



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

GEOTECHNICAL PRACTICE

### Course

Field of study

SUSTAINABLE BUILDING ENGINEERING

Area of study (specialization)

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Level of study

First-cycle studies

Form of study

full-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

English

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

60

Tutorials

Projects/seminars

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

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Faculty of Civil and Transport Engineering

St. Piotrowo 5 (building A2) room 339C

Responsible for the course/lecturer:

### Prerequisites

KNOWLEDGE: student has basic general knowledge of mathematics, chemistry, physics, technical drawing, descriptive geometry and geodesy.

student has knowledge of geology, soil mechanics and foundation in the range of 3 and 4 terms.

SKILLS: student is able to integrate obtained information and results, interpret them, draw conclusions, formulate and substantiate opinions, is able to operate a computer and programs supporting documentation creation.

SOCIAL COMPETENCES: student is able to work in a team, knows his role and is able to achieve set goals for the good of the team.



### Course objective

To familiarize students with practical aspects of performing geotechnical research (field and laboratory) and office work (interpretation of obtained results and preparation of geotechnical documentation).

### Course-related learning outcomes

#### Knowledge

The student knows the basics of geology, has detailed knowledge of soil mechanics and foundation of building objects.

#### Skills

The student is able to obtain information from literature, databases and other properly selected sources; is able to integrate obtained information, interpret and evaluate it, as well as draw conclusions, form opinions and positions and discuss about them. The student knows how to read construction drawings and prepare graphic documentation in a traditional and electronic way.

#### Social competences

The student has the ability to adapt to new and changing circumstances, is able to set priorities in the implementation of the task specified by himself and other, acting inter alia in the public interest and taking into account sustainable development goals. He is responsible for the reliability of the results of his work and their interpretation. Understands the need for teamwork, is responsible for the safety of own and team work.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Assessment criteria: practice is "passed" or "not passed".

The lecturer sets the grade for:

- class attendance and activity,
- discussion and ongoing preparation,
- execution and collective defense of the internship report in the form of 'Geotechnical Documentation',
- settlement of individual tasks.

### Programme content

Geotechnical categories of building objects. Rules for conducting a local vision. Programming principles of geotechnical soil research. Practical application of geotechnical (field and laboratory) research. Dynamic penetration tests. Static penetration tests. Rules for determining the characteristic and calculated values of geotechnical parameters. Principles of creating geotechnical cross-sections.

### Teaching methods

1. Field research



2. Laboratory tests
3. Auditorium exercises
4. Lectures
5. Preparation of the project (geotechnical documentation)

### Bibliography

#### Basic

1. Principles of Geotechnical Engineering. Braja M. Das, Thomson.
2. Basic Geotechnical Engineering. Richard P. Weber, CED Engineering.

#### Additional

1. Craig's Soil Mechanics. R.F. Craig, SPON.
2. Soil Mechanics Laboratory Manual. Michael E. Kalinski.
3. Laboratory Testing of Soils, Rocks and Aggregates. N. Sivakugan et al.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2,0
Classes requiring direct contact with the teacher	40	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	20	1,0

<sup>1</sup> delete or add other activities as appropriate