GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Planning of transport systems, PG_00062450		
Field of study	Transport		
Date of commencement of studies	February 2027	Academic year of realisation of subject	2027/2028
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 -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor		
	Teachers		

Lesson types

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	Course content – lecture 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
Prerequisites and co-requisites	no requirements

Assessment methods and criteria

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%

Recommended reading

Basic literature	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.
Supplementary literature	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
eResources addresses	
Example issues/ example questions/ tasks being completed	
Practical activites within the subject	Not applicable

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