GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	BASICS OF CONCRETE ELEMENTS PREFABRICATION, PG_00041186		
Field of study	Civil Engineering		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Mechanics of Materials and Structures -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Marzena Kurpińska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	30.0	15.0	0.0	0.0	0.0	45

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=17787

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	45	2.0	8.0	55

Subject objectives

Learning and mastering a basic level concepts and principles of precast concrete. Knowledge of the principles of design of prefabricated concrete elements. The ability to design concrete mix, mold and cycle thermotreatment in precast concrete.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W15] has deep and adequate knowlege of civil engineering, within offered specialization and profile	246 / 5 000 The student defines and explains at a basic level the concepts and principles of concrete prefabrication. The student proposes the principles of designing precast concrete, taking into account the selection of the type of form and the purpose of the precast element, the method of compaction.	[SW3] Assessment of knowledge contained in written work and projects
[K7_U15] has advanced skills in civil engineering within offered specialization/profile	The student designs a concrete mixture, forms and thermal treatment cycle in concrete prefabrication.	[SU1] Assessment of task fulfilment

Subject contents

Course content – lecture
Precast concrete elements production plants. The methods of production of precast concrete and reinforced concrete structures. Technological processes at the precast production. Single- and multi-capable units for precast elements production. The forms, its construction and classification. Transport and laying of concrete mixture. Thickening of concrete mixture inc. vibration parameters. Special methods of thickening. Accelerated maturation of precast concrete and reinforced concrete elements: thermal treatment cycles and devices. The influence of thermal treatment on the concrete mixture properties. Precast elements storage. Ready-made elements cure. Concrete pipe production. Cellular concrete technology.

Prerequisites and co-requisites

No requirements

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Essay	100.0%	25.0%
Project	80.0%	25.0%
Midterm colloquium	50.0%	50.0%

Recommended reading	Basic literature	1. Chrabczyński G. Przemysłowa produkcja prefabrykatów, Warszawa PWN 1990 2. Biliński T., Kozak T.: -Budownictwo prefabrykowane 3. Rowiński L.- Technologia produkcji prefabrykatów budowlanych, PWN 1987 4. Bielawski J., Chrabczyński G., Hodyniuk W. Technologia prefabrykatów budowlanych; Wydawnictwo Politechniki Warszawskiej 1978
	Supplementary literature	1. Bielawski J., Cieszyński K., Hodyniuk W., Szymański E., Wojciechowski H. Przemysłowa produkcja prefabrykatów; PWN, Warszawa 1984. Mikoś J.
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Practical activites within the subject	Not applicable	

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