



Subject card

Subject name and code	Roads and Motorways I, PG_00064565						
Field of study	Civil Engineering						
Date of commencement of studies	October 2024		Academic year of realisation of subject		2026/2027		
Education level	first-cycle studies		Subject group				
Mode of study	Part-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		3.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Department of Transportation Engineering -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Marcin Stienss				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	10.0	0.0	0.0	0.0	20
	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	20		0.0		0.0	20
Subject objectives	Getting basic knowledge on geometrical design of roads, road earthworks and pavement subsoil.						
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.		After completing the course, the student has the ability to calculate the parameters of a road route in plan and longitudinal profile and to determine the parameters of a cross-section.		[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
	[K6_U03] Design engineering objects and details, processes and engineering systems by applying appropriate standards and methods of design.		After completing the course, the student has the ability to design a normal cross-section of a rural road, in accordance with the technical knowledge and requirements specified in the relevant regulations.		[SU5] Assessment of ability to present the results of task [SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
	[K6_W03] Demonstrate knowledge and understanding of the processes, established standards and design methods in the civil engineering subject area and of their limitations.		After completing the course, the student has the ability to design a preliminary road route in accordance with the technical knowledge and requirements specified in the relevant regulations.		[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge		
Subject contents	Course content – lecture Road users and vehicles. Road and motorway design process. Basic parameters for road design. Designing of cross section, vertical and horizontal alignments. Road capacity. Road safety. Earthworks - design and basic rules of execution. Road drainage.						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Design of a road section	100.0%	100.0%
Recommended reading	Basic literature	1. Węzły drogowe i autostradowe. Praca pod red. Prof. R. Krystka. WKiŁ Warszawa, 2008. 2. Gaca S., Suchorzewski W., Tracz M.: Inżynieria Ruchu drogowego. Teoria i praktyk. WKŁ Warszawa 2009 3. Edel R., Odwodnienie dróg , WKŁ, Warszawa 2009 4. Wiłun Z. Zarys geotechniki, WKŁ, 2013	
	Supplementary literature	1. Głazewski M., Nowocień E., Piechowicz K. Roboty ziemne i rekultywacyjne w budownictwie komunikacyjnym, WKŁ, 2011. 2. Rozporządzenie Ministra Infrastruktury z dnia 24 czerwca 2022 r. w sprawie przepisów techniczno-budowlanych dotyczących dróg publicznych. 3. Wytyczne rekomendowane dotyczące dróg publicznych publikowane przez Ministerstwo Infrastruktury.	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Practical activites within the subject	Not applicable		

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