COURSE DESCRIPTION CARD - SYLLABUS

Course name
Geotechnology [S1Arch1>GEOTE]

Course

Field of study
Architecture

Year/Semester
3/5

Area of study (specialization)
–

Profile of study
general academic

Level of study
first-cycle

Course offered in
polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

Lecturers

Prerequisites

Basic knowledge on building mechanics and georaphy/geology

Course objective

Knowledge on soil classification and ground conditions. Basic knowledge on theoretical basis of soil mechanics and defining soil as 3 phase system. Stress distribution in ground, bearing capacity and soil deformations (consolidation and settlemnts). Shallow and deep foundations, types and design principles.

Course-related learning outcomes

Knowledge:
Student knows and understands:
B.W5. issues of construction, construction technologies and installations, construction and building physics, covering key issues in architectural, urban and planning design as well as issues related to fire protection of buildings;
B.W6. investment economics and organization methods as well as the course of the design and investment process; basic principles of design and implementation quality management in the construction process;
B.W9. principles of occupational health and safety.

Skills:

Student can:
B.U3. use properly selected computer simulations, analyzes and information technologies, supporting architectural and urban design;
B.U4. develop solutions for individual building systems and elements in terms of technology, construction and materials;
B.U5. make a preliminary economic analysis of planned engineering activities;
B.U6. properly apply standards and legal regulations in the field of architectural and urban design.

Social competences:
Student is capable of:
B.S2. reliable self-assessment, formulating constructive criticism regarding architectural and urban planning activities.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Exam
2,0; 3,0; 3,5; 4,0; 4,5; 5,0

Programme content

Genesis of soil and classification methods. Basic soil mechanics. Soil as a 3-phase system. Physical and mechanical soil properties and parameters. Stress strain relations in soil. Soil investigations and documantation of ground conditions. Design principles of shallow and deep foundations.

Teaching methods

Lectures, design and laboratory excercises, eLearning Moodle

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	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50