



Course title: **Advanced Geotechnics**

ECTS credit allocation (and other scores): 2.5

Semester: spring

Level of study: ISCED-7 - second-cycle programmes (EQF-7)

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  
marcin.bujko@uwm.edu.pl

Type of classes: classes

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Substantive content

Introducing the student to:

- Principles of design according to EC-7 recommendations;
- Operation of modern devices and apparatus for testing the physical and mechanical characteristics of soils, as well as methods of interpreting the obtained results.

Classes: Implementation of design tasks: geotechnical calculations, interpretation of laboratory and field test results. Discussion of the obtained results  
Learning purpose: Presentation of the scope of building physics. Transfer of basic knowledge in the field of thermodynamics, hygrometry, building acoustics and room lighting.

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On completion of the study programme the graduate will gain:

Knowledge: W1 – Student knows the basic methods, techniques, tools, and materials used in solving complex geotechnical problems.

Skills: U1 – Student can use analytical, simulation, and experimental methods to formulate and solve engineering tasks and simple research problems. Social competencies:

Social competences – Student is able to cooperate and work effectively in a group.

Basic literature:

1. Chen W.F, Liu X.L., "Limit analysis in soil mechanics. Developments in geotechnical engineering", Tom 52, Wyd. Elsevier, R. 1990
  2. T.W. Lambe; R.V. Whitman,, "Mechanika Gruntów", Tom 1 i 2, Wyd. Arkady, R. 1978
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The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 32

Student's independent work: 30.5