



Subject card

Subject name and code	Disruptive Technologies , PG_00053756						
Field of study	Engineering Management						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2022/2023		
Education level	first-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			English		
Semester of study	6	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Informatics in Management -> Faculty of Management and Economics						
Name and surname of lecturer (lecturers)	Subject supervisor		dr lic. Adegboyega Ojo				
	Teachers		dr Nadzeya Sabatini dr lic. Adegboyega Ojo				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	30.0	0.0	0.0	60
	E-learning hours included: 0.0						
Technologie Przelomowe - Disruptive Technologies 2023 - Moodle ID: 29624 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=29624							
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	60		7.0		58.0	125
Subject objectives	Students will at the end of the module be able to: <ul style="list-style-type: none">• Explain the types and patterns of innovation• Discuss different types of disruptive technologies• Apply the idea of disruptive innovation in different industries• Develop disruptive innovation ideas in selected industry						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K6_U08] analyses engineering and managerial solutions in decision-making processes, taking into account pro-quality and pro-environmental aspects, as well as safety of work processes		Apply the idea of disruptive innovation in different industries; Develop disruptive innovation ideas in selected industry.		[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject [SU5] Assessment of ability to present the results of task		
[K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems		Explain the types and patterns of innovation; Discuss different types of disruptive technologies		[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects			
Subject contents	Lectures: INTRODUCTION TO INNOVATION Types & Adoption of Innovation BUSINESS ANALYTICS VR & Immersive Technologies SMART CITIES Analytics-driven Public Service and Policy Innovation SUMMARY Laboratories: 1. Guidelines for laboratories 2. Part 1 - apply the theories and concepts Select an industry Details of DT/solution mass access Cost/finance structure Challenges and Risk management 3. Part 2 - Group Assessment Background of the chosen disruptive technology The technological change in the chosen industry in which the technology will be used The disruptive impact (or potential impact) of the technology in the industry, or how it is being used to create new markets in the industry Explain the challenges associated with the use of the technology in the industry Future developments of the technology and implications for the industry						

Prerequisites and co-requisites	nil		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written individual test	0.0%	60.0%
	Report	0.0%	20.0%
	Report and oral presentation	0.0%	20.0%
Recommended reading	Basic literature	<p>Carlos M. DaSilva, Peter Trkman, Kevin Desouza & Jaka Lindič (2013) Disruptive technologies: a business model perspective on cloud computing, <i>Technology Analysis & Strategic Management</i>, 25:10, 1161-1173, DOI: 10.1080/09537325.2013.843661</p> <p>2. Coccia, Maria. (2017). Disruptive Technologies and Competitive Advantage of Firms in Dynamic Markets. <i>SSRN Electronic Journal</i>. 10.2139/ssrn.2960190.</p> <p>3. M. Bublitz, F.; Oetomo, A.; S. Sahu, K.; Kuang, A.; X. Fadrique, L.; E. Velmovitsky, P.; M. Nobrega, R.; P. Morita, P. Disruptive Technologies for Environment and Health Research: An Overview of Artificial Intelligence, Blockchain, and Internet of Things. <i>int. J Environ. Res. Public Health</i> 2019, 16, 3847. https://doi.org/10.3390/ijerph16203847</p> <p>4. Boer, Harry. (2001). Innovation, What Innovation? A Comparison between product, process and organizational innovation. <i>International Journal of Technology Management - INT J TECHNOLOGY MANAGEMENT</i>. 22. 83-107. 10.1504/IJTM.2001.002956.</p>	
	Supplementary literature	<p>Carlos M. DaSilva, Peter Trkman, Kevin Desouza & Jaka Lindič (2013) Disruptive technologies: a business model perspective on cloud computing, <i>Technology Analysis & Strategic Management</i>, 25:10, 1161-1173, DOI: 10.1080/09537325.2013.843661</p> <p>2. Coccia, Maria. (2017). Disruptive Technologies and Competitive Advantage of Firms in Dynamic Markets. <i>SSRN Electronic Journal</i>. 10.2139/ssrn.2960190.</p> <p>3. M. Bublitz, F.; Oetomo, A.; S. Sahu, K.; Kuang, A.; X. Fadrique, L.; E. Velmovitsky, P.; M. Nobrega, R.; P. Morita, P. Disruptive Technologies for Environment and Health Research: An Overview of Artificial Intelligence, Blockchain, and Internet of Things. <i>int. J Environ. Res. Public Health</i> 2019, 16, 3847. https://doi.org/10.3390/ijerph16203847</p> <p>4. Boer, Harry. (2001). Innovation, What Innovation? A Comparison between product, process and organizational innovation. <i>International Journal of Technology Management - INT J TECHNOLOGY MANAGEMENT</i>. 22. 83-107. 10.1504/IJTM.2001.002956.</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed	<ul style="list-style-type: none"> • Comprise analysis of cases on the application of disruptive technology in social, business or government context • Students will work in a group of five to complete these lab exercises and develop a presentation on the results of their analyses. 		
Work placement	Not applicable		