



Subject card

Subject name and code	DISRUPTIVE TECHNOLOGIES, PG_00059288						
Field of study	Engineering Management						
Date of commencement of studies	October 2020		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Part-time studies		Mode of delivery		at the university		
Year of study	4		Language of instruction		English		
Semester of study	7		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 Nadzeya Sabatini				
	Teachers		dr inż. Sławomir Ostrowski dr Nadzeya Sabatini				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	16.0	0.0	16.0	0.0	0.0	32
	E-learning hours included: 0.0						
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	32		0.0		0.0	32
Subject objectives	<p>The goal of the course is to familiarize students with the type of technological innovation - disruptive technologies. On the laboratories they will study how to apply the theories and concepts in developing disruptive ideas in a selected industry.</p>						
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		- Understand and evaluate the role of disruptive technologies within the global digital transformation context. - Discuss different types of disruptive technologies		[SU2] Assessment of ability to analyse information [SU3] Assessment of ability to use knowledge gained from the subject		
	[K6_W13] has a basic knowledge of the design, modelling and optimisation of technical processes and systems		- Apply the idea of disruptive innovation in different industries. - Develop disruptive innovation ideas in selected industry.		[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects		

Subject contents	Role of disruptive technologies in the global digital transformation context		
	Cases of disruptive technologies (e.g. Fabrican Spray-on fabric and sharing economy)		
	Introduction to Innovation and its Management		
	Categories and Types of Innovation		
	Adoption of Innovation		
	Disruptive Innovation Ecosystem (e.g. Smart Destination and Smart Cities)		
Prerequisites and co-requisites	NA		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Collaborative Project I	60.0%	40.0%
	Collaborative Project II	60.0%	20.0%
	Individual Exam	60.0%	40.0%
Recommended reading	Basic literature	<p>- Carlos M. DaSilva, Peter Trkman, Kevin Desouza & Jaka Lindič (2013). Disruptive technologies: a business model perspective on cloud computing, Technology Analysis & Strategic Management, 25:10, 1161-1173, DOI: 10.1080/09537325.2013.843661</p> <p>- Coccia, Mario. (2017). Disruptive Technologies and Competitive Advantage of Firms in Dynamic Markets. SSRN Electronic Journal. 10.2139/ssrn.2960190.</p> <p>- 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. Int. J. Environ. Res. Public Health 2019, 16, 3847. https://doi.org/10.3390/ijerph16203847</p> <p>- Boer, Harry. (2001). Innovation, What Innovation? A Comparison between product, process and organizational innovation. International Journal of Technology Management - INT J TECHNOL MANAGE. 22. 83-107. 10.1504/IJTM.2001.002956.</p>	
	Supplementary literature	NA	
	eResources addresses	Adresy na platformie eNauczanie: 2023/24 Technologie Przełomowe - Disruptive Technologies - Moodle ID: 31538 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=31538	
	Example issues/ example questions/ tasks being completed		
Work placement	Not applicable		