



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Design of internal transport systems [N1Log2>PSTW]

### Course

Field of study

Logistics

Year/Semester

4/7

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

part-time

Requirements

elective

### Number of hours

Lecture

8

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

8

### Number of credit points

2,00

### Coordinators

dr inż. Piotr Lubiński

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### Lecturers

### Prerequisites

Bases of the mechanical engineering and transport equipments Fundamentals of the use of machines Bases of the organization of transport systems Ability of using the knowledge acquired earlier Ability of the independent thinking and the constructive criticism of solutions Ability of having a factual discussion and the teamwork Understanding of the need of work in a team. Ability of putting own substantial contribution into the work of the entire team.

### Course objective

Acquainting students with the process of designing the close transport systems. Mastering the ability of designing close transport systems.

### Course-related learning outcomes

Knowledge:

1. The student has knowledge on the substance of the contextual sciences in reference to the close transport systems [P6S\_WG\_01]

2. The student has a wide knowledge on the role of man in the formation of the organizational culture and ethics in the process of design and management of interial transport systems [P6S\_WK\_06]

### Skills:

1. The student is able to use the obtained theoretical knowledge for describing and analyzing causes and results of course of processes and social and technical phenomena, he is able to formulate own opinions of internal transport systems [P6S\_UW\_07]
2. The student is able to interpret and explain correctly technical, political, legal, economical phenomena, as well as mutual relations between these phenomena [P6S\_UO\_01]

### Social competences:

1. Student can notice causally consecutive relations in the realization of established purposes and set the ranking of importance of alternative or competitive tasks [P6S\_KK\_01]
2. Student is aware of the interdisciplinary character of the knowledge from the range of environmental protection engineering; he has the skill to solve composite environmental problems of the organization and forms interdisciplinary teams [P6S\_KR\_02]
3. is willing to cooperate and work in a team on solving problems from the area of the studied subject [P6S\_KO\_01]

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

### -forming assessment:

project: on basis of the evaluation of the realized following stages of the project and the knowledge of topics necessary for its realization. The work within the project team is important

lectures: basing on questions asked during the lecture, which refer to previous lectures on the subject.

### - final assessment:

project: public presentation of the project (in front of the entire group) and discussion

lectures: final conversation in form of discussion: 2-3 students discuss with the examining person topics from lectures. The accession to the exam is based on positive assessment of the project. The exam is passed when the student gives correct answers for the majority of questions

## Programme content

The course of lectures starts with the description of the process of storing and operation consisting in it; types of close transport, sorts of close transport equipment and rules for their selection. Next, the process of designing a close transport system will be shown. Also possibilities of using simulations for designing systems of the close transport will be presented.

## Course topics

Lectures include analysis of internal logistics within enterprises, aimed at assessing the company's condition and opportunities for improvement.

The benchmark for modernizing the internal transport system is the actual flow of materials, raw materials, work in progress, and finished goods.

Other types of classes offer practical content related to a specific enterprise selected by the students. The final result is a project, implemented in a team of two or three.

## Teaching methods

### -forming assessment:

project: on basis of the evaluation of the realized following stages of the project and the knowledge of topics necessary for its realization. The work within the project team is important

lectures: conversation lecture, basing on questions asked during the lecture, which refer to previous lectures on the subject.

### - final assessment:

project: public presentation of the project (in front of the entire group) and discussion

lectures: final conversation in form of discussion: 2-3 students discuss with the examining person topics from lectures. The accession to the final conversation is based on positive assessment of the project. The exam is passed when the student gives correct answers for the majority of questions

## Bibliography

Basic:

1. Korzeń Z., Logistyczne systemy transportu bliskiego i magazynowania, t. 1 i 2, Biblioteka logistyka, Wydawnictwo ILiM, Poznań, 1998.
2. Pfohl H. Ch., Systemy logistyczne, Wydawnictwo ILiM, Poznań, 1998.
3. Fechner I., Centra logistyczne cel-realizacja-przyszłość, Wydawnictwo ILiM, Poznań, 2004.
4. Lubiński P., Projektowanie systemów transportu wewnętrznego, WPP, Poznań, 2013.

Additional:

1. Korzeniowski A., Szyszka G., Skrzypek M., Opakowania w systemach logistycznych , Wydawnictwo ILiM, Poznań, 2001.
2. Mendyk E., Ekonomia i organizacja transportu, WSL, Poznań, 2002.
3. Głowacka-Fertsch D., Fertsch M., Zarządzanie produkcją, WSL, Poznań, 2004.
4. Polański A., Mechanizacja wewnętrznego transportu, WNT, Warszawa, 1963.
5. Katalogi i czasopisma branżowe

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	16	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	34	1,00