



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Geotechnology

Course

Field of study

Architecture

Area of study (specialization)

-

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

III/5

Profile of study

general academic

Course offered in

polish/english

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

Lecturers

Responsible for the course/lecturer:

dr inż. Andrzej T.Wojtasik

Responsible for the course/lecturer:

e-mail: andrzej.wojtasik@put.poznan.pl

Wydział Inżynierii Lądowej i Transportu,
ul.Piotrowo 5, 60-965 Poznań

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 settlements). 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:

Lecture:

Formative assessment:

periodic control of learning progress, active participation in classes

Accepted grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0.

Percentage of grades: 0–50% - 2.0 (insufficient); 50-60% - 3.0 (sufficient); 60-70% - 3.5 (sufficient plus); 70-80% - 4.0 (good); 80-90% - 4.5 (good plus); 90-100% - 5.0 (very good).

Summative assessment:

a final test or (if an exam is included in the curriculum) a written exam

Accepted grading scale: 2,0; 3,0; 3,5; 4,0; 4,5; 5,0.



Percentage of grades: 0–50% - 2.0 (insufficient); 50–60% - 3.0 (sufficient); 60–70% - 3.5 (sufficient plus); 70–80% - 4.0 (good); 80–90% - 4.5 (good plus); 90–100% - 5.0 (very good).

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 documentantation 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	1,0
Classes requiring direct contact with the teacher	15	0,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	10	0,5

¹ delete or add other activities as appropriate