

Polish course name	INFRASTRUKTURA LOGISTYCZNA
English course name	LOGISTICS INFRASTRUCTURE
Course code	WIP-MDL-D1-LI-05
Field of study	Materials design and logistics
Level of qualification	First degree
Form of study	Full-time
Semester	5
Number of ECTS points	2
Ways of assessment	Test

Number of hours per semester

Lecture	Seminar	Classes	Laboratory	Project
15		15		

TEACHERS:

Dr Mateusz Chłąd,

Dr hab. inż. Anna Brzozowska, prof. PCz.,

Dr Judyta Kabus.

COURSE OBJECTIVES:

- › **C1** Acquiring the knowledge and skills necessary for operational logistics management.
- › **C2** Getting to know the issues related to the logistics infrastructure.

PRELIMINARY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES:

1. The student knows the basic issues of logistics and logistic management.
2. The student knows the basic issues of business management, especially in the context of costs, finance and capital.
3. The student is able to analyze the logistic activity in the functional areas of the economic entity.

COURSE CONTENT

LECTURE

- › **L1, L2** Overview of the lecture schedule. Introduction to issues related to logistics infrastructure, basic terms.
- › **L3** Division and main elements of logistics infrastructure.
- › **L4** Logistics infrastructure - basic concepts.
- › **L5, L6** Logistics infrastructure - broken down by branches.
- › **L7, L8** Storage and handling infrastructure.
- › **L9, L10** The role of logistics centers in the logistics infrastructure.
- › **L11, L12** Packaging infrastructure.
- › **L13, L14** IT infrastructure.
- › **L15** The revision and supplementation of the material.

CLASSES

- › **C1** Introductory class - discussion of the subject matter and rules for passing the course.
- › **C2** Logistics system, process and structure. Division of logistics infrastructure.
- › **C3, C4** Logistics centres versus logistics infrastructure.
- › **C5** Demonstrate how to solve storage decision-making tasks.
- › **C6** Solving storage tasks.
- › **C7** Solving tasks on transport decisions, helping to choosing the right mode of transport.
- › **C8** Solving tasks relating to transport decisions.
- › **C9, C10** Selecting a suitable site for logistics facilities. Demonstration of how to solve tasks with topics on location decisions.
- › **C11** Addressing the issue of packaging infrastructure.
- › **C12, C13** Case study on logistics infrastructure in terms of IT systems used.
- › **C14** Repetition of messages and completion of missing information.
- › **C15** Colloquium.

BASIC REFERENCES

1. Kozłowski M., Porty lotnicze - infrastruktura, eksploatacja i zarządzanie, Oficyna Wydaw. Politechniki Warszawskiej, Warszawa 2015 r.
2. Liberadzki M., Finansowanie infrastruktury transportowej w Polsce: innowacyjne instrumenty finansowe: publiczno-prywatne partnerstwo, Oficyna Wydaw. Szkoła Główna Handlowa, Warszawa 2014 r.

3. Markusik S., Infrastruktura logistyczna w transporcie/T. 3 Cz. 1, Wydaw. Politechniki Śląskiej, Gliwice 2013 r.
4. Szarata A., Modelowanie podróży wzbudzonych oraz tłumionych zmianą stanu infrastruktury transportowej. Inżynieria lądowa, Wydaw. Politechniki Krakowskiej im. Tadeusza Kościuszki, Kraków 2013 r.
5. Brzozowska A., Lis T., Najważniejsze porty transportu morskiego i śródlądowego w Niemczech i Polsce, Logistyka nr 6/2013 r.
6. Brzozowska A., Terminale kontenerowe w sektorze transportu morskiego - przykład BCT, Logistyka nr 5/2013.
7. Brzozowska A., Zarządzanie w globalnych sieciach transportowych, Gospodarka Materiałowa & Logistyka, nr 10 (1226)/ 2013.
8. Kozubek P. R., Efektywność inwestycji infrastrukturalnych w transporcie kolejowym: analiza i ocena, Wydaw. Politechniki Świętokrzyskiej, Kielce 2012 r.
9. Łukasiewicz A., Interesariusze w przedsięwzięciach infrastruktury drogowej i kolejowej, Instytut Badawczy Dróg i Mostów, Warszawa 2012 r.
10. Towpik K., Koleje dużych prędkości: infrastruktura drogi kolejowej, Oficyna Wydaw. Politechniki Warszawskiej, Warszawa 2012 r.
11. Kozubek P. R., Ocena transportowych inwestycji infrastrukturalnych współfinansowanych z funduszy Unii Europejskiej, Instytut Nauk.-Wydaw. SPATIUM, Radom 2011 r.
12. Markusik S., Infrastruktura logistyczna w transporcie/T. 2, Wydaw. Politechniki Śląskiej, Gliwice 2010 r.
14. Brzozowska A., Organization of Transport. Theoretical Approach, (in:) Brzozowska A., red. Economical and Organizational Aspects of Transportation.
15. Kabus J., Znaczenie technologii informatycznych w zarządzaniu łańcuchem dostaw, [w:] Logistyka nr 6, 2014, s. 14305-14310.

SUPPLEMENTARY REFERENCE MATERIALS

1. Brzozowska A., Miler R. K., Implementation of the Green Shipping Practices as an Element of the Maritime Transport Restructuring Processes, Publishing House: Foundation of the Cracow University of Economics, Kraków 2017 r.
2. Kabus J., Miciuła I., Piersiała L., Risk in Supply Chain Management, [w:] European Research Studies Journal, Vol. 23, Iss. 4, 2020 r., s. 467-480.

3. Nowicka-Skowron M., Brzozowska A., Nowakowska-Grunt J., Systemy transportowe a polityka zrównoważonego rozwoju w Unii Europejskiej (w:) Wielowymiarowość zarządzania XXI wieku (red.) Jakubiec Marcin, Barcik Agnieszka Bielsko-Biała: Wydawnictwo Naukowe Akademii Techniczno-Humanistycznej w Bielsku-Białej, 2018 r.
4. Chłąd M., Analysis and Development of Sustainable Transport Development in Selected EU Countries, Institute of Economic Research, Toruń, 2019 r.
5. Chłąd M., Nowakowska – Grunt J., Directions of the Transport System Development on the Example of Selected Cities, Transportation Research Procedia, Vol.39, 2019 r.

LEARNING OUTCOMES

- › **EU1** The student has knowledge and can see the current trends in infrastructure development.
- › **EU2** The student knows the basic concepts related to logistics infrastructure, can characterize its elements and make a division.

TEACHING TOOLS

- › Lecture with the use of audiovisual means.
- › Exercises - reference materials, textbook and script.

WAYS OF ASSESSMENT (F – FORMATIVE, P – SUMMATIVE)

- › **F1.** Assessment of the implementation of tasks included in the curriculum.
- › **F2.** Assessment of the mastery of the teaching material being the subject of exercises - final test.
- › **P1.** Assessment of the mastery of the teaching material within the lectures - final test.

STUDENT WORKLOAD

Form of activity	Number of hours	ECTS
Contact hours with the teacher		
Lectures	15	0,6
Seminar		

Classes	15	0,6
Laboratory		
Project		
Test	3	0,12
Exam		
Total contact hours	33	1,32
Student's own work		
Getting acquainted with the indicated literature	7	0,28
Preparation for seminar		
Preparation for classes		
Preparation for lab		
Project preparation		
Consultation	4	0,16
Preparation for the test	6	0,24
Total student's own work	17	0,68
Total number of hours/ ECTS points for the course	50	2,0

ADDITIONAL INFORMATION

Timetable of classes	https://wip.pcz.pl/dla-studentow/plan-zajec/studia-stationne
Information about the consultation (time + place)	https://wip.pcz.pl/dla-studentow/konsultacje-dla-studentow

MATRIX OF LEARNING OUTCOMES REALISATION

Learning outcome	Reference of given outcome to outcomes defined for whole program	Course objectives	Course content	Ways of assessment
EU 1	K_W01, K_W02, K_U04, K_K01,	C1, C2	L1 - L15, C1 - C15	F1, F2, P1

EU 2	K_W01, K_W02, K_U04, K_K01,	C1, C2	L1 - L15 C1 - C15	F1, F2, P1
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FORM OF ASSESSMENT - DETAILS

EU1 The student has knowledge and can see the current trends in infrastructure development.

- › 2,0 The student does not know the basic rules of logistics infrastructure.
- › 3,0 The student knows the basic rules of logistics infrastructure , but is unable to use it in practice.
- › 3,5 The student almost knows the basic rules in the field of logistics infrastructure.
- › 4,0 The student knows the general knowledge of logistics infrastructure well and understands the current development trends and is able to use them in practice.
- › 4,5 Student has almost very good information on logistics infrastructure.
- › 5,0 The student knows the basic rules of logistics infrastructure very well and knows how to use it in practice, relating it to the current development trends.

EU2 The student knows the basic concepts related to logistics infrastructure, can characterize its elements and make a division.

- › 2,0 The student is not able to define the scope of the logistics infrastructure.
- › 3,0 The student knows the basic rules of logistics infrastructure, but is unable to use it in practice.
- › 3,5 The student can almost define the basic rules in the field of logistics infrastructure.
- › 4,0 The student is able to present general knowledge of logistics infrastructure in organizational and economic terms and is able to use it in practice.
- › 4,5 The student is able to determine information in the field of logistics infrastructure almost very well.
- › 5,0 The student knows the basic rules of logistics infrastructure very well and knows how to use it in practice, relating it to the current development trends.