

Course code:

Plan position:

A. INFORMATION ABOUT THE COURSE

B. Basic information

Name of course	Geotechnical Engineering
Field of studies	Civil Engineering
Level of studies	II
Profile of studies	General Academic
Form of studies	Full-time
Specialty	
Unit responsible for the field of studies	Faculty of Civil and Environmental Engineering and Architecture
Name and academic degree of teacher(s)	Dr inż. Szymon Topoliński
Introductory courses	Geology, Soil Mechanics
Introductory requirements	Basic knowledge of soil types and their physical and mechanical properties

C. Semester/week schedule of classes

Semester	Lectures (W)	Auditorium classes (Ć)	Laboratory classes (L)	Project classes (P)	Seminar (S)	Field classes (T)	Number of ECTS points
summer	30						6

2. LEARNING OUTCOME

No.	Learning outcomes description	The reference to the learning outcomes of specific field of study	The reference to the learning outcomes for the area
KNOWLEDGE			
W1			
W2			
...			
SKILLS			
U1			
U2			
...			
SOCIAL COMPETENCES			
K1			
K2			
...			

3. TEACHING METHODS

A. Traditional methods used ***

Multimedia lecture, discussion, solving example problems

B. Distance learning methods used ***

Synchronous method (classes conducted in a way that ensures direct interaction between the student and the teacher in real time, enabling immediate flow of information, the method can be used only if it is provided for in the study plan for a given cycle of education): MS TEAMS
e.g. remote lecture in the form of videoconference, remote discussion, etc.

Asynchronous method used as an auxiliary (a method that does not ensure direct interaction between the student and the teacher in real time, used only as an auxiliary / complementary method): exercises, presentations shared via email or MS TEAMS
e.g. online educational videos, online multimedia presentations, etc.

4. METHODS OF EXAMINATION

Lecture – written exam;

5. SCOPE

Lectures	Soil improvement methods. Examples of structural damage caused by geotechnical errors in design, construction and use. Principles of selection of geosynthetic materials in the design of earth structures. Principles of designing geotechnical properties and selection of methods and embankment soils. Basics of geotechnical and geological-engineering documentation. Basics of geotechnical design according to EC -7.
Laboratories	

6. METHODS OF VERIFICATION OF LEARNING OUTCOMES

LEARNING OUTCOME	Form of assessment					
	Oral examination	Written exam	Colloquium	Project	Presentation
W1		x				
...			x			
U1	x					
...		x				
K1		x				
...					x	

7. LITERATURE

Basic literature	<p>[1] Wiłun Z.: Zarys geotechniki. WKŁ, Warszawa, 2006</p> <p>[2] Pisarczyk S.: Geoinżynieria. Metody modyfikacji podłoża gruntowego. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2014</p> <p>[3] Pisarczyk S.: Grunty nasypowe. Właściwości geotechniczne i metody ich badania. Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2015</p>
Supplementary literature	<p>[1] Moseley M.P., Kirch K., 2004. Ground Improvement. Spon Press Londyn i Nowy Jork.</p>

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8. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity		Student workload– number of hours
Classes conducted under a direct supervision of an academic teacher or other persons responsible for classes	Participation in classes indicated in point 1B	30
	Supervision hours	10
Student's own work	Preparation for classes	40
	Reading assignments	50
	Other (preparation for exams, tests, carrying out a project etc)	50
Total student workload		180
Number of ECTS points		6