



MODULE SPECIFICATION

Module code	
Module title in Polish	Kosztorysowanie
Module title in English	Cost Estimation
Module running from the academic year	2016/2017

A. MODULE IN THE CONTEXT OF THE PROGRAMME OF STUDY

Field of study	Environmental Engineering
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 Building Engineering Technologies and Organisation
Module co-ordinator	Anna Kotwa, PhD, Eng. Marek Telejko, PhD, Eng.
Approved by:	Lidia Dąbek, PhD hab., Professor of the University

B. MODULE OVERVIEW

Module type	core module (core/programme-specific/elective HES*)
Module status	compulsory module (compulsory/optional)
Language of module delivery	Polish/English
Semester in the programme of study in which the module is taught	semester 6
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	2

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



Politechnika Świętokrzyska

WYDZIAŁ INŻYNIERII ŚRODOWISKA, GEOMATYKI I ENERGETYKI

Mode of instruction	lectures	classes	laboratories	project	others
Total hours per semester	15			15	



C. LEARNING OUTCOMES AND ASSESSMENT METHODS

Module aims	The aim of the module is to familiarise students with: the knowledge concerning the methods of cost estimation; the principles of pre-estimation of building works; the types, forms, and principles of preparing constructional cost estimation (with the use the Norma program); the principles of standardising people's work, mater consumption, and machine operation, and the principles of conducting tenders.
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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 is knowledgeable about engineering economics, cost estimation, management and legal aspects in environmental protection.	l/p	IS_W18	T1A_W08
W_02	A student has fundamental knowledge as regards management, including running a business activity.	l/p	IS_W19	T1A_W09
U_01	A student is capable of obtaining information from the literature on the subject and other sources; a student can also draw conclusions.	l/p	IS_U02	T1A_U01 T1A_U05 T1A_U07
U_02	A student can estimate costs of the designed engineering solutions.	l/p	IS_U13	T1A_U07 T1A_U10 T1A_U12
U_03	A student is capable of self-education, i.e. in order to raise his/her professional competences.	l/p	IS_U07	T1A_U05
U_04	A student can use appropriately selected methods which facilitate solving a determined engineering task.	l/p	IS_U12	T1A_U08 T1A_U09 T1A_U15
K_01	A student can work individually on the assigned task.	p	IS_K01	T1A_K03
K_02	A student is responsible for the reliability of the obtained results and their interpretation.	p	IS_K02	T1A_K02 T1A_K05
K_03	A student can formulate conclusions and describe the results of his/her own work.	p	IS_K07	T1A_K01 T1A_K07

Module content:

1. Topics to be covered in the lectures

No.	Topics	Module outcome code
1	Norms and standardisation in civil engineering.	W_01 U_01
2	Costs and their structures in construction engineering enterprise.	W_02 U_01 U_03
3	Investment process (its phases and stages).	W_02 U_01 U_03
4	Cost estimation in civil engineering.	W_01 W_02 U_01 U_03
5	Tenders and their organisation in civil engineering.	W_01 U_01 U_02 U_03 U_04
6	Negotiations and agreements in the realisation and investment process.	W_01 W_02 U_01



7	Cost estimation according to FIDIC.	W_01 W_02 U_01 U_02
8	Norms and standardisation in civil engineering.	W_01 U_01 U_02 U_03 U_04

2. Topics to be covered in the classes
3. Topics to be covered in the laboratories
4. Topics to be covered in the project

No.	Topics	Module outcome cod
1	Discussing the principles of pre-estimation.	W_01 U_01
2	Completing a pre-estimation with the Norma program.	W_01 U_02 U_03 K_01 K_02
3	Preparing cost estimation as with the method of simplified and detailed calculation.	W_01 U_02 U_03 K_01 K_02 K_03
4	Completing calculation with the Norma program.	W_01 U_02 U_03 K_01 K_02 K_03

Assessment methods

Module outcome code	Assessment methods <i>(Method of assessment; for module skills – reference to specific project, laboratory and similar tasks)</i>
W_01	An examination and obtaining a credit for the project
W_02	An examination and obtaining a credit for the project
U_01	An examination and obtaining a credit for the project
U_02	Obtaining a credit for the project
U_03	An examination and obtaining a credit for the project
U_04	Obtaining a credit for the project
K_01	Obtaining a credit for the project
K_02	Obtaining a credit for the project
K_03	Obtaining a credit for the project



D. STUDENT LEARNING ACTIVITIES

ECTS summary		
	Type of learning activity	Study time/ credits
1	Contact hours: participation in lectures	15
2	Contact hours: participation in classes	
3	Contact hours: participation in laboratories	
4	Contact hours: attendance at office hours (2-3 appointments per semester)	2
5	Contact hours: participation in project-based classes	15
6	Contact hours: meetings with a project module leader	2
7	Contact hours: attendance at an examination	
8		
9	Number of contact hours	34 <i>(total)</i>
10	Number of ECTS credits for contact hours <i>(1 ECTS credit = 25-30 hours of study time)</i>	1,36
11	Private study hours: background reading for lectures	8
12	Private study hours: preparation for classes	
13	Private study hours: preparation for tests	
14	Private study hours: preparation for laboratories	
15	Private study hours: writing reports	
16	Private study hours: preparation for a final test in laboratories	
17	Private study hours: preparation of a project/a design specification	8
18	Private study hours: preparation for an examination	
19		
20	Number of private study hours	16 <i>(total)</i>
21	Number of ECTS credits for private study hours <i>(1 ECTS credit = 25-30 hours of study time)</i>	0,64
22	Total study time	50
23	Total ECTS credits for the module <i>(1 ECTS credit = 25-30 hours of study time)</i>	2
24	Number of practice-based hours <i>Total practice-based hours</i>	25
25	Number of ECTS credits for practice-based hours <i>(1 ECTS credit = 25-30 hours of study time)</i>	1

E. READING LIST

References	
Module website	