Subject card

Subject name and code	Disruptive Technologies , PG_00053756
Field of study	Engineering Management

Date of commencement of studies	October 2022	Academic year of realisation of subject	2024/2025
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 lic. Adegboyega Ojo dr Nadzeya Sabatini

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						

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: • Explain the types and patterns of innovation • Discuss different types of disruptive technologies • Apply the idea of disruptive innovation in different industries • Develop

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	Explain the types and patterns of innovation; Discuss different types of disruptive technologies	[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.	[SW2] Assessment of knowledge contained in presentation

Subject contents	Module Overview ·
	Part 1 - Introduction to Innovation
	Part 2 - Types and Patterns of Innovation
	Part 3 Business Analytics Part 1 & Part 2
	Part 4 Artificial Intelligence Part 1 (Technology and Applications)
	Part 5 Artificial Intelligence 2 (Ethics & Responsible Innovation)
	Part 6 GovTech & Smart Cities as Disruptive Innovation Ecosystem
	Module Summary

Prerequisites and co-requisites	

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		0.0%	60.0%
		0.0%	20.0%
		0.0%	20.0%

Recommended reading	Basic literature	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 2. Coccia, Maria. (2017). Disruptive Technologies and Competitive Advantage of Firms in Dynamic Markets. SSRN Electronic Journal. 10.2139/ssrn.2960190. 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. int. JEnviron. Res. Public Health 2019, 16, 3847. https://doi.org/10.3390/ ijerph16203847 4. Boer, Harry. (2001). Innovation, What Innovation? A Comparison between product, process and organizational innovation. International Journal of Technology Management - INT J TECHNOLOGY MANAGEMENT. 22. 83-107. 10.1504/IJTM.2001.002956.
	Supplementary literature	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 2. Coccia, Maria. (2017). Disruptive Technologies and Competitive Advantage of Firms in Dynamic Markets. SSRN Electronic Journal. 10.2139/ssrn.2960190. 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. int. JEnviron. Res. Public Health 2019, 16, 3847. https://doi.org/10.3390/ ijerph16203847 4. Boer, Harry. (2001). Innovation, What Innovation? A Comparison between product, process and organizational innovation. International Journal of Technology Management - INT J TECHNOLOGY MANAGEMENT. 22. 83-107. 10.1504/IJTM.2001.002956.
	eResources addresses	Uzupełniające Adresy na platformie eNauczanie: Technologie Przełomowe - Disruptive Technologies 2025 - Moodle ID: 42894 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42894

Example issues/ example questions/ tasks being completed	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

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