GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Automation of Processes and Means of Transportation, PG_00060674		
Field of study	Transport and Logistics		
Date of commencement of studies	October 2026	Academic year of realisation of subject	2028/2029
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	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Marine Structures Mechanics and Technology -> Institute of Naval Architecture -> Faculty of Mechanical Engineering and Ship Technology -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Ryszard Pyszko	
	Teachers		

Lesson types

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	2.0	18.0	50

Subject objectives

The objectives of the course are to familiarize students with the issues: - improving efficiency in freight and passenger transport processes, - efficient use of means of transportation, - reducing adverse environmental effects associated with transportation, -providing the needed integration of various modes of transport, - Identification of constraints of a technical, economic, organizational nature.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U01] can obtain information from literature, databases and other sources; verify and systematize the information obtained, interpret it and draw conclusions, formulate and justify opinions	The student is able to carry out the selection of the means of transport for the task set in the order	[SU1] Assessment of task fulfilment [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information
[K6_U04] is skilled in self-educating in order to develop his professional qualifications, is prepared to work in an industrial environment, applies the principles of occupational health and safety	The student is familiar with the regulations applied in the transport industry regarding the transport environment and health and safety rules	[SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task
[K6_W04] has well established knowledge in the field of computer science, electronics, automation and control, information technology and computer graphics, useful for understanding the possibilities of applying them in transport	The student is able to develop on his own (using a spreadsheet) to carry out the selection of a carrier for a given transportation task.	[SW3] Assessment of knowledge contained in written work and projects [SW1] Assessment of factual knowledge

<table>
<tr><td>Subject contents</td><td>Course content – lecture

1.Automation of transport processes and means 2.Logistics chain
3.Warehousing
4.Open and semi-open warehouse 5.Distribution channels
6.Inventory in logistics 7.Distribution channels
8.Warehouse susceptibility 9.Commodity picking 10.RIFD system11.Storage regulations 12.Warehouse automation13.Automation of means of transport 14.Autonomy of means of transport</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></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>60.0%</td><td>50.0%</td></tr>
<tr><td>Exercises</td><td>60.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
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<tr><td>Basic literature</td><td>Wojewódzka-Król Krystyna, Załoga Elżbieta,Transport New Challenges; Wydawnictwo Naukowe PWN S.A.; ISBN: 978-83-01-18462-9;Warszawa, 2016W. Choromanski, I. Grabarek. M. Kozłowski, M. Czerepicki, K. Marczuk, Autonomous vehicles and autonomous transport systems, Wydawnictwo Naukowe PWN, Warsaw, 2020Emilia SCZANIECKA, Angelika SURMA* AUTOMATIC HIGH STORAGE STORAGE AS THE FUTURE OF STORAGE - JOURNAL OF TRANSLOGISTICS - article.Translated with www.DeepL.com/Translator (free version)</td></tr>
<tr><td>Supplementary literature</td><td>Journals, websites of institutions dealing with maritime economy, transport

Portal Morski - Wiadomości morskie z kraju i ze świata</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>Explain the concept of automation and means of transportation?Explain how the concept of autonomy of means of transportation is to be understood?What is storage, phases, storage systems?</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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