



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Soil mechanics and foundations II

Course

Field of study

Sustainable building engineering

Area of study (specialization)

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

15

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

15

Number of credit points

2

Lecturers

Responsible for the course/lecturer:

dr inż. Andrzej T. Wojtasik

Responsible for the course/lecturer:

mgr inż. Miłosz Just

Prerequisites

Basic knowledge on building mechanics and engineering geology

Course objective

Knowledge on types of foundations relevant to ground conditions and type of building structure. Design procedures and calculations of bearing capacity and settlements for simple foundations, considering type of ground conditions.

Course-related learning outcomes

Knowledge

Basic knowledge on foundation methods applied in different soil conditions.

Skills

Can determine and apply the right foundation method and calculate direct foundations.

Social competences

Competence in need the determination of sustainable development in civil engineering.



Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Exam, design project.

Programme content

Types of foundations. Direct foundations with calculations of bearing capacity and settlements. Deep foundations, methods and technologies. Lateral earth pressure, deep excavations and retaining structures. Soil improvement methods. Dewatering of deep excavations.

Teaching methods

Lectures, design and laboratory exercises

Bibliography

Basic

Principles of Geotechnical Engineering; Braja M.Das. Thompson

Additional

Basic Geotechnical Engineering; Richard P.Weber, CED Engineering

Breakdown of average student's workload

	Hours	ECTS
Total workload	60	2.0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	30	1,0

¹ delete or add other activities as appropriate