STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Geotechnical Training**		Code **1010101141010120301**
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) **full-time**	
No. of hours Lecture: **-** Classes: **40** Laboratory: **-** Project/seminars: **-**		No. of credits **3**
Status of the course in the study program (Basic, major, other) **other**	(university-wide, from another field) **university-wide**	
Education areas and fields of science and art **technical sciences** **Technical sciences**		ECTS distribution (number and %) **3 100%** **3 100%**

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**	A full range of knowledge in mathematics and physics included in the program of high school. A full range of knowledge covered by the program of studies 1 and 2 semester majoring in construction, in particular in the field of soil mechanics, foundations and fundamentals of geology
2	**Skills**	Student: - knows how to apply the principles of recognition of soil mechanisc to determine the models of subsoil; - is able to apply the basic laws of soil mechanics to determine the state of stress, strength and deformability of the ground; - be ableto design a simple foundations of buildings; - can apply methods to ensure slope stability foundation trenches
3	**Social competencies**	Student: - he is able to work independently and collaborate in a team on specific task; - he is responsible for the accuracy obtained results of their work; - isolated complements and extends the knowledge of modern techniques,processes and technologies

Assumptions and objectives of the course:

Enhancing knowledge of soil mechanics and foundation and skills in its application in practis

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. In acquainted with construction law, nationalnorms andEN standardsand technical conditions for of structure construction - [-K_W06]
2. Knows geology fundamentals,soil mechanisc and foundations construction structuresvaluate - [-K_W08]
3. Knowsrules related to the design and analysis of residential, industraial, road,railroad and bridge structures - [-K_W09]

Skills:

1. Can evaluate and list loads acting on structures - [-K_U02]
2. Can appropriately define computional models used for the structur analysis - [-K_U03]
3. Can design simple foundations of structures for residental, public, industrial construction engineering, road, railways, bridges infrastructures - [-K_U09]
Social competencies:
1. Can work on a problem individually and in a team - [-K_K01]
2. Is aware of own health and fitness - [-K_K04]
3. Is aware of the necessity to advance professional and personal competencies - [-K_K06]

Assessment methods of study outcomes
- oral tests as part of the continuous assessment
- execution of studies containing results and analysis geotechnical
Course description
- programming geotechnical testing ground
-perform geotechnical testing ground to determine the geotechnical foundation conditions of builings;
- interpretation of the results of gotechnical studies of the substrate;
- analysis of geotechnical foundation conditions of buildings;
- technologies for earth moving and foundation
Basic bibliography:
1. Wiłun 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. Puła O. Projektowanie fundamentów według Eurokodu 7. Wyd. 2., DWE, Wrocław 2012

Result of average student's workload

Activity	**Time (working hours)**
1. participation in classes and individual work	90

Student's workload

Source of workload	**hours**	**ECTS**
Total workload	90	3
Contact hours	30	1
Practical activities	60	2