University of Gdańsk

Subject card

Subject name and code	Transport Operations Management, PG_00200407						
Field of study	Logistics and Mobility						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2027/2028		
Education level	Bachelor's studies		Subject group		Obligatory subject group in the field of study 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	2		Language of instruction		English English		
Semester of study	4		ECTS credits		4.0		
Learning profile	academic		Assessment form		credit		
Conducting unit	Department of Transport Policy and Economic Integration -> Faculty of Economics -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Dorota Książkiewicz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	0.0	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		0.0		55.0	100
Subject objectives	To equip students with comprehensive knowledge and skills related to effective management of transport operations. The course aims to develop the ability to plan, organize, and control transport operations across different transport modes, as well as to understand their specific characteristics. Students gain knowledge of the tools used in transport operations management and an awareness of the risk factors associated with these processes.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[LML3_K03] participates in the preparation of logistics and mobility projects, being able to reconcile legal, economic, ecological, political and social requirements	participates in the preparation of transport operations management projects, being able to reconcile legal, economic, environmental, political, and social requirements related to various modes of transport.	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
[LML3_W08] has knowledge of the main and logistics processes in companies, as well as the changes in these processes, knows what their causes, course, scale, consequences are and what is the impact of external stakeholders on them	has knowledge of basic and logistical processes occurring within transport enterprises, understands the causes, course, scale, and consequences of these processes, as well as the impact of external stakeholders on them.	[SW2] presentation/project/paper/ report
[LML3_W02] has advanced knowledge of different types of entities that require logistics support or provide logistics services	Has advanced knowledge about various types of entities operating in the transport sector that require support in managing transport operations or provide transport services, taking into account the specific characteristics of different transport modes.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[LML3_U04] is able to predict the course of logistics and mobility processes and systems	is able to forecast the course of processes and systems involved in transport operations management, taking into account the specific characteristics of different transport modes.	[SU1] oral statement/conversation/ discussion [SU2] presentation/project/paper/ report
[LML3_W07] has knowledge of the economic and financial principles of operation and management of business entities and organizations that require logistics support or provide logistics services, as well as legal, organizational, moral and ethical norms and rules of operation of public institutions	has knowledge of the basic economic and financial principles of operation and management of entities and organizations operating in the transport sector, which require support in transport operations management or provide transport services, as well as understanding legal, organizational, moral, and ethical norms and rules governing public institutions related to transport.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report

Subject contents

1. Introduction to Transport Operations Management
2. Modes of Transport and Their Characteristics
3. Legal aspects of transport operations; carrier liability.
4. Transport Planning and Scheduling
5. Fleet Management and Maintenance
6. Load capacity planningand lifecycle cost optimization.
7. Performance Measurement and KPIs in Transport Operations
8. Risk Management in transport operations
9.Technology and Innovation in Transport Operations - Impact of ITS, telematics, automation, and digitalization on transport efficiency.
10. Sustainable transport and green technologies

Consultations will be used to clarify more complex issues related to the class topics.

Prerequisites and co-requisites

Basic knowledge of the transport services market

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
in-class discussion	0.0%	20.0%
presentation	0.0%	80.0%

Recommended reading

Basic literature

Jean Paul Rodrigue, The Geography of Transport Systems 6th Edition, Routledge 2024.

Darren Prokop, Transportation Operations Management, Elsevier Science Publishing Co Inc. 2022.

Wong, W., Anwar, M. F., & Soh, K. L. (2024). *Transportation 4.0 in supply chain management: State-of-the-art and future directions towards 5.0 in the transportation sector*. *Operations Management Research, 17*, 683710.

	Supplementary literature	Ulmer, M. W., Goodson, J. C., Mattfeld, D. C., & Hennig, M. (2023). Recent advances in integrating demand management and vehicle routing: A methodological review. *European Journal of Operational Research, 306*(2), 499518. Logistics Transportation Systems, ELSEVIER UK 2020.
	eResources addresses	
Example issues/ example questions/ tasks being completed	What are the principles of route selection and optimization in road transport? What factors influence the efficiency of cargo handling operations in seaports?	
Work placement	Not applicable	

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