KAPITAŁ LUDZKI
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez Unię Europejską w ramach Europejskiego Funduszu Społecznego

UNIA EUROPEJSKA
EUROPEJSKI
FUNDUSZ SPOŁECZNY

Course title	ECTS code
Mathematics I	13.3.0722

Name of unit administrating study

null

Studies

faculty	field of study		
Faculty of Chemistry	Chemical Business	type	first tier studies (BA)
		form	full-time
		specialty	all
		specialization	all

Teaching staff

dr Aleksandra Nowel; Marta Leśniak; dr Paweł Klinga; dr Maciej Niebrzydowski; prof. UG, dr hab. Antoni Augustynowicz; dr Ewa Kozłowska-Walania; mgr Marcin Staniszewski; dr Marek Hałenda; dr Elżbieta Mrożek

Forms of classes, the realization and number of hours

Forms of classes

Auditorium classes, Lecture

The realization of activities

classroom instruction

Number of hours

Auditorium classes: 45 hours, Lecture: 30 hours

ECTS credits

5
classes - 75 h
tutorial classes – 10 h
student's own work – 40 h

Total: 125 h - 5 ECTS

The academic cycle

2022/2023 winter semester

Type of course

obligatory

Language of instruction

polish

Teaching methods

- Lecture
- problem solving

Form and method of assessment and basic criteria for eveluation or examination requirements

Final evaluation

Graded credit

Assessment methods

Assessment methods
Lecture
•exam with open/closed questions
Auditorium classes:
• attendance, active participation, tests and quizes

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

basic mathematics

Aims of education

Aims of education

Introduction to differential and integral calculus of, linear algebra, in particular the mathematical tools that can be applied in describing physical and chemical processes

Teaching the ability of understanding abstract problems

Course contents

Course contents

1. Elementary functions
2. Limits of functions, continuity
3. Derivative of a function of one variable
4. Applications of derivatives
5. Integral of a function of one variable
6. Elements of differential and integral calculus of several variables functions

Bibliography of literature

Bibliography of literature

Literature required to pass the course

T. Jurlewicz, Z. Skoczylas, Algebra liniowa 1. Przykłady i zadania
M. Gewert, Z. Skoczylas, Analiza matematyczna 1. Przykłady i zadania
G. Kwiecińska: Matematyka : kurs akademicki dla studentów nauk stosowanych. Cz. 1, Wybrane zagadnienia algebry liniowej
G. Kwiecińska: Matematyka : kurs akademicki dla studentów nauk stosowanych. Cz. 2, Analiza funkcji jednej zmiennej
W. Krysicki, 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

Classification of elementary functions, their properties

application of main tools of differential and integral calculus to problems solving

verifying properties of one and several variables functions by using main tools of differential and integral calculus

	Skills
	Social competence
Contact	
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