



Subject card

Subject name and code	Numerical methods, PG_00045296						
Field of study	Data Engineering						
Date of commencement of studies	October 2024	Academic year of realisation of subject			2024/2025		
Education level	first-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	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			English		
Semester of study	2	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Microwave and Antenna Engineering -> Faculty of Electronics, Telecommunications and Informatics						
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Grzegorz Fotyga					
	Teachers	dr hab. inż. Grzegorz Fotyga					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	0.0	0.0	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	A general aim of the course is to give the student the understanding of the theory and application of the basic numerical techniques and the knowledge how to implement them using high-level programming languages.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
Subject contents	1 System of equations 2 Roots of Functions 3 Numerical errors 4 Interpolation 5 Approximation 6 Numerical integration						
Prerequisites and co-requisites	Participants should be familiar with the mathematical analysis and the programming basics.						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Laboratory		50.0%		40.0%		
	Test		50.0%		60.0%		

Recommended reading	Basic literature	[1] Fortuna, Zenon, Bohdan Macukow, and Janusz Wasowski. <i>Metody numeryczne</i> . Wydawnictwa Naukowo-Techniczne, 2002. [2] Trefethen, Lloyd N., and David Bau III. <i>Numerical linear algebra</i> . Vol. 50. Siam, 1997.
	Supplementary literature	[1] Solomon, Justin. Numerical Algorithms , AK Peters/CRC Press, 2015 https://people.csail.mit.edu/jsolomon/share/book/numerical_book.pdf
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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