



Course title: **GEOTECHNICAL DESIGN BASED ON CALCULATIONS**

ECTS credit allocation (and other scores): 2.0

Semester: spring

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Engineering and technology

Language: English

Number of hours per semester: 15

Course coordinator/ Department and e-mail: dr inż. Marcin Bujko / Department of Building Engineering
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Type of classes: classes

Substantive content

Introducing students to the fundamental principles of geotechnical design. Developing skills in selecting computational methods appropriate to geotechnical problems in various soil-water conditions.

Classes: Implementation of design tasks: Interpreting grain size distribution curve, studying effective stress, designing excavation drainage, designing soil consolidation with embankments.

On completion of the study programme the graduate will gain:

Knowledge:

Understands the processes and phenomena occurring in soil as well as the principles of designing and computational analysis of selected geotechnical structures.

Skills:

Can select analytical tools for solving problems related to the analysis and design of geotechnical structures.

Social competencies:

Can work independently and collaborate within a team on a designated geotechnical task, conducting a critical assessment of the problem being solved.

Basic literature:

1. Grabowski Z., Pisarczyk S., Obrycki M., Fundamentowanie, Wyd. Oficyna Wydawnicza Politechniki Warszawskiej, R. 2005
2. Myślińska E., Laboratoryjne badania gruntów, Wyd. Wydawnictwo Naukowe PWN, R. 1998
3. Pisarczyk S., Mechanika gruntów, Wyd. Oficyna Wydawnicza Politechniki Warszawskiej, R. 1999

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 32

Student's independent work: 30.5