COURSE DESCRIPTION CARD - SYLLABUS

Course name
Properties and structure of igneous and metamorphic rocks

Course

Field of study
Circular System Technologies
Year/Semester
2/3
Area of study (specialization)
-
Profile of study
general academic
Level of study
First-cycle studies
Course offered in
polish
Form of study
full-time
Requirements
elective

Number of hours

Lecture
0
Laboratory classes
15
Other (e.g. online)
0
Tutorials
0
Projects/seminars
0

Number of credit points

1

Lecturers

Responsible for the course/lecturer:
dr inż. Aleksandra Grząbka-Zasadzińska

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Responsible for the course/lecturer:

Prerequisites

Basic knowledge of geology.

The ability to obtain information from literature, databases, other properly selected sources.

Ability to work in a chemical laboratory and operate research equipment.

Understanding the need for training and improving one's professional competences and the significance of the effects of engineering activities.

Course objective

Mastering the ability to identify rocks on the basis of physicochemical properties.

Course-related learning outcomes

Knowledge

K_W02 - has knowledge of physics and chemistry that allows to understand the phenomena and changes occurring in technological and environmental processes.

K_W10 - has knowledge of raw materials, products and processes used in closed-loop technologies.

Skills

K_U01 - can obtain information from literature, databases and other sources related to closed-loop technologies, also in a foreign language, integrate them, interpret them, draw conclusions and formulate opinions.

K_U03 - plans, selects equipment and scientific apparatus, carries out research, analyzes the results and formulates conclusions on this basis.

K_U08 - is able to plan and organize work individually and in a team.

K_U21 - is able to plan and carry out simple experiments related to closed-loop technologies, using both experimental and simulation methods, and is able to interpret their results and formulate conclusions.

Social competences

K_K02 - shows independence and inventiveness in individual work, and effectively cooperates in a team, playing various roles in it; objectively assesses the effects of his own work and that of team members.

K_K03 - independently determines and implements the action plan entrusted to him, defining priorities for its implementation, critically assesses the level of advancement in the implementation of the entrusted task.

K_K07 - shows care and full responsibility for the specialist equipment entrusted to him for testing.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

1. Knowledge test before the start of classes.

2. Assessment of laboratory work with a report.

Programme content

During the course the student performs practical exercises covering the identification, qualitative and quantitative description of igneous and metamorphic rocks. Student also performs X-ray analysis of selected rocks (preparation, measurement, interpretation of results).

Teaching methods

Laboratories.

Bibliography

Basic

1. Kowalski W., Pawlik P., Przewodnik do ćwiczeń z petrografii i geologii inżynierskiej.

2. Mizerski W., Geologia Polski, Warszawa 2009.

Additional

1. Adams A.E., MacKenzie W.S., Guilford C., Atlas of sedimentary rocksunder the microscope. Longman Scientific & Technical, 1984.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	16	0,5
Student's own work (literature studies, preparation for test, preparation of lab report) [1]	9	0,5

[1] delete or add other activities as appropriate