GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Digital Business, PG_00073962		
Field of study	Economics		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2026/2027
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	Polish
Semester of study	6	ECTS credits	6.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Informatics In Management -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Magdalena Ciesielska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	30.0	0.0	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	10.0	80.0	150

Subject objectives

To prepare students to analyse the mechanisms of digital markets, including network effects, platforms and pricing strategies, to identify and develop innovative business ideas, and to design and economically assess the business models of digital ventures, based on knowledge of the digital economy, platform economics, data analytics and the regulation of digital markets; and to develop critical and analytical thinking and an entrepreneurial attitude based on integrating knowledge from many disciplines.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_K03] exhibits critical and analytical thinking skills and integrates knowledge from multiple disciplines while acting in an entrepreneurial manner.	The student is ready to think critically and analytically when assessing digital ventures, including critically assessing data and analytical results (also those obtained from AI tools), and to act in an entrepreneurial way by integrating knowledge from economics, management, data analytics and law.	[SK1] Assessment of group work skills [SK5] Assessment of ability to solve problems that arise in practice
[K6_W04] displays creative and entrepreneurial actions in identifying and solving innovative ideas.	The student knows and understands the principles of creative and entrepreneurial activity in the digital economy, including the economic mechanisms of digital markets (network effects, two-sided markets, pricing strategies), ways of identifying and developing innovative ideas, and the principles of designing and economically assessing the business models of digital ventures.	[SW1] Assessment of factual knowledge [SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects

Subject contents

Course content – lecture

1. The digital economy – new rules of competition and value creation
2. Digital markets I – how businesses and consumers trade (B2C, B2B)
3. Digital markets II – sharing platforms, e-government and cross-border commerce
4. Platform economics – network effects, two-sided markets and why the winner often takes all
5. Business models and revenue models – how online companies make money
6. Lean startup – how to validate an idea before it consumes the budget
7. Pricing in the digital economy – from pricing strategy to algorithms: who sets the price when an algorithm decides?
8. Digital money and crypto-assets – from bitcoin to the digital euro
9. Innovation and creative destruction – how innovative ideas emerge and change markets
10. The customer in the digital economy – sales channels and digital marketing: from acquisition to loyalty
11. AI in digital business – analysis, forecasts and recommendations supporting decisions
12. Digitalisation and the economy – productivity, the labour market and digital exclusion
13. International trade and taxation in the digital era – data flows, digital services and the global minimum tax
14. How to start your own digital business – from feasibility assessment to company registration
15. Law and regulation of digital markets – competition (DMA), data, platforms, AI and copyright

Course content – exercises

Module 1. Digital market analysis – demand, segmentation, market structure and concentration, competitor analysis

Module 2. Idea and business model – idea generation and selection, product analysis, USP, value proposition, revenue model, network effects

Module 3. Price and sales channels – pricing methods, pricing strategy, choice of sales channels, A/B price testing, price elasticity of demand

Module 4. Customer and profitability – CAC, LTV, unit economics, RFM segmentation, AI-supported demand forecasting

Module 5. Feasibility and pitch – market, economic, technological and legal feasibility assessment, sensitivity analysis, expert panel, course summary

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
lecture test	60.0%	40.0%
practical excercises	60.0%	60.0%

Recommended reading

Basic literature

- Belleflamme P., Peitz M., The Economics of Platforms: Concepts and Strategy, Cambridge University Press 2021
- Śledziewska K., Włoch R., Digital Economy: How New Technologies Are Changing the World, University of Warsaw Press 2020 (in Polish)
- Chaffey D., Hemphill T., Edmundson-Bird D., Digital Business and E-Commerce Management, 7th ed., Pearson 2019

Supplementary literature

- Goldfarb A., Tucker C., Digital Economics, Journal of Economic Literature 2019, 57(1), pp. 3–43
- Calvano E., Calzolari G., Denicolò V., Pastorello S., Artificial Intelligence, Algorithmic Pricing, and Collusion, American Economic Review 2020, 110(10), pp. 3267–3297
- Aghion P., Antonin C., Bunel S., The Power of Creative Destruction: Economic Upheaval and the Wealth of Nations, Harvard University Press 2021
- Acemoglu D., Johnson S., Power and Progress: Our Thousand-Year Struggle over Technology and Prosperity, PublicAffairs 2023 (Polish edition: Zysk i S-ka 2025)
- Parker G.G., Van Alstyne M.W., Choudary S.P., Platform Revolution: How Networked Markets Are Transforming the Economy, W.W. Norton 2016
- Agrawal A., Gans J., Goldfarb A., Power and Prediction: The Disruptive Economics of Artificial Intelligence, Harvard Business Review Press 2022
- Laudon K.C., Traver C.G., E-commerce 2023–2024: Business, Technology, Society, 18th ed., Pearson 2023
- Gregor B., Kalińska-Kula M., Online Commerce: The E-Consumer Perspective, University of Łódź Press 2020 (in Polish)
- Kohavi R., Tang D., Xu Y., Trustworthy Online Controlled Experiments: A Practical Guide to A/B Testing, Cambridge University Press 2020
- Wirtz B.W., Digital Business and Electronic Commerce: Strategy, Business Models and Technology, 2nd ed., Springer 2024

eResources addresses

Example issues/ example questions/ tasks being completed	1. Examine the demand and structure of a selected digital market and identify a niche with an unmet need. 2. Formulate a unique selling proposition (USP) and select a revenue model, taking network effects into account. 3. Set the price of a digital product using cost-based, competition-based and value-based methods, and estimate the price elasticity of demand from an A/B price test. 4. Calculate CAC, LTV and the break-even point of the venture for different acquisition channels. 5. Assess the feasibility of the venture in economic, technological and legal terms and defend it before an expert panel.
Practical activites within the subject	Not applicable

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