

Course name:**TRANSPORT LOGISTICS**

ECTS	4
Course status	obligatory
Course final assesement/evaluation of outcomes	exam
Prerequisites	

Main field of study:**TRANSPORT AND LOGISTIC**

Profile of study	General-academic
The code of studies (education level)	SI (bachelor)
Semester of studies	winter / summer
Language of instruction	English

Course offered by:

Name of faculty offering the course	Faculty of Production and Power Engineering
Name of department offering the course	Department of Bioprocesses Engineering, Energetics and Automatization
Course coordinator	Anna Krakowiak-Bal, PhD, DSc

Learning outcomes of the course:

Symbol of outcome	Description of learning outcome	Reference to	
		main field of study outcomes	discipline#
KNOWLEDGE – student knows and/or understands:			
LTR_W1	legal, economic and organizational conditions of transport	TIL1_W06	TZ
LTR_W2	basic concepts related to transport logistics, as well as the main transport shocks in the country and the world	TiL_W16	TZ
SKILLS – student is able to:			
LTR_U1	identify phenomena influencing delivery planning according to various criteria	TIL1_U07	TZ
LTR_U2	Interpret technical and operational parameters of transport means and optimize their use and loading devices	TIL1_U11	TZ
SOCIAL COMPETENCE- student is ready to:			
LTR_K1	responsible performance of tasks in the field of planning and organizing transport logistics, including compliance with the principles of professional ethics	TIL1_K06	TZ

Teaching contents:

Lectures		15	hours
Topics of the lectures	<ol style="list-style-type: none"> 1. Basic concepts related to transport logistics (transport services, transport needs, transport process) 2. Criteria for assessing the transport modes and selection of technical measures in transport processes 3. Measures of effectiveness of transport processes 4. Transport costs 5. Development of intermodal technologies 6. Logistic systems 		
Accomplished learning outcomes	LTR_W1, LTR_W2, LTR_K1		
Verification methods, rules and criteria of outcome assessment	test (40 %)		
Classes		40	hours
Topics of the classes	<ol style="list-style-type: none"> 1. Economic and organizational aspects of road transport 2. Economic and organizational aspects of rail transport 3. Economic and organizational aspects of maritime transport 4. Economic and organizational aspects of inland waterway transport 5. Economic and organizational aspects of air transport 6. Allocation problems - planning goods delivery using the cost minimization criterion (Northwest Angle Method, MEM, Vogel method, potential method), 7. Pickup Delivery Problem in logistics supply chain management - salesman problem 8. The shortest path in the graph 9. Costs in transport 10. Indicators of the use of means of transport and loading devices 		
Accomplished learning outcomes	LTR_U1, LTR_U2		
Verification methods, rules and criteria of outcome assessment	projects, test (60 %)		
References:			
Basic	<ol style="list-style-type: none"> 1. Topolšek, Darja & Čižiūnienė, Kristina & Cvahte Ojsteršek, Tina. (2018). Defining transport logistics: A literature review and practitioner opinion based approach. <i>Transport</i>. 33. 1196-1203. 10.3846/transport.2018.6965. 2. Farahani, R. (2011). <i>Logistics operations and management: concepts and models</i>. Elsevier. 3. Park, S. (2020). Quality of transport infrastructure and logistics as source of comparative advantage. <i>Transport policy</i>, 99, 54-62. 		
Supplementary	Kraskowiak-Bal, A., Lasocka, T., Salamon, J., Findura, P. [2014], The use of multiple-criteria ranking methods for designing public transport systems. <i>Infrastruktura i Ekologia Terenów Wiejskich</i> , (IV/3		
Structure of learning outcomes:			
Discipline: TZ		4	ECTS**

Structure of student activities:				
Contact hours		65	hours	2,6 ECTS**
including:	lectures	15	hours	
	classes and seminars	40	hours	
	consultations	5	hours	
	participation in research	...	hours	
	mandatory traineeships	...	hours	
	participation in examinations	5	hours	
e-learning		...	hours	... ECTS**
student own work		35	hours	1,4 ECTS**

* where 10 hours of classes = 1 ECTS (in case of 15 h → 2 ECTS)

** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes

academic discipline code: RZ - animal science and fishery, PB - biological sciences, etc.