

Course title:	Techniques for assessing the water and moisture tightness of structures
Course title in Polish:	Techniki oceny szczelności obiektów na działanie wody i wilgoci
Course for discipline:	Civil Engineering, Surveying and Transport

Semester:	5	Status of course:	faculty	Language:	english
Academic year:	2027/2028	Catalog number:	90/2025/26		

Coordinator of course:	dr hab.inż Barbara Francke, prof.SGGW
Lecturer od course:	dr hab.inż Barbara Francke, prof.SGGW
Executing unit:	Institute of Civil Engineering
Ordering unit:	Doctoral School SGGW
Assumptions, goals and description of the course:	The aim of the course is to prepare graduates to select effective methods for assessing the causes of dampness in building structures and to develop methods for eliminating it. The scope of the course includes: -Information on possible methods of waterproofing in selected areas of buildings, divided into methods used in new buildings and renovated buildings. Methods for assessing the effectiveness of the above-mentioned protection measures. Methods for carrying out necessary repairs.
Didactic form, number of hours:	15 hours
Teaching methods:	Lecture 8 hours + project 7 hours
Limit of people in the group:	10

Learning outcomes

KNOWLEDGE - the graduate knows and understands:	SKILLS - the graduate is able to:	COMPETENCES - the graduate is ready to:
To the extent enabling to revise the existing pradigms in the field/discipline - the world achievements, gathering theoretical background as well as general and selected detailed issues	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	Critically evaluate the achievements in the field/discipline represented
Major general development trends in the field/discipline		Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect
		Support the ethos of scientific circles and conduct independent research
The method of verification of learning outcomes:	Final examination consisting of a lecture part and assessment of a project carried out during project exercises	
Form of documentation of achieved learning outcomes:	Individual student assessment cards, entry into the eHMS system	
Elements and weights of the final grade:	Final grade: 60% – project grade, 40% – test on the subject matter of the lectures	
Place of the course:	teaching room	

Basic and supplementary literature

1. Henshell, J. The Manual of Below-Grade Waterproofing, 2nd ed.; CRC Press: Boca Raton, FL, USA, 2016	
2. Francke, B. Nowoczesne Hydroizolacje Budynków. parts 1,2,3; Wydawnictwo Naukowe PWN: Warsaw, Poland,	3.
Warunki techniczne wykonania i odbioru robót budowlanych : Część C: Zabezpieczenia i izolacje Z.4: Izolacje wodochronne tarasów, Warszawa : Instytut Techniki Budowlanej,	
4.Warunki techniczne wykonania i odbioru robót budowlanych : Część C: Zabezpieczenia i izolacje Zeszyt 5: Izolacje przeciwwilgociowe i wodochronne części podziemnych budynków, Warszawa : Instytut Techniki Budowlanej,	
5.Warunki techniczne wykonania i odbioru robót budowlanych : Część .C: Zabezpieczenia i izolacje Z.11: Pokrycia dachowe z dachówek ceramicznych i cementowych , Warszawa : Instytut Techniki Budowlanej,	
6.Warunki techniczne wykonania i odbioru robót budowlanych : Część C: Zabezpieczenia i izolacje Z.13: Przekrycia dachowe i tarasowe wykonywane w odwróconym układzie warstw, Warszawa : Instytut Techniki Budowlanej,	
7.Warunki techniczne wykonania i odbioru robót budowlanych : Część C: Zabezpieczenia i izolacje Z.12: Części podziemne budynków wykonanych z betonu wodoszczelnego: Uszczelnianie miejsc newralgicznych , Warszawa : Instytut Techniki Budowlanej	
Comments:	

Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:	30h
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Learning outcomes reference to the second degree characteristics of the National Qualification Framework (level 8) covering doctoral competences:		
Symbol:	Learning outcomes:	8 level NQF
SD1_KW01	To the extent enabling to revise the existing pradigms in the field/discipline - the world achievements, gathering theoretical background as well as general and selected detailed issues	P8S_WG
SD1_KW02	Major general development trends in the field/discipline	P8S_WG
SD1_KU05	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	P8S_UW
SD1_KK01	Critically evaluate the achievements in the field/discipline represented	P8S_KK

SD1_KK03	Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect	P8S_KK
SD1_KK08	Support the ethos of scientific circles and conduct independent research	P8S_KR