University of Gdańsk

Subject card

Subject name and code	Master Seminar 1, PG_00177520		
Field of study	Informatics and Econometrics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2026/2027
Education level	Master's studies	Subject group	Obligatory subject group in the field of study 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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	2.0
Learning profile	academic	Assessment form	credit
Conducting unit	Department of Business Informatics -> Faculty of Management -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Jerzy Auksztol	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	0.0	0.0	30.0	30

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	30	4.0	16.0	50

Subject objectives

The aim of the master's seminar, consisting of three semester parts, is to prepare participants to: (i) plan a scientific study on the subdiscipline of business informatics, (ii) conduct it, and (iii) prepare a master's thesis on this basis, summarizing the entire process and the obtained results of the study. The additional aim is to prepare the student to effectively defend the work they have prepared in front of the examination committee.

In the first semester, the seminar participants identify a research problem or opportunity and, on its basis, formulate a research hypothesis indicating a possible solution and then propose a master's thesis outline discussing the actions will be taken using the identified literature.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IiEMU2_W06] The student possesses a structured understanding of the processes, methods, and tools necessary for the design, creation, development, and provision of suitable conditions for informatics, econometrics or statistics tools.	The student knows the research methods used in business informatics, from quantitative methods, such as statistical and econometric methods, through design methods, such as design science research, to qualitative methods, such as grounded theory, action research, or case study.	[SW1] oral statement/ conversation/discussion
	[IiEMU2_U07] Students can prepare detailed written papers, presentations, and oral speeches on econometrics, informatics, or statistics issues.	The student is able to prepare a scientific research card that is the basis for future activities ending with the development and defense of a diploma thesis. The research card consists of a description of the research problem or opportunity, a proposed research hypothesis, the aim of the work, the research method, the outline of the work and the available literature.	[SU3] text preparation/written work
	[IiEMU2_U01] The student can creatively and profoundly analyze complex social and economic processes using structured knowledge, econometrics, informatics, or statistics tools.	The student identifies a research problem or opportunity resulting from the observation of socio-economic processes and phenomena and, on this basis, proposes a research hypothesis along with a method of its verification using available research methods and tools.	[SU3] text preparation/written work
	[IiEMU2_U02] Students can use conventional or innovative statistics, econometrics or informatics tools to analyze economic and social phenomena.	The student is able to select and creatively adapt research methods and tools to the needs of the design, descriptive or exploratory process proposed in the master's thesis.	[SU3] text preparation/written work
	[IiEMU2_K01] The student is ready to acquire and deepen the knowledge needed to solve cognitive and practical problems, in particular in the field of econometrics, informatics or statistics, as well as to evaluate the knowledge and the received content critically and to consult experts in the event of difficulties with solving the problem on their own.	The student notices the diversity of socio-economic phenomena in the area of information systems and proposes the use of appropriate methods and research tools of economic informatics to solve a problem or take advantage of an emerging opportunity.	[SK3] text preparation/written work

Subject contents	1. The place of economic informatics among the subdisciplines of economic sciences. 2. Paradigms, theories and research methods enabling study in the field of economic informatics. 3. Design science research as a special category of research methods in business informatics. 4. Content, formal and editorial requirements for master's theses. 5. Fields of research topics from the research category according to the design approach: • development of innovative IT systems operating in the area of electronic economy, • planning new forms of using integrated ERP management systems in economic organizations. • shaping information security systems in organizations, • shaping intellectual property management systems, • designing new business models using information technologies, • designing information systems using modern analytical tools, such as web scraping, big data, artificial intelligence and its language models, 6. Fields of research topics from the category of descriptive and explanatory research in the area of socio-economic phenomena: • place and role of IT in the national economy, • research on socio-economic phenomena occurring in the space of electronic administration, • research on the structure, impact and effectiveness of electronic marketing systems and social media. • study of the structure and impact of artificial intelligence. 7. Topics according to supervisors: *dr hab. Jerzy Auksztol, prof. UG* 1. Information systems development and maintenance 2. Legal aspects of business informatics. 3. Software engineering. 4. Software development project management. 5. E-administration research. 6. Language models in application. *dr hab. Bartłomiej Gawin, prof. UG* 1. Business process management using dedicated IT tools (process design, simulation, implementation, analysis and optimization); 2. Design and implementation of IT systems; 3. Energy efficiency management using dedicated IT tools (building energy strategies for enterprises, telemetry and renewable energy source control systems, multi-source data analysis); 4. IT project management; 5. Data collection, processing, visualization and analysis.
Prerequisites and co-requisites	• Completed the second semester of second-cycle studies. • Have knowledge of methods and ways of building information systems • Have knowledge of methods and research tools of management and economic sciences . • Have knowledge of selected text typesetting tools, such as Microsoft Word, LibreOffice, LaTex. • Have the ability to freely formulate thoughts in a descriptive form
Assessment methods and criteria	

Subject passing criteria	Passing threshold	Percentage of the final grade
Scientific research card	51.0%	100.0%

Recommended reading	Basic literature	• Dyhdalewicz, A. (2022). Ramy koncepcyjne prac magisterskich. Wybrane problemy metodyczne. Akademia Zarządzania, 6(1), 183-205. • Glaser B. G., Strauss A L. (1999), The Discovery of Grounded Theory: Strategies for qualitative research. Aldine de Gruytter, New York. • Grobler A. (2006). Metodologia nauk, Wydawnictwo Aurelus - Wydawnictwo Znak. Kraków. • Pułło A. (2000). Prace magisterskie i licencjackie, Wydawnictwa Prawnicze PWN, Warszawa. • Stringer E.T. (1999). Action Research. Second Edition.Sage Publication. Thousand Oaks. • Yin R. K. (2018). Case Study Research and Application. Design and Method. Sixth Edition, Sage Publication. Thousand Oaks.. • Węglińska, M. (2013). Jak pisać pracę magisterską? Poradnik dla studentów. Wydawnictwo Impuls, Kraków. • Wrycza, S. i Maślankowski, J. (eds.) (2019). Informatyka ekonomiczna: teoria izastosowania. Wydawnictwo Naukowe PWN. Warszawa.
	Supplementary literature	Literature items from the field of information systems, information technology, computer science, economy and management corresponding to the topic of the master's thesis.
	eResources addresses	
Example issues/ example questions/ tasks being completed	Discussion of: • the research problem, • thesis, • research method and its limitations, • master's thesis outline, • and literature.	
Work placement	Not applicable	

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