



Subject card

Subject name and code	Planning of transport systems, PG_00062450						
Field of study	Transport						
Date of commencement of studies	February 2024	Academic year of realisation of subject			2024/2025		
Education level	second-cycle studies	Subject group			Specialty subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Transportation Engineering -> Faculty of Civil and Environmental Engineering						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Krystian Birr					
	Teachers	dr inż. Krystian Birr dr inż. Michał Urbaniak					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	15.0	15.0	0.0	45
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	45	5.0		25.0		75
Subject objectives	to explain what is transport planning, transport planning regulations, processes, methods nad computer programs						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_U02] presents logical and solid arguments regarding the obtained results, through analysis, synthesis of information in various technical contexts, critically approaching their interpretation	student can design plans and projects of transport networks and interchanges			[SU1] Assessment of task fulfilment		
	[K7_W01] identifies in an in-depth way phenomena related to the field of study as well as theories describing them and possible methods of analyzing processes occurring in the life cycle of technical systems	The student knows the assumptions and structures of planning documents. Is able to develop assumptions regarding transport policy or transport plan for a city or region.			[SW1] Assessment of factual knowledge		
	[K7_K02] makes competent and ethical decisions, caring for the public interest and maintaining economic, social and environmental values	student can do diagnose of transport system			[SK5] Assessment of ability to solve problems that arise in practice		

Subject contents	<p>LECTURES The objectives and the role of transport planning. Expected outcomes of transport planning. Basic relationships between transport and land use (interaction, means of transport, functional classifications). Sustainable development in transport. Planning levels (national, regional, corridor, local, etc.). Transport policy, its objectives and priorities. Contemporary directions and principles of transportation planning (including intermodal transport integration, integration with land use planning, integration with other spheres of planning.) Assessment of transport needs in short and long term planning. Planning assessment of mobility, security, capacity, environmental impact. A comprehensive study of transport behavior. Analyses of transport data (displacement, mobility, distribution of traffic, transportation demands, availability). Travel forecasts (models generation, spatial distribution, traffic distribution, network capacity). Planning of the transport system to achieve short-and long-term objectives. The stages of the development plan for transport infrastructure. Technical concepts of the development of transport networks. Planning the integrated transport points. Concepts and methodologies of evaluation of options (capacity, safety and impact on the environment, economic efficiency and financial viability). Strategies to mitigate transportation problems (mobility management, security management, software improvements, the application of ITS). Planning the development of automobile roads, rail and inland waterways. Planning the development of infrastructure of maritime and air transport. Urban transport planning. Public participation and partnership in the planning of transport networks. EXERCISES Selected calculations for planned transport network evaluation LABORATORY Traffic modeling with VISSUM</p>														
Prerequisites and co-requisites	no requirements														
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="451 573 794 607">Subject passing criteria</th> <th data-bbox="794 573 1137 607">Passing threshold</th> <th data-bbox="1137 573 1487 607">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="451 607 794 640">exercises</td> <td data-bbox="794 607 1137 640">100.0%</td> <td data-bbox="1137 607 1487 640">25.0%</td> </tr> <tr> <td data-bbox="451 640 794 674">Written exam</td> <td data-bbox="794 640 1137 674">50.0%</td> <td data-bbox="1137 640 1487 674">50.0%</td> </tr> <tr> <td data-bbox="451 674 794 712">project</td> <td data-bbox="794 674 1137 712">100.0%</td> <td data-bbox="1137 674 1487 712">25.0%</td> </tr> </tbody> </table>	Subject passing criteria	Passing threshold	Percentage of the final grade	exercises	100.0%	25.0%	Written exam	50.0%	50.0%	project	100.0%	25.0%		
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Recommended reading	<p>Basic literature</p>	<ol style="list-style-type: none"> 1. K. Wojewódzka Król, R. Rolbiecki: Infrastruktura transportu. Wydawnictwo UG, Gdańsk 2008. 2. J. Neider: Transport międzynarodowy. PWE, Warszawa 2008. 3. Współczesne technologie transportowe. L. Mindur (red.). Radom 2004. 4. K. Chwesiuk, B. Wiśnicki, I. Kotowska: Perspektywy rozwoju przewozów intermodalnych w Polsce. Wydawnictwo Akademii Morskiej w Szczecinie, Szczecin 2008. 5. Jacyna M.: Modelowanie i ocena systemów transportowych, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa 2009. 6. Jacyna M. (red.): Kształtowanie systemów w wybranych obszarach transportu i logistyki, Wydawnictwo Politechniki Warszawskiej, Warszawa 2014. 													
	<p>Supplementary literature</p>	<ol style="list-style-type: none"> 1. Zintegrowane łańcuchy transportu. I. Semenov (red.). Difin, Warszawa 2. M. Madeyski, E. Lissowska, W. Morawski: Transport rozwój i integracja. WKiŁ, Warszawa 1987. 3. J. Wesołowski, A. Zalewski: Integracja transportu szynowego w śródmieściu Łodzi. Warszawa 2009 													
	<p>eResources addresses</p>	<p>Adresy na platformie eNauczanie: Planowanie Systemów Transportowych 24/25 - Moodle ID: 37187 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=37187</p>													
Example issues/ example questions/ tasks being completed															
Work placement	Not applicable														

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