University of Gdańsk

Subject card

Subject name and code	Business Informatics, PG_00178024						
Field of study	Informatics and Econometrics						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Bachelor's studies		Subject group	Obligatory subject group in the field of study 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	1		Language of instruction	Polish			
Semester of study	1		ECTS credits	5.0			
Learning profile	academic		Assessment form	exam			
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Jerzy Auksztol, prof. UG				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	45.0	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		4.0	61.0	125	
Subject objectives	**Educational objecives** • to prepare the student for effective and safe use of information technologies, • the correct usage of terminology related to information technology, • to acquire skills in creating documents, spreadsheets and multimedia presentations, principles of visual communication, • to teach the principles of safe usage of the Internet, searching for information and critically evaluating and selecting it.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IiEL3_U12] Can design and implement IT systems to enhance business operations and effectively utilize modern ICT technologies for management and business communication	The student is able to select, choose and use software tools (spreadsheets, text editors, graphic processing and visualization software) and selected information technologies supporting the processes of collecting, storing, sharing and processing data supporting management processes.	[SU2] presentation/project/paper/ report
	[IiEL3_W06] Knows and understands, to an advanced degree, the processes and methods of creating, developing, and providing appropriate conditions for using informatics or statistics tools, particularly those that improve human and organizational functioning	The student knows the methods and understands the benefits of applying appropriate IT tools in the decision-making process. Knows the methods of calculating, evaluating, and creating scenarios for outcomes in the analysis of resources, areas, and levels of management.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
	[IiEL3_W05] Knows and understands the methods, techniques and informatics or statistics tools used to acquire, collect, process and present data in decision-making processes	The student knows and understands the principles of selecting methods and techniques for data collection, storage, analysis, and processing in the context of decision-making and managerial processes. Understands the need to identify, verify, challenge, and reject erroneous data.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
	[IiEL3_U03] Can obtain data from appropriately selected sources, use these data to solve economic and social problems, and process and interpret them using econometrics, informatics or statistics tools	The student is able to correctly and critically select data sources, choose and utilize data, and appropriately process and visualize information for the purpose of analysis, evaluation, design, and construction of IT tools that support the understanding of economic phenomena and processes.	[SU2] presentation/project/paper/ report

Subject contents	**Lectures (15 hours):** 1. Introduction to economic informatics, 2. Teleinformatics technologies (including: Computer hardware, Computer networks, Internet of Things) 3. Computer software and programming and Cloud Computing 4. Creating IT systems (including: business process modeling, methodologies for creating IT systems, databases and Big Data) 5. IT project management. Management IT systems 6. Digital economy (including: tools supporting knowledge management, information society, e-business, e-learning, communication and cooperation tools). 7. Advanced techniques for searching for information on the Internet. White intelligence, legality. 8. Public presentations of business data - principles, "good practices", selection of tools 9. CMS tools. Wordpress. Principles of creating websites. Visual identification. Hosting, Administration. Website security. SEO elements. **Labs (45 hours):** **1. Advanced use of MS Excel -20 hours:** • Spreadsheet - principles of working with spreadsheets in solving business problems, optimizing work with large amounts of data, preparing business reports Solving business problems using conditional, date and time, text and financial analysis functions. • Pivot tables and charts based on the data model • Data visualization and creation of dashboards. Automation of work in the spreadsheet, creation of forms, use of macros, advanced data filtering • Solver tool, multidimensional analysis, conditional analysis, scenario manager, optimization of the objective function **2. Visual communication - 5 hours:** • Tools and techniques for effective content delivery. Preparing business reports • Audience interaction tools, graphic elements, infographics, visual notes. Teamwork tools. • Forms, surveys, reports, presentations, stories. Google Forms and Sway application. **3. Advanced information retrieval techniques - 10 hours:** • Sources of information, quality of information, verification of information credibility, • White intelligence on the Internet, WWW browsers, selected web search engines, elements of Google Hacking **4. CMS Systems - 10 hours:** • Acquiring, processing and presenting business data using Internet services • Working with the CMS system. WordPress configuration. Administrative activities. Personalization of appearance. • Content creation. Wordpress management, user management, Plug-in installation.
Prerequisites and co-requisites	Basic computer skills and the ability to use the Internet.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
MS Excel Project	51.0%	35.0%
MS Word Report on Information Search	51.0%	15.0%
Lecture Test	51.0%	25.0%
Visual Communication Project	51.0%	10.0%
WWW Design and Implementation	51.0%	15.0%

Recommended reading	Basic literature	MS Excel based Software Support Tools for Decision Problems with Multiple Criteria Jablonsky,Josef https://www-1sciencedirect-1com-1hcks4gj5001c.hansolo.bg.ug.edu.pl/science/article/pii/S2212567114003426
	Supplementary literature	How to Implement a Trinomial Option Pricing Model in MS-Excel? Journal of accounting and finance, 2021-11, Vol.21 (5) https://research-1ebsco-1com-1wbtebkj5001d.hansolo.bg.ug.edu.pl/c/kxegtv/viewer/pdf/d5mwpdbtar
	eResources addresses	
Example issues/ example questions/ tasks being completed	Credit Analysis. Labor Costs.	
Work placement	Not applicable	

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