



Subject card

Subject name and code	BASICS OF CONCRETE ELEMENTS PREFABRICATION, PG_00041186						
Field of study	Civil Engineering						
Date of commencement of studies	February 2024	Academic year of realisation of subject			2024/2025		
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						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Marzena Kurpińska				
	Teachers		mgr inż. Lucyna Grabarczyk				
Lesson types and methods of instruction	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						
	Address on the e-learning platform: 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_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		
	[K7_W15] has deep and adequate knowledge 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		
Subject contents	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		
	Midterm colloquium		50.0%		50.0%		
	Project		80.0%		25.0%		
	Essay		100.0%		25.0%		

Recommended reading	Basic literature	<p>1. Chrabczyński G. Przemysłowa produkcja prefabrykatów, Warszawa PWN 1990</p> <p>2. Biliński T., Kozak T.: -Budownictwo prefabrykowane</p> <p>3. Rowiński L.- Technologia produkcji prefabrykatów budowlanych, PWN 1987</p> <p>4. Bielawski J., Chrabczyński G., Hodyniuk W. Technologia prefabrykatów budowlanych; Wydawnictwo Politechniki Warszawskiej 1978</p>
	Supplementary literature	1. Bielawski J., Cieszyński K., Hodyniuk W., Szymański E., Wojciechowski H. Przemysłowa produkcja prefabrykatów; PWN, Warszawa 1984. Mikoś J.
	eResources addresses	Adresy na platformie eNauczanie: Podstawy prefabrykacji elementów betonowych 2025 - Moodle ID: 45184 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=45184
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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