



Subject card

Subject name and code	Systems Modelling and Analysis, PG_00047715						
Field of study	Informatics						
Date of commencement of studies	October 2023	Academic year of realisation of subject			2023/2024		
Education level	second-cycle 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	Part-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	1	ECTS credits			6.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Software Engineering -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Bogdan Wiszniewski					
	Teachers	prof. dr hab. inż. Bogdan Wiszniewski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	12.0	0.0	12.0	12.0	0.0	36
	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	36	10.0		104.0	150	
Subject objectives	The goal of the course is to prepare students for performing jobs of system analyst and business analyst.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_U08] while identifying and formulating engineering tasks specifications and solving these tasks, can:n- apply analytical, simulation and experimental methods,n- notice their systemic and non-technical aspects,n- make a preliminary economic assessment of suggested solutions and engineering workn	Student can apply UML in systems modeling.	[SU1] Assessment of task fulfilment
	[K7_W42] Knows and understands, to an increased extent, the principles and trends in the analysis and design of local and distributed IT systems and the basics of computer modeling and computerization of complex cognitive and decision-making processes.	Student knows and understands areas of system analysis and business analysis as well as selected advanced approaches to software modeling.	[SW1] Assessment of factual knowledge
	[K7_U01] can apply mathematical knowledge to formulate and solve complex and non-typical problems related to the field of study by:n- appropriate selection of source information and its critical analysis, synthesis, creative interpretation and presentation,n- application of appropriate methods and toolsn	Student can select proper techniques and tools for software modeling and business analysis	[SU2] Assessment of ability to analyse information
	[K7_U41] can select methods of modelling and analysis of information systems and applications using selected elements of theoretical computer science and modern programming tools	Student can select proper techniques and tools for software modeling and business analysis	[SU1] Assessment of task fulfilment
Subject contents	<p>Introduction to modeling, UML Use case diagram Class diagram - elements and application of class diagrams in system analysis Dynamic models in UML Other structure diagrams Application of UML models in software engineering</p> <p>UML tools and their usability Application of analysis patterns Introduction to MDA/MDE Domain specific modeling Business modeling Selection of proper modeling methods Business analyst</p>		
Prerequisites and co-requisites	No requirements		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written exam	50.0%	50.0%
	Project	50.0%	17.0%
	Lab	50.0%	33.0%

Recommended reading	Basic literature	<p>Booch G., Rumbaugh J., Jacobsen I.: UML przewodnik użytkownika. WNT, 2001</p> <p>Business Process Modeling Notation (BPMN) www.bpmn.org</p> <p>Fower M., Analysis Patterns: Reusable Object Models, Addison-Wesley, 1997</p> <p>Kelly S., Tolvanen J-P.: Domain-Specific Modeling: Enabling Full Code Generation, John Wiley & Sons, 2008.</p> <p>IBM Rational Unified Process Specification, www.ibm.com.</p> <p>International Institute of Business Analysis - A Guide to Business Analysis Body of Knowledge (BABOK Guide), version 3.0, 2015.</p>
	Supplementary literature	n/a
	eResources addresses	Adresy na platformie eNauczanie:
	Example issues/ example questions/ tasks being completed	n/a
Work placement	Not applicable	