



COURSE SPECIFICATION

Course code	full-time studies	Z-ZB-E-402b
	part-time studies	-
Course title in English	Business modelling	
Course title in Polish	Modelowanie dla biznesu	
Valid from academic year	2025/2026	

PLACEMENT IN THE TEACHING PROGRAM

Programme of study	BUSINESS MANAGMENT
Level of education	1st degree
Studies profile	academic
Form and mode of study	full-time programme
Scope	all
Academic unit responsible for the course	Department of Economics and Finance
Course coordinator	dr Katarzyna Brzozowska-Rup
Approved by	dr hab. inż. Dariusz Bojczuk, prof. uczelni

GENERAL CHARACTERISTIC OF THE COURSE

Teaching block	Directional subject	
Course status	Elective	
Language of instruction	English	
Semester of delivery	full-time studies	Semester IV
	part-time-studies	-
Prerequisites	Fundamentals of statistics and econometrics	
Exam (YES/NO)	NO	
ECTS	2	

Method of conducting classes		lecture	classes	laboratory	project	other
Number of hours per semester	full-time	15		15		
	part-time					



LEARNING OUTCOMES

Category	Outcome code	Course learning outcomes	Reference to the directional learning effect
Knowledge	W01	The student has knowledge of the mechanisms of functioning of the market economy, the functioning of enterprises in the economic environment, cause-and-effect relationships, and contemporary trends in new digital technologies.	ZB1_W03 ZB1_W07
	W02	The student knows advanced econometric methods that improve the process of solving management problems and making business decisions.	ZB1_W06
	W03	The student has knowledge of the methodology and principles of creating research studies and the proper, substantive interpretation of their results.	ZB1_W11
Skills	U01	The student is able to analyse the micro- and macro-economic environment of an organisation and its links with the global economy for the purposes of conducting business activities and making management decisions taking into account risk and uncertainty.	ZB1_U03
	U02	The student able to apply methods of statistical inference and econometric modelling to formulate, describe and verify assumptions regarding the interdependencies and dynamics of phenomena.	ZB1_U01 ZB1_U05
	U03	The student is able to obtain information from databases and other sources.	ZB1_U02
Social competences	K01	The student is able to work and communicate effectively within a group and defend their own views while respecting the opinions and positions of others.	ZB1_K03 ZB1_K07
	K02	The student is able to supplement and improve acquired knowledge and skills in the field of management and quality sciences, economic sciences, social sciences, and exact sciences in order to improve professional qualifications.	ZB1_K01 ZB1_K02
	K03	The student is able to work and make decisions under conditions of stress and uncertainty.	ZB1_K04

COURSE CONTENT

Method of conducting classes	Course content
lecture	Analysis of qualitative feature dependencies. Logistic regression – basics of theory, modeling and forecasting. Customer migration analysis (churn modeling). Selected classification methods and scoring models.
laboratory	Application of a method selected from those discussed during the lecture to solve a practical problem related to planning or decision-making in an enterprise. Project implementation using MS Excel spreadsheet, Gretl program and R.



METHODS FOR VERIFYING LEARNING OUTCOMES

Outcome code	Learning outcomes verification methods					
	Oral examination	Written examination	Test	Project	Report	Other
W01				X		X
W02				X		X
W03				X		X
U01				X		X
U02				X		X
U03				X		X
K01				X		X
K02						X
K03						X

FORM AND CONDITIONS OF ASSESSMENT

Form of classes	Assessment type	Assessment Criteria
lecture	Credit with grade	Passing is based on the defense of the project and the evaluation of the project in its written form.
laboratory	Credit with grade	Achieving at least 50% of the points for the project defense, passing the project with a mark based on its written and multimedia versions, and active participation during classes.

STUDENT WORKLOAD

ECTS Balance							
No.	Activity type	Student workload					Unit
		full-time					
1.	Scheduled contact hours	W	C	L	P	S	h
		15		15			
2.	Other (consultations, exams)	2		2			h
3.	Total number of contact hours	34					h
4.	Number of ECTS credits for contact hours	1,4					ECTS
5.	Number of hours of independent student work	16					h
6.	Number of ECTS points that a student obtains through independent work	0,6					ECTS
7.	Workload related to practical classes	25					h
8.	Number of ECTS credit points which a student receives for practical classes	1,0					ECTS
9.	Total number of hours of a student's work	50					
10.	ECTS credits for the course <i>1 1 ECTS credit =25 student learning hours</i>	2					ECTS

W - LECTURE C - CLASSES L - LABORATORY P- PROJECT S - SEMINAR



READING LIST

1. Mc Clave J.T., Benson P.G, Sincich T., (2019), Statistics for Business and Economics, 14th Edition, Cengage Learning.
2. Adkins L.C, (2018), Using gretl for Principles of Econometrics, 5th Edition, ebook.
3. Berry M. J.A, Linoff G.S, (2004), Data Mining Techniques For Marketing, Sales, and Customer Relationship Management, Second Edition, Wiley Publishing, Inc.