1.	Field of study	Applied Geology
2.	Faculty	Faculty of Natural Sciences
3.	Academic year of entry	2024/2025 (winter term)
4.	Level of qualifications/degree	first-cycle studies (in engineering)
5.	Degree profile	general academic
6.	Mode of study	full-time

7.	General information about the module
Module name	**Mathematics in Earth Sciences**
Module code	W2-GS-S1-009
Number of the ECTS credits	3
Language of instruction	Polish
Purpose and description of the content of education	Moduł Matematyka w naukach o Ziemi umożliwi studentowi gruntowne poznanie (lub przypomnienie) wybranych zagadnień z matematyki, jak przekształcenie wyrażeń wymiernych i niewymiernych, podstawowych pojęć z zakresu algebry, własności funkcji elementarnych i trygonometrycznych oraz podstaw rachunku różniczkowego i całkowego. Student nabędzie umiejętności posługiwania się podstawowym aparatem matematycznym, wykorzystywanym w naukach przyrodniczych, a także w podstawach fizyki i chemii.
List of modules that must be completed before starting this module (if necessary)	not applicable

8. Learning outcomes of the module

Code	Description	Learning outcomes of the programme	Level of competenc (scale 1-5)
W2-GS-S1-009 _1	zna podstawowe pojęcia z zakresu matematyki i pogłębia wiedzę w zakresie wybranej problematyki	1GS_W1 1GS_W2	1 1
W2-GS-S1-009 _2	przyswoi nowe pojęcia matematyki wyższej i metody obliczeniowe stosowane w naukach o Ziemi.	1GS_W1 1GS_W3	1 1
W2-GS-S1-009 _3	pozna podstawy statystyki matematycznej.	1GS_W1	3
W2-GS-S1-009 _4	będzie potrafił przeprowadzić krytyczną dyskusję posiadanej wiedzy i umiejętności	1GS_K1 1GS_U1	1 1
W2-GS-S1-009 _5	nabierze przekonania do stosowania metod obliczeniowych w opisie zjawisk geologicznych	1GS_K2 1GS_U1	1 1

9. Methods of conducting classes

Code	Category	Name (description)
a01	Lecture methods / expository methods	Formal lecture/ course-related lecture

		a systematic course of study involving a synthetic presentation of an academic discipline; its implementation assumes a passive reception of the information provided
e01	Practical methods	Laboratory exercise / experiment *[also conducted as fieldwork] a method of practical application of knowledge; implemented in three stages: the recognition of a problem induced by the task content, the formulation of the problem and the attempt to solve it accompanied by the assessment of the effects; the goal is to acquire skills, abilities and habits, and to consolidate the acquired knowledge so that it becomes operational; the laboratory method assumes greater independence of learners than carrying out an experiment*

10. Forms of teaching

Code	Name	Number of hours	Assessment of the learning outcomes of the module	Learning outcomes of the module	Methods of conducting classes
W2-GS-S1-009_l_1	laboratory classes	24	course work	W2-GS-S1-009 _1, W2-GS-S1-009 _2, W2-GS-S1-009 _3, W2-GS-S1-009 _4, W2-GS-S1-009 _5	e01
W2-GS-S1-009_w_1	lecture	12	course work	W2-GS-S1-009 _1, W2-GS-S1-009 _2, W2-GS-S1-009 _3, W2-GS-S1-009 _4, W2-GS-S1-009 _5	a01

11. The student's work, apart from participation in classes, includes in particular:

Code	Category	Name (description)	Is it part of the BUNA?
a02	Preparation for classes	Literature reading / analysis of source materials *reading the literature indicated in the syllabus; reviewing, organizing, analyzing and selecting source materials to be used in class*	Yes
a03	Preparation for classes	Developing practical skills *activities involving the repetition, refinement and consolidation of practical skills, including those developed during previous classes or new skills necessary for the implementation of subsequent elements of the curriculum (as preparation for class participation)*	Yes

Information on the details of the module implementation in a given academic year can be found in the syllabus available in the USOS system: https://usosweb.us.edu.pl.