractive way the results of their own work and that of the team	EP-7	K_U09	Project
<b>Social Competencies</b>	<b>Code</b>		<b>Assessment</b>
	<b>Subject</b>	<b>Field</b>	
Can work in a team	EP-8	K_K03	Project
Sense of responsibility for the project	EP-9	K_K01	Project
<b>5. Module Leader</b>	<b>Name</b>		<b>E-mail</b>
<b>6. Lecturer (s)</b>	<b>Name</b>		<b>E-mail</b>

<b>7. Module Level</b>	<b>Master's</b>	<b>Bachelor's</b>	
	X		
<b>8. Year and Programme</b>	<b>Year</b>	<b>Programme</b>	
	I	Management	
<b>9. Module Content</b>			
<b>#.</b>	<b>Topics Discussed</b>	<b>Hours</b>	
<b>Workshop</b>			
1	Database evolution - from traditional registers to distributed technologies. Tokenization - digital assets (shares, bonds, real estate, etc.), personal tokens	2,5	
2	Fundamentals of blockchain technology - general concept (role of banks, "generals problem"). Application of blockchain in companies - examples from foreign companies	2,5	
3	Fundamentals of blockchain technology - bitcoin concept analysis (white paper S. Nakamoto). Application of blockchain in companies - TecraCoin case study	2,5	
4	Fundamentals of blockchain technology - analysis of the concept of Ethereum and other major public blockchains; Private blockchains (Hyperledger et al.). Application of blockchain in companies - case studies of other Polish projects	2,5	
5	Digital currency markets - basic indicators, historical data and their analysis, stock exchanges and exchange offices, infrastructure, investor communities. Blockchain technology application project - presentation of the projects by students	2,5	
6	ICO / STO - legal, market and marketing issues; examples. Blockchain technology application project - presentation of the projects by students	2,5	
<b>10. Individual Student's Work</b>			
<b>#.</b>	<b>Description</b>	<b>Hours</b>	
	Preparation for final exam	15	
	Research project	20	
<b>11. Assessment Methods</b>	Final exam - 25% Coursework – 60%: group project 50%, class activities 25%		
<b>12. Assessment Criteria</b>	Points translate into marks as follows: 50 - 59 points: mark 3 60 - 69 points: mark 3.5 70 - 79 points: mark 4 80 - 89 points: mark 4.5 90 - 98 points: mark 5 98-100 points: mark 5.5 In the case of exceptional student's performance, the lecturer may award a mark of 5.5 even with an insufficient number of points scored.		
<b>13. ECTS Credits</b>	2		
		<b>Hours</b>	<b>ECTS</b>
<b>Contact Hours</b>			
<b>Workshop</b>		<b>15</b>	<b>0,6</b>
<b>Other Form</b>			
<b>Individual Student's Work</b>			
- Preparation for final exam		<b>15</b>	<b>1,4</b>
- Research project		<b>20</b>	
<b>SUMM</b>		<b>50</b>	<b>2</b>

<b>14. Required Readings</b>	S. Nakamoto, <i>Bitcoin: A Peer-to-Peer Electronic Cash System</i> , 2008, <a href="https://bitcoin.org/bitcoin.pdf">https://bitcoin.org/bitcoin.pdf</a>
<b>15. Recommended Readings</b>	<i>Bitcoin and Cryptocurrency Technologies</i> , Coursera, Princeton University, <a href="https://www.coursera.org/learn/cryptocurrency">https://www.coursera.org/learn/cryptocurrency</a> , 2019
<b>16. Place where module is run</b>	Lazarski University
<b>17. Other</b>	n/a