GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Intermodal transport infrastructure , PG_00044676		
Field of study	Transport		
Date of commencement of studies	October 2020	Academic year of realisation of subject	2022/2023
Education level	first-cycle studies	Subject group	Optional 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	3	Language of instruction	Polish
Semester of study	6	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Railway Engineering -> Faculty of Civil and Environmental Engineering		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Michał Urbaniak	
	Teachers	dr inż. Michał Urbaniak	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	15.0	0.0	0.0	0.0	30

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	30	5.0	40.0	75

Subject objectives

The aim of the course is to familiarize students with issues related to intermodal transport infrastructure and the principles of its operation.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U13] able to select tools and methods, carry out assessments and simple tests of transport infrastructure and means of transport to an extent required of the specialty / learning profile	The student has structured knowledge in the field of transport infrastructure diagnostics and designing corrective actions in the field of roads and railways. The student is able to perform simple diagnostic tests and plan maintenance works for selected transport objects.	
[K6_W18] has proficiency in transport infrastructure as appropriate for their specialty	The student is able to develop simple technical, technological and organizational documentation and formulate specifications for simple intermodal transport facilities. The student has structured knowledge in the design, construction and maintenance of intermodal transport infrastructure.	

<table>
<tr><td>Subject contents</td><td>LECTURE

1. Division of multimodal transport
2. Intermodal transport and its infrastructure
3. Intermodal transport systems
4. Types of reloading points and their tasks
5. Gauge
6. Characteristics and types of containers
7. Technical characteristics of the most important lines of intermodal transport
8. Technical requirements for intermodal transport terminals
9. Terminal equipment and their operational equipment
10. Principles of designing terminals with high, medium and low speed
11. Principles and criteria of designing intermodal terminals

TUTORIALS

Calculation of parameters and equipment of intermodal terminals. Terminal location selection</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Information on rail and road transport infrastructure and means of transport</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>tutorials</td><td>60.0%</td><td>50.0%</td></tr><tr><td>test</td><td>60.0%</td><td>50.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>Rydzykowski W., Intermodal transport, Poznań 2015
Jacyna M., Pyza D., Jachimowski R., Intermodal transport. Designing reloading terminals, PWN, Warsaw 2017
Poliński J., The role of railways in intermodal transport, Railway Institute, Warsaw 2015.</td></tr><tr><td>Supplementary literature</td><td>Grulkowski, Koc, Kędra, Nowakowski, Drogi szynowe, Wyd. PG. Gdańsk 2013</td></tr><tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:
Infrastruktura Transportu Intermodalnego - r. 2022/2023 - Moodle ID: 25649
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=25649</td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>1. What are transition points? List their types
2. Requirements for railway infrastructure for intermodal transport
3. Basic requirements for the location of intermodal terminals
4. Name the individual elements of the terminal (Annex Document 1)
5. Name the equipment for horizontal transport of containers in the terminal</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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