



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Design of internal transport systems

### Course

Field of study

Logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

4/7

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lecture

15

Tutorials

Laboratory classes

Projects/seminars

15

Other (e.g. online)

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

Ph.D., Eng. Piotr Lubiński

Mail to: [piotr.lubinski@put.poznan.pl](mailto:piotr.lubinski@put.poznan.pl)

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

### 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 technical systems [P6S\_WK\_06]
3. The students has basic knowledge of: engineering graphics, construction and technology as well building and operation machines in transport systems [P6S\_WK\_07]

#### 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 and choose critical data and methods [P6S\_UW\_07]
2. The student is able to economically evaluate a selected problem within the framework of [P6S\_UW\_06]
3. The student is able to identify and formulate the task designe (engineering) of a practical nature, characteristic of logistics of transport systems [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.

### 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. Logistyczne systemy transportu bliskiego i magazynowania, t.1 i 2, Biblioteka logistyka, Korzeń Z, Wydawnictwo ILiM, Poznań, 1998
2. Systemy logistyczne, Pfohl H.Ch., ILiM, Poznań, 1998
3. Centra logistyczne cel-realizacja-przyszłość, Fechner I., ILiM, Poznań, 2004
4. Projektowanie systemów transportu wewnętrznego, Lubiński P., WPP, Poznań, 2013
5. Management Principles and Practices, Griffin R.W. 2011

Additional

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



### Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	35	1,5
Student's own work (literature studies, preparation for project, preparation for final conversation, project preparation) <sup>1</sup>	40	1,5

<sup>1</sup> delete or add other activities as appropriate