

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Foundation		Code 1010104141010121115
Field of study Civil Engineering First-cycle Studies	Profile of study (general academic, practical) general academic	Year /Semester 2 / 4
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time,part-time) part-time	
No. of hours Lecture: 12 Classes: 10 Laboratory: - Project/seminars: 10		No. of credits 4
Status of the course in the study program (Basic, major, other) major		(university-wide, from another field) from field
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 4 100% 4 100%
Responsible for subject / lecturer: dr inż. Sławomir Janiński email: slawomir.janinski@put.poznan.pl tel. 6652417 Faculty of Civil and Environmental Engineering ul. Piotrowo 5 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	- full range of knowledge of mathematics and physics, the program for high school - full range of knowledge covered by the program of studies 1 and 2 of semester studies at Construction
2	Skills	The Student: - is able to perform static analysis of bar structures statically determinate, - is able to correctly select troubleshooting tools analysis and design of buildings, - can dimension the basic structural components of buildings
3	Social competencies	The Student: - is able to work independently and collaborate as a team on the specific task; - is responsible for the accuracy of the results of their work and their interpretation - isolated complements and extends knowledge of modern techniques processes and technology
Assumptions and objectives of the course: achieve a basic level of knowledge of groundwater and soil mechanics applicable to first degree studies of construction		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. The Student know fundamentals of groundwater expert knowledge - [K_W06] 2. The Student know the basic laws of soilmechanic - [K_W08] 3. The Student know methods for determining stresses in the subsoil - [K_W09]		
Skills:		
1. The Student is able to apply the principles for classification of soil - [K_U02] 2. The Student is able to make interpretation of the results of laboratory tests the basic features of soil - [K_U03] 3. The Student is able to use the basic rights of soil mechanics to determine the stresses in the subsoil - [K_U09]		
Social competencies:		

1. The Student is aware of the need to care for their own health and fitness - [K_K01] 2. The Student is aware of the need to improving of professional and personal of competence - [K_K03] 3. The Student understands the need to inform the public knowledge of the construction industry, provide information to the public of construction in a commonly understood - [K_K06]
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Assessment methods of study outcomes		
- the written examination, - the written and oral tests as part of the continuous assessment, - the execution of a handbook of results of calculations of laboratory characteristics of the subsoil		
Course description		
- introduction to groundwater expert knowledge		
Basic bibliography:		
1. Witun Z.: Zarys geotechniki, Warszawa, WKiŁ 2012 2. Pisarczyk St.: Gruntozawstwo inżynierskie, Warszawa, PWN 2001 3. Szymański A.: Mechanika Gruntów, SGGW, Warszawa 2007 4. Rybak Cz., Puła O., Sarniak W.: Fundamentowanie, DWE 1997		
Additional bibliography:		
1. Jeż J.: Biogeotechnika, Poznań, Wyd. PP 2008 2. Motak E.: Fundamenty bezpośrednie, Warszawa, Arkady 1988 3. Obrycki M., Pisarczyk St.: Zbiór zadań zmechaniki gruntów, Warszawa, PW 2007 4. Cios I., Garwacka-Piórkowska St.: Projektowanie fundamentów, PW, Warszawa 2003		
Result of average student's workload		
Activity	Time (working hours)	
1. The total amount of work	120	
Student's workload		
Source of workload	hours	ECTS
Total workload	100	4
Contact hours	40	2
Practical activities	16	1