GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Planning and organization of railway works, PG_00062463		
Field of study	Planowanie i organizacja robót kolejowych		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	
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	Faculty of Civil and Environmental Engineering -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Zbigniew Kędra	
	Teachers	dr inż. Zbigniew Kędra dr inż. Kamila Szwaczkiewicz	

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

eNauczanie source addresses:

Moodle ID: 2329 Planowanie i organizacja robót kolejowych 2025/26 (Transport II st.)
https://enauczanie.pg.edu.pl/2025/course/view.php?id=2329

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

The aim of the course is to teach students how to plan track works in the field of: costing, organization and scheduling of repairs railway works.

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	It presents logical arguments for the adopted technological and organizational solutions.	[SU5] Ocena umiejętności zaprezentowania wyników realizacji zadania [SU2] Ocena umiejętności analizy informacji
[K7_K02] makes competent and ethical decisions, caring for the public interest and maintaining economic, social and environmental values	Makes competent and economical decisions when planning and organizing railway works	[SK5] Ocena umiejętności rozwiązywania problemów występujących w praktyce
[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	Has knowledge in the field of planning and organization of railway works. Has knowledge in the field of technology of construction and repair of railway lines.	[SW1] Ocena wiedzy faktograficznej

<table>
<tr><td>Subject contents</td><td>Course content – lecture
Characteristics and scope of rail road maintenance. Planning railway works. Bill of quantities. Cost estimation rules for railway works. Types and rules of execution of work schedules. Rules for preparing line schedules. Rules for preparing complex schedules. Technology and organization of railway works. Mechanization of railway works.
Course content – laboratory
Elaboration of technology, organization and planning of selected track works (track tamping, ballast cleaning, rail grinding, track and turnout ballasting, material transport, earthworks). Execution of the bill of quantities of railway works. Preparation of cost estimate for railway works. Planning the organization of railway works. Schedule of a repair. Discussion and presentation of the planned repair.
Course content – project
Elaboration of technology, organization and planning of selected track works (track tamping, ballast cleaning, rail grinding, track and turnout ballasting, material transport, earthworks). Execution of the bill of quantities of railway works. Preparation of cost estimate for railway works. Planning the organization of railway works. Schedule of a repair. Discussion and presentation of the planned repair.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Knows the basic technologies of railway works and the basics of their planning.</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>Lecture</td><td>50.0%</td><td>40.0%</td></tr>
<tr><td>Laboratory</td><td>100.0%</td><td>30.0%</td></tr>
<tr><td>Exercises</td><td>60.0%</td><td>30.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Kędra Z.: Technologia robót torowych. Wydawnictwo Politechniki Gdańskiej, Gdańsk, 2017.

Warunki techniczne wykonania i odbioru robót nawierzchniowo-podtorzowych. Id-114, PKP PLK S.A.

Kędra Z.: Materiały dydaktyczne z wykładów do przedmiotu Utrzymanie dróg szynowych.</td></tr>
<tr><td>Supplementary literature</td><td>KNR 2-37 Nawierzchnie kolejowe w torach o prześwicie normalnym

KNR W-2-37 Budowa i remont nawierzchni torowych, tory o prześwicie normalnym 1435 mm

KNP 16 Roboty torowe</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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