



MODULE SPECIFICATION

Module code	
Module title in Polish	Urządzenia sanitarne
Module title in English	Sanitary Facilities
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	Sanitary Pipelines and Systems
Organisational unit responsible for module delivery	Department of Piped Utility Systems
Module co-ordinator	Justyna Lisowska, PhD, Eng.
Approved by:	Prof. Andrzej Kuliczkowski, PhD hab., Eng.

B. MODULE OVERVIEW

Module type	programme-specific module (core/programme-specific/elective HES*)
Module status	optional module (compulsory/optional)
Language of module delivery	Polish/ 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 (winter semester/summer semester)
Pre-requisites	None (module code/module title, where appropriate)
Examination required	No (Yes/No)
ECTS credits	1

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

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



C. LEARNING OUTCOMES AND ASSESSMENT METHODS

Module aims	The aim of the module is to familiarise students with the issues of sanitary devices applied in sanitary installation with their location, division, and principles of operation.
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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 knows basic principles of pipeline and sewage installations.	l	IS_W10	T1A_W04 T1A_W05 T1A_W06 T1A_W07
W_02	A student has basic knowledge on the structure and method of operation as regards sanitary devices.	l	IS_W10 IS_W15	T1A_W04 T1A_W05 T1A_W06 T1A_W07
W_03	A student knows basic materials used in sanitary installations (together with the methods of joining them).	l	IS_W06	T1A_W03 T1A_W04 T1A_W05 T1A_W07
U_01	A student can correctly locate sanitary device in rooms requiring water supply and sewage disposal.	l	IS_U10	T1A_U02 T1A_U03 T1A_U05 T1A_U07 T1A_U15
U_02	A student can correctly select the material of pipeline and sewage installation.	l	IS_U15	T1A_U07 T1A_U10 T1A_U14 T1A_U15
K_01	A student can pass knowledge on economical pipeline water use to the society.	l	IS_K06	T1A_K06 T1A_K07
K_02	A student is aware of broadening his/her knowledge of sanitary devices independently.	l	IS_K03	T1A_K01 T1A_K02 T1A_K04

Module content:

1. Topics to be covered in the lectures

No.	Topics	Module outcome code
1	The elements of pipeline installations.	W_01 U_01 K_02
2	The elements of sewage installations.	W_01 U_01 K_02
3	Sanitary devices (the division of devices, their structure, and principle of operation).	W_01 W_02 U_01 K_02
4	Sanitary devices (the division of devices, their structure, and principle of operation).	W_01 W_02 U_01 K_02
5	The places of location as regards sanitary devices.	W_02 U_01 K_02



6	Assembling water supply fitting and sanitary devices.	W_01 U_01 K_02
7	The materials used in sanitary installations, the methods of connecting them, and the places of locating ducts.	W_01 W_03 U_02 K_02
8	New solutions as regards economical pipeline water use.	K_01 K_02

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	A test
W_02	A test
W_03	A test
U_01	A test
U_02	A test
K_01	Participation in the discussion during the lecture. Observation of the students work during the classes
K_02	Participation in the discussion during the lecture

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	
6	Contact hours: meetings with a project module leader	
7	Contact hours: attendance at an examination	
8		
9	Number of contact hours	17 <i>(total)</i>
10	Number of ECTS credits for contact hours <i>(1 ECTS credit = 25-30 hours of study time)</i>	0.68
11	Private study hours: background reading for lectures	3
12	Private study hours: preparation for classes	
13	Private study hours: preparation for tests	5
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	



18	Private study hours: preparation for an examination	
19		
20	Number of private study hours	8 <i>(total)</i>
21	Number of ECTS credits for private study hours <i>(1 ECTS credit = 25-30 hours of study time)</i>	0.32
22	Total study time	25
23	Total ECTS credits for the module <i>(1 ECTS credit = 25-30 hours of study time)</i>	1
24	Number of practice-based hours <i>Total practice-based hours</i>	
25	Number of ECTS credits for practice-based hours <i>(1 ECTS credit = 25-30 hours of study time)</i>	

E. READING LIST

References	<ol style="list-style-type: none">1. Panchdhari A.C.: Water Supply and Sanitary Installations. 2th edition, New Age International, 2000, p.2232. Mohinder L. Nayyar P.E.: Piping Handbook, 7th edition, McGraw-Hill Education, 20003. World Health Organization: Health aspects of plumbing, WHO Press, 2006
Module website	