

1. Course (module) name	2. Code
Modern LEAN and Agile Methodologies	

3. Lecturer (s)	4. Division(s)
Prof. Dr.Alexander Tsigkas	Business Innovations School

5. Cycle of studies	6. Course (module) level	7. Course (module) type
First	Course is not divided into parts	Mandatory

8. Delivery form	9. Delivery period	10. Delivery language (s)
Full-time	Semester 5	English

11. Requirements for students	
Preliminary requirements:	Associated requirements (if any):
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12. Scope of course (module) in ECTS credits	13. Full workload of a student (hours)	14. Contact work hours	15. Independent work hours
6	160	36	124

16. Course (module) purpose: competences developer by the course programme
The objective for the Modern Lean and Agile Methodologies module is for the students to understand the main concepts and methodologies for the business needs, process and projects management and work optimization.

17. Content of the subject									
Themes	Contact hours and studying method						Time and tasks of independent studies		
	Lectures	Consultations	Seminars	Practical classes	Laboratory classes	Practice	Total contact hours	Independent work	Tasks
<p>1. The modern Lean Enterprise</p> <p>Lean vs. agile Focus: Creating Complementarities vs. Agility Purpose: Indirect Efficiency Method: Lean Flow Frame: Flow in Internal Logistics</p>	0.3	-	-	-	-	-	1	2	Distinguish between Lean and agile concepts. Modern aspect of waste and efficiency.
<p>2. The displacement of the Economy</p> <p>A New Social System of Production Organisation in the Post-Mass Production Era Open Innovation and customer Value Variability and Experimentation Tolerance to Mistakes Dynamic Equilibrium Emerging Characteristics Review of Lean Thinking</p>	0.2	-	1	-	-	-	1	2	Individual task to describe how and why the economy has changed.  Prepare a presentation for a seminar as home work.
<p>3. The Post-industrial Factory</p> <p>Modern Way of Production Value-Adding Communities The Evolution of Mass Customisation Mass Customisation Theory of Mass Customisation A Case Study from the Furniture Industry</p>	2	-	1	-	-	-	0.5	1	Individual task Analyse the material submitted by the teacher, identify values of post-industrial factory.  Prepare a presentation for a seminar as home work.
<p>4. Principles of Lean Production</p> <p>Principles of Lean Production The Road of Toyota to the West Continuous Improvement and Kaizen Respect for People Modern Perception on Waste</p>	2	-	1	-	-	-	0.5	1	Individual task on Critical thinking on the Toyota production system.  Prepare a presentation for a seminar as home work.

5. Lean Flow - A method  Lean flow in production Lean flow in Logistics Lean flow in supply Lean in cost accounting Demand planning and agility borders	4	-	1	-	-	-	20	80	Individual task to apply the method on individually chosen manufacturing case.  Prepare a written report including a step-by-step application of the method in the form of a seminar.
6. Successful implementation  Features of a Successful Implementation Product Synchronisation Flows Sequence of Events Designed Capacity Materials Facilities Results from a Successful Implementation Measurements Suggested for Performance and Flow Improvement ERP Systems and Lean Flow Organisation in a Lean Environment	0.5	-	1	-	-	-	4	4	Group work Students represent groups of functional areas designated by the teacher. Describe the efforts that will be undertaken for implementing successfully the method. To apply at a seminar
7. Modern Lean Thinking  Complementarity and Synergies Process and Material Complementarity Digitisation	0.5	-	1	-	-	-	6	24	Individual task To identify 3 examples of complementarity. Present them at a seminar.
8. Lean for Industry 4.0 and 5.0  Towards the Modern Lean Enterprise The Way Is Open and Modern	0.5	-	1	-	-	-	2	8	Individual task for implementing lean and agile methodologies to the case selected. Present the results to the audience
<b>Total</b>	<b>7</b>	<b>-</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>36</b>	<b>124</b>	

<b>19. Strategy and criteria for the evaluation of students</b>			
<b>Evaluation method</b>	<b>Percentage</b>	<b>Accounting time</b>	<b>Evaluation criteria</b>
Work in the classroom at seminars.	15 %	In the course of the semester.	1.5 points: a student is an active participant in discussions, answers questions, able to formulate problems and questions, submits critical comments; 1 point: participates in discussions and responds to questions; 0 points: a student barely participates in the discussions, or has missed more than 1/3 of the seminars.
Presentation of the work	30%	In the course of the semester.	Total six individual tasks. Maximum score to be assigned to each task – 0.5 points. Evaluation methodology: <b>0.5:</b> Excellent knowledge, abilities and creative skills and originality. <b>0.4-0.3.</b> Good knowledge and abilities, weaker creative skills and originality. <b>0.2-0.1.</b> Good knowledge and abilities, weak creative skills and originality. <b>0:</b> Minimum requirements not met.
Examination: test	<b>55 %</b>	In the course of the exams	The exam is composed of 10 open and 10 closed question mainly on terminology. Each correct answer is scored at 0.5 points. Evaluation methodology: <b>10.-9.</b> Excellent knowledge and abilities. Level of evaluation. 20-17 correct answers. <b>8.-7:</b> Good knowledge and abilities. Level of synthesis. 16-14 correct answers. <b>6.-5:</b> Mediocre knowledge and abilities. Level of analysis. 13-10 correct answers. <b>4-0:</b> Minimum requirements not met. 9 or less correct answers. The score obtained is multiplied by 0.55.

<b>20. Sources of studies, reference lists</b>
Main sources of studies, reference lists (indicatively) Some more sources will be given during the course
<ol style="list-style-type: none"> <li>1. Tsigkas A (2022) The Modern Lean Enterprise From Mass Customisation to Personalisation. S.I.: Springer.</li> <li>2. Tsigkas A (2021) The Performative Enterprise: ideas and case studies on moving beyond the quality paradigm. S.I.: Springer.</li> <li>3. Chesbrough HW (2003) Open innovation: the new imperative for creating and profiting from technology. Harvard Business School Press, Boston, MA</li> <li>4. Baranauskas G, Raišienė AG, Korsakienė R (2020) Mapping the scientific research on mass customization domain: a critical review and bibliometric analysis. J Risk Finan Manag 13(9):220. <a href="https://doi.org/10.3390/jrfm13090220">https://doi.org/10.3390/jrfm13090220</a></li> </ol>

**Additional sources of studies, reference lists**

1. Tsigkas AC (2005) Mass customization through value adding communities. In: Third world wide conference on mass customization and personalization, Hong Kong
2. Tsigkas AC (2006) The factory in the post-industrial era variety instead of flexibility, mass customisation: the production system of the future. In: Second conference CE conference on mass customization and personalization, Rzeszow, Poland