

MODULE SPECIFICATION

Module code	
Module title in Polish	Organizacja produkcji budowlanej
Module title in English	Organisation of Building Production
Module running from the academic year	2016/2017

A. MODULE IN THE CONTEXT OF THE PROGRAMME OF STUDY

Field of study	Civil Engineering
Level of qualification	First cycle <i>(first cycle, second cycle)</i>
Studies profile	Academic <i>(academic/practical)</i>
Mode of study	Full-time <i>(full-time / part-time)</i>
Specialism	
Organisational unit responsible for module delivery	The Department of Building Engineering Technologies and Organisation
Module co-ordinator	Stefan Szałkowski, PhD, Eng.
Approved by	Marek Iwański, Professor

B. MODULE OVERVIEW

Module type	Core module <i>(core/programme-specific/elective HES*)</i>
Module status	Compulsory module <i>(compulsory / non-compulsory)</i>
Language of module delivery	English
Semester in the programme of study in which the module is taught	Semester 7
Semester in the academic year in which the module is taught	Winter semester <i>(winter / summer)</i>
Pre-requisites	None <i>(module code/module title, where appropriate)</i>
Examination required	Yes <i>(yes / no)</i>
ECTS credits	5

Mode of instruction	lectures	classes	laboratories	project	others
Total hours per semester	30			15	

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

C. LEARNING OUTCOMES AND ASSESSMENT METHODS

Module aims	The aim of the module is to acquaint students with the ability of independent identification of the constraints and hazards as regards the realisation of the building production (together with their elimination); another aim is to acquire the abilities of analysing, preparing, and designing the realisation of works as well as the organisation of a construction site.
--------------------	--

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 the organisation of building works, particularly in terms of designing constructional processes.	l/p	B_W13	T1A_W02 T1A_W03 T1A_W06 T1A_W08
W_02	A student is knowledgeable about creating the procedures of managing the quality of building works. In addition, a student knows the norms and standards of work in civil engineering together with the organisation and principles of managing a construction site.	l/p	B_W14	T1A_W08 T1A_W09 T1A_W03 T1A_W04
W_03	A student has basic knowledge on the procedures binding while realising constructional investment.	l/p	B_W16	T1A_W08 T1A_W09 T1A_W11
U_01	A student can select and apply the methods of planning building works. Furthermore, a student can interpret the obtained results.	l/p	B_U12	T1A_U01 T1A_U07 T1A_U08 T1A_U09 T1A_U14 T1A_U15
U_02	A student can prepare the schedule of building works.	l/p	B_U19	T1A_U10 T1A_U12 T1A_U15
U_03	A student can design constructional processes as regards the organisation of building works.	l/p	B_U20	T1A_U03 T1A_U05 T1A_U09 T1A_U12 T1A_U13 T1A_U16
U_04	A student is able to organise works at a construction site according to the principles of technology, organisation, and management in civil engineering.	l/p	B_U21	T1A_U09 T1A_U12 T1A_U13 T1A_U16
U_05	A student can assess hazards during the realisation of building works; a student can also implement appropriate safety procedures.	l/p	B_U22	T1A_U11 T1A_U13
K_01	A student can work independently and co-operate in a team on the assigned task.	p	B_K01	T1A_K01 T1A_K03 T1A_K04
K_02	A student is responsible for the reliability of the presented results of his/her work (and their interpretation).	p	B_K02	T1A_K02 T1A_K05 T1A_K07
K_03	A student is aware of raising his/her professional	l/p	B_K03	T1A_K01

	competences; additionally, a student improves and broadens his/her knowledge.			T1A_K05 T1A_K06
K_04	A student can formulate conclusions and describe the results of his/her own work.	p	B_K04	T1A_K01 T1A_K07

Module content:

1. Topics to be covered in the lectures

No.	Topics	Module outcome code
1	The concepts and definitions concerning the organisation of building works.	W_01 W_02 K_03
2	The technological capacity of constructional solutions. Organisational structures of building processes.	W_01 W_02 W_03
3	Schedules and network methods.	W_01 W_02 U_01 U_02 U_03
4	Linear programming and its application.	W_01 W_02 U_01 U_03
5	Integer programming and its application.	W_01 W_02 U_01 U_03
6	The reliability theory and its application in an enterprise.	W_01 W_02 U_01 U_03
7	The theory of mass service and its application. The application of simulation.	W_01 W_02 U_01 U_03
8	The application of dynamic programming in an enterprise.	W_01 W_02 U_01 U_03
9	Multi-criteria optimisation.	W_01 W_02 U_01 U_03
10	The principles of designing the contractor's temporary plant and facilities and developing a construction site. Selecting devices and production objects.	W_01 W_02 U_04
11	Designing temporary roads.	W_01 W_02 U_04
12	Designing stockpiles.	W_01 W_02 U_04
13	Auxiliary production plants and material base of a construction site. Renovation base of machines and constructional devices.	W_01 W_02

		U_04
14	Development direction of designing methods. The methods of artificial intelligence and the theory of games.	W_01 W_02 U_01
15	The OHS plan.	W_01 W_02 U_05

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

Project number	Topics	Module outcome code
1	Discussing the principles of organising building works (concepts, definitions, and methods).	W_01 W_02 W_03 K_03
2	Baseline schedule (the principles of creating it; examples).	W_01 W_02 U_01 U_02 U_03 K_01 K_02 K_03 K_04
3 - 4	A general schedule: its structure, principles of creating, schedules connected with a general schedule (employment, supplies, etc.).	W_01 W_02 U_01 U_02 U_03 K_01 K_02 K_03 K_04
5	Network schedule: basic principles of the critical path method (CPM); examples.	W_01 U_01 U_02 U_03 K_01 K_02 K_03 K_04
6	A project of developing a construction site.	W_01 W_02 U_01 U_03 U_04 K_01 K_02 K_03 K_04
7	The elements of the OHS plan.	W_01 W_02 U_05

		K_01 K_02 K_03 K_04
--	--	------------------------------

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 a project
W_02	An examination and a project
W_03	An examination and a project
U_01	An examination and a project
U_02	An examination and a project
U_03	An examination and a project
U_04	An examination and a project
U_05	An examination and a project
K_01	A project
K_02	A project
K_03	An examination and a project
K_04	A project

C. STUDENT LEARNING ACTIVITIES

ECTS summary		
	Type of learning activity	Study time/ credits
1	Contact hours: participation in lectures	30
2	Contact hours: participation in classes	
3	Contact hours: participation in laboratories	
4	Contact hours: attendance at office hours (2-3 appointments per semester)	6
5	Contact hours: participation in project-based classes	15
6	Contact hours: meetings with a project module leader	12
7	Contact hours: attendance at an examination	2
8		
9	Number of contact hours	65 <i>(total)</i>
10	Number of ECTS credits for contact hours <i>(1 ECTS credit =25-30 hours of study time)</i>	2.6
11	Private study hours: background reading for lectures	10
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	35
18	Private study hours: preparation for an examination	15
19		

20	Number of private study hours	60 <i>(total)</i>
21	Number of ECTS credits for private study hours <i>(1 ECTS credit =25-30 hours of study time)</i>	2.4
22	Total study time	125
23	Total ECTS credits for the module <i>(1 ECTS credit =25-30 hours of study time)</i>	5
24	Number of practice-based hours <i>Total practice-based hours</i>	68
25	Number of ECTS credits for practice-based hours <i>(1 ECTS credit =25-30 hours of study time)</i>	2.7