



KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez
Unię Europejską w ramach
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Społecznego

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Course title		ECTS code	
Mathematics II		13.3.0843	
Name of unit administrating study			
null			
Studies			
faculty	field of study	type	all
Faculty of Chemistry	Chemical Business	form	all
		specialty	all
		specialization	all
Teaching staff			
dr Aleksandra Nowel; dr Jacek Tryba; mgr Paweł Bytner; dr Paweł Klinga; dr Ewa Kozłowska-Walania; dr Iwona Krzyżanowska			
Forms of classes, the realization and number of hours		ECTS credits	
Forms of classes		6	
Auditorium classes, Lecture		classes - 60 h	
The realization of activities		tutorial classes – 20 h	
classroom instruction		student's own work – 70 h	
Number of hours		Total: 150 h - 6 ECTS	
Auditorium classes: 30 hours, Lecture: 30 hours			
The academic cycle			
2022/2023 summer semester			
Type of course		Language of instruction	
obligatory		polish	
Teaching methods		Form and method of assessment and basic criteria for evaluation or examination requirements	
- lecture		Final evaluation	
- problem solving		- Graded credit	
		- Examination	
		Assessment methods	
		Assessment methods	
		Lecture	
		•exam with open/closed questions	
		Auditorium classes:	
		• attendance, active participation, tests and quizzes	
		The basic criteria for evaluation	

The basic criteria for evaluation or exam requirements

Lecture:

- pass the exam with open questions

91-100%: 5.0

81-90%: 4.5

71-80%: 4.0

61-70%: 3.5

51-60%: 3.0

Less than 51% 2.0

Auditorium classes:

- completed all tests

91-100%: 5.0

81-90%: 4.5

71-80%: 4.0

61-70%: 3.5

51-60%: 3.0

Less than 51% 2.0

Method of verifying required learning outcomes

Required courses and introductory requirements

A. Formal requirements

none

B. Prerequisites

Required courses and introductory requirements

Mathematics I

Aims of education

Aims of education

Introduction to the notion of series, to linear algebra and statistics, in particular the mathematical tools that can be applied in describing physical and chemical processes and business problems

Teaching the ability of understanding abstract problems

Course contents

Course contents

1. Complex numbers

2. Matrices

3. Systems of linear equations

4. Linear spaces

5. Sequences and series

6. Elements of statistics

7.* Random variable, probability space

Bibliography of literature

Bibliography of literature

Literature required to pass the course

M. Gewert, Z. Skoczylas, Analiza matematyczna 1. Przykłady i zadania

G. Kwiecińska: Matematyka : kurs akademicki dla studentów nauk stosowanych. Cz. 2, Analiza funkcji jednej zmiennej

G. Kwiecińska: Matematyka : kurs akademicki dla studentów nauk stosowanych. Cz. , Analiza funkcji wielu zmiennych

W. Kryszicki, L. Włodarski: Analiza matematyczna w zadaniach. 1 i 2

Extracurricular readings

Erich Steiner : „Matematyka dla chemików”, Warszawa, Wydaw. Naukowe PWN, 2001.

Halina Pidek-Łopuszańska: „Matematyka dla chemików”, Wiedza Powszechna, Warszawa 1974.

The learning outcomes (for the field of study and specialization)

Knowledge

Knowledge

methods of verifying the solvability of linear systems and how to find the solution set

basic operations on matrices

operating on complex numbers

	properties of linear spaces over \mathbb{R} and \mathbb{C} kriterions of series convergence, methods of finding limits of sequences rules and formulas of statistics and how to apply them to solve problems
	Skills
	Social competence
Contact	
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