GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Introduction to Concrete Technology, PG_00059340		
Field of study	Civil Engineering		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2023/2024
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	Polish
Semester of study	1	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Katedra Wytrzymałości Materiałów -> Faculty of Civil and Environmental Engineering		
Name and surname of lecturer (lecturers)	Subject supervisor	mgr inż. Lucyna Grabarczyk	
	Teachers	mgr inż. Lucyna Grabarczyk	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	5.0	0.0	0.0	0.0	0.0	5

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	5	0.0	0.0	5

Subject objectives

Knowledge of the classification and marking of technical characteristics of concrete components, concrete mixtures and hardened concrete, classification and use of concrete, basic technological processes in concrete production.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U02] Analyse & solve engineering issues & problems in the field of civil engineering by applying appropriate and relevant established analytical, numerical and experimental methods.	The student defines and explains at a basic level the concepts and principles of concrete technology.	[SU2] Assessment of ability to analyse information
[K6_W01] Demonstrate knowledge and understanding of mathematics as well as sciences and engineering disciplines underlying civil engineering at a level necessary to achieve the other programme outcomes.	The student is able to use appropriate formulas in the process of selecting concrete components.	[SW3] Assessment of knowledge contained in written work and projects
[K6_W05] Demonstrate knowledge and understanding of research methods (obtaining information, simulations, experimental methods) in the field of civil engineering.	The student knows the basic properties of concrete components and hardened concrete	[SW3] Assessment of knowledge contained in written work and projects
[K6_U01] Apply knowledge and understanding of mathematics as well as sciences and engineering disciplines underlying civil engineering to solve engineering problems and issues.	The student knows the basics of designing the composition of a concrete mixture	[SU2] Assessment of ability to analyse information

Subject contents

Origin and definitions of concrete. Concrete ingredients: binders, aggregates, admixtures, additives according to current standards. Basic properties of binders. Types and classifications of cements. Main and secondary ingredients, chemical and mineral composition. Special cements. Aggregates; classification, origin, properties. Mixing water. Admixtures and additives. Concrete mix - consistency, workability, homogeneity. Selected methods for designing the composition of concrete mixtures. Concrete mix tests. Concrete testing.

Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test	50.0%	100.0%
Recommended reading	Basic literature	1. Jamroży Z.; Beton i jego technologie. PWN Warszawa, 2000 2. Kluz T., Eman K.: -Projektowanie betonów. 3. Neville A. M.: Właściwości betonu, Polski Cement Kraków 2000 4. Małolepszy J.; Deja J; Brylicki W, Gawlicki M: -Technologia betonu. Metody badań 5. Piasta J., Piasta W.:- Beton zwykły.	
	Supplementary literature	1. Praca zbiorowa. Budownictwo ogólne tom 1 i 2 Arkady 2005, 2006 2. Bukowski B.; Kuczyński: Budownictwo betonowe. Tom I i II. Arkady, Warszawa 1977	
	eResources addresses	Adresy na platformie eNauczanie: Wstęp do technologii betonu 2023-24 - Moodle ID: 34678 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34678	
Example issues/ example questions/ tasks being completed	1. Discuss the ingredients of concrete.2. Discuss 1 method of concrete design.3. Discuss the methods of testing concrete mixture and concrete.		
Work placement	Not applicable		

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