GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Mathematical analysis II, PG_00037260		
Field of study	Technical Physics		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2021/2022
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	Polish
Semester of study	2	ECTS credits	6.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Department of Probability Theory and Biomathematics -> Faculty of Applied Physics and Mathematics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr Joanna Cyman	
	Teachers	dr Joanna Cyman dr inż. Paweł Wojda	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	30.0	0.0	0.0	0.0	60

E-learning hours included: 0.0

Adresy na platformie eNauczanie:
Analiza matematyczna II 2022 - Moodle ID: 18610
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18610

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	10.0	80.0	150

Subject objectives

To equip students with the knowledge that supports technical items

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_W03	Student understands mathematical theorems and it uses with they of solving exercises. Can calculate integrals and knows applications of integrals. Study infinite series of numbers and series of functions. Student can make differential and integral calculus of multivariate function like partial derivatives, multiple integration.	[SW1] Assessment of factual knowledge
K6_U01	Student understands the importance of studying by himself. Student is practising by himself.	[SU2] Assessment of ability to analyse information

Subject contents

Integral calculus of the function of one variable. An infnite series of numbers and functions (Taylor series, Fourier series). Differential and integral calculus of multivariate function - Partial derivatives, Multiple integration.

Prerequisites and co-requisites

Student knows basics of differential calculus of the function of one variable.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Colloquium 1	50.0%	27.0%
Colloquium 2	50.0%	27.0%
Exam	50.0%	40.0%
Activity	50.0%	6.0%

Recommended reading	Basic literature	1. M. Gewert, Z. Skoczylas, Analiza matematyczna 1 i 2. Definicje, twierdzenia, wzory. Wrocław, Oficyna Wydawnicza GiS 2014. 2. M. Gewert, Z.Skoczylas, Analiza matematyczna 1 i 2. Przykłady i zadania. Wrocław, Oficyna Wydawnicza GiS 2014. 3. W. Krysicki, L. Włodarski, Analiza matematyczna w zadaniach 1 i 2. Warszawa, PWN 2015. 4. J. Dymkowska, D. Beger, Rachunek całkowy w zadaniach, Gdańsk, Wydawnictwo Politechniki Gdańskiej 2017.
	Supplementary literature	1. J. Topp, Matematyka. Funkcje jednej zmiennej. Gdańsk, Wydawnictwo UG 2016. 2. G. M. Fichtenholz, Rachunek różniczkowy i całkowy. T 1 i 2. Warszawa, PWN 1994.
	eResources addresses	Analiza matematyczna II 2022 - Moodle ID: 18610 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=18610
Example issues/ example questions/ tasks being completed	Calculate the double integral Definition of Partial derivatives	
Work placement	Not applicable	