MODULE SPECIFICATION

Module code	
Module title in Polish	**Komputerowe obliczenia geodezyjne**
Module title in English	**Surveying Computations**
Module running from the academic year	**2016/2017**

A. MODULE IN THE CONTEXT OF THE PROGRAMME OF STUDY

Field of study	Surveying and Cartography
Level of qualification	first cycle (first cycle, second cycle)
Programme type	academic (academic/practical)
Mode of study	full-time (full-time/part-time)
Specialism	All
Organisational unit responsible for module delivery	The Department of Geotechnical Engineering. Geomatics and Waste Management
Module co-ordinator	**Anita Kwartnik-Pruc, PhD, Eng.**
Approved by:	**Ryszard Florek-Paszkowski, PhD, Eng.**

B. MODULE OVERVIEW

Module type	core module (core/programme-specific/elective HES*)
Module status	compulsory module (compulsory/optional)
Language of module delivery	English
Semester in the programme of study in which the module is taught	semester 2
Semester in the academic year in which the module is taught	summer semester (winter semester/summer semester)
Pre-requisites	None (module code/module title, where appropriate)
Examination required	No *(yes / no)*
ECTS credits	3

* elective HES – elective modules in the Humanities and Economic and Social Sciences

Mode of instruction	lectures	classes	laboratories	project	others
Total hours per semester			**45**		

C. LEARNING OUTCOMES AND ASSESSMENT METHODS

Module aims	The aim of the module is to broaden students' knowledge acquired during high school in selected aspects of the technologies used in the work of surveying.

Module outcome code	Module learning outcomes	Mode of instruction *(l/c/lab/p/ others)*	Corresponding programme outcome code	Corresponding discipline-specific outcome code
W_01	A student has knowledge on specialist surveying software.	lab	GiK _W04	T1A_W01, T1A_W05, T1A_W07, T1A_W10
W_02	A student knows basic information tools which are applied while solving engineering tasks as regards engineering tasks on surveying engineering.	lab	GiK_W27	T1A_W07
U_01	A student can consciously use computer software in surveying practice.	lab	GiK _U02	T1A_U01, T1A_U02, T1A_U03, T1A_U05, T1A_U07
U_02	A student has theoretical background as regards the utilisation of specialist software to work in surveying engineering (both in companies and organisational structures of various institutions).	lab	GiK _U20	T1A_U11
K_01	A student understands the necessity and knows the possibilities of raising his/her professional, personal, and social competences.	lab	GiK _K01	T1A_K01

Module content:

1. Topics to be covered in the laboratories

No.	Topics	Module outcome code
1-3	Introduction to the selected programs. Software configuration, customising for user needs. Basic functions.	W_01 W_02 U_02 K_01
4-6	Creating a new object. Entering utility data (obtained from various sources) to surveying programs.	W_01 W_02 U_01 U_02 K_01
7-9	Preparing utility data (obtained from various sources) in surveying programs.	W_01 W_02 U_01 U_02 K_01
10-12	Preparing utility data in surveying programs for various purposes.	W_01 W_02 U_01 U_02 K_01
13-15		W_01

	Preparing a cartographic paper of processes surveying data in surveying utility programs.	W_02 U_01 U_02 K_01

Assessment methods

Module outcome code	Assessment methods *(Method of assessment; for module skills – reference to specific project, laboratory and similar tasks)*
W_01 W_02 U_01 U_02	Completing and obtaining a credit with the use of the learnt surveying programs.
K_01	Observing a student's involvement, a final test, and a discussion during the classes.

D. STUDENT LEARNING ACTIVITIES

ECTS credit points		
	Type of learning activity	**Study time/ credits**
1	Contact hours: participation in lectures	
2	Contact hours: participation in classes	
3	Contact hours: participation in laboratories	**45**
4	Contact hours: attendance at office hours (2-3 appointments per semester)	**5**
5	Contact hours: participation in project-based classes	
6	Contact hours: meetings with a project module leader	
7	Contact hours: attendance at an examination	
8		
9	**Number of contact hours**	**50** *(total)*
10	**Number of ECTS credits for contact hours** *(1 ECTS credit =25-30 hours of study time)*	**2**
11	Private study hours: background reading for lectures	
12	Private study hours: preparation for classes	
13	Private study hours: preparation for tests	
14	Private study hours: preparation for laboratories	**10**
15	Private study hours: writing reports	
16	Private study hours: preparation for a final test in laboratories	**15**
17	Private study hours: preparation of a project/a design specification	
18	Preparing for an examination	
19		
20	**Number of private study hours**	**25** *(total)*
21	**Number of ECTS credits for private study hours** *(1 ECTS credit =25-30 hours of study time)*	**1**

22	**Total study time**	**75**
23	**Total ECTS credits for the module** *(1 ECTS credit =25-30 hours of study time)*	**3**
24	**Number of practice-based hours** *Total practice-based hours*	**55**
25	**Number of ECTS credits for practice-based hours** *(1 ECTS credit =25-30 hours of study time)*	**2.1**

E. READING LIST

References	1. www.coder.pl 2. www.geobid.pl 3. www.softline.geo.pl
Module website	