



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Soil mechanics and foundations [S1BZ1E>MGiF2]

### Course

Field of study

Sustainable Building Engineering

Year/Semester

2/4

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

English

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

15

### Number of credit points

2,00

### Coordinators

dr inż. Andrzej Wojtasik

andrzej.wojtasik@put.poznan.pl

### Lecturers

### 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:

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.

## Course topics

none

## 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	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00