



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Operating of logistics systems

### Course

Field of study

logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

15

Other (e.g. online)

Tutorials

Projects/seminars

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

Prof. Marek Fertsch, Ph.D., D.Sc., Eng.,

Mail to: [marek.fertsch@put.poznan.pl](mailto:marek.fertsch@put.poznan.pl)

Phone: 61 665 34 16

Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

### Prerequisites

The student starting this subject should have basic knowledge of logistics and logistics engineering. He should also be able to obtain information from specified sources and be willing to cooperate as part of a team.

### Course objective

The student acquires knowledge, skills and social competences related to the operation of logistics systems.

### Course-related learning outcomes

Knowledge



1. The student knows the basic issues of construction, technology and techniques related to the operation of logistics systems [P6S\_WG\_01]
2. The student knows the basic issues of mechanics, construction and operation of machines used in logistics systems [P6S\_WG\_02]
3. The student knows the basic issues of mathematics and statistics in researching the structure of economic and logistic phenomena [P6S\_WG\_04]

#### Skills

1. The student is able to use appropriate experimental and measurement techniques to solve a problem within the studied subject, including computer simulation used in the operation of logistics systems. [P6S\_UW\_03]
2. The student is able to recognize systemic and non-technical aspects in engineering tasks, as well as socio-technical, organizational and economic aspects. [P6S\_UW\_04]
3. The student is able to select appropriate tools and methods to solve a problem related to the operation of logistics systems, as well as use them effectively. [P6S\_UO\_02]
4. The student is able to identify changes in requirements, standards, regulations, technical progress and labor market reality in the area of logistic system operation, and on their basis determine the need to supplement knowledge [P6S\_UU\_01]

#### Social competences

1. Student can plan and manage in an entrepreneurial manner [P6S\_KO\_01]
2. The student is aware of initiating activities related to the formulation and transfer of information and cooperation in society in the area of operation of logistics systems. [P6S\_KO\_02]
3. The student is aware of cooperation and team work to solve problems in the area of operation of logistics systems [P6S\_KR\_02]

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

assessment based on laboratory results

grade based on written credit

#### Programme content

Lecture: Basics of technical systems operation. Rules for operating technical systems. Logistic system as a technical system. Controlling the operation of technical systems. The concept of logistics support as the basis for the operation of the logistics system. Designing a logistics system in terms of its operation. Planning of logistics system operation.



Laboratory: RFID technology. Designing logistic labels. Planning of transport routes. Performing basic registration activities in the WMS program. Area development project in the logistics system. Using the racks - preliminary activities. Use of racks - control of racks during operation.

### Teaching methods

Lecture: multimedia presentation, illustrated with examples on the board.

Projects: multimedia presentation illustrated with examples given on the board and performance of tasks given by the teacher.

### Bibliography

Basic

1. Legutko S., Podstawy eksploatacji maszyn, Wydawnictwo Politechniki Poznańskiej, Poznań, 1999.
2. Blanchard B., Logistics engineering and management, Prentice – Hall, Inc., Englewood Cliffs, New Jersey, 1992.
3. Fertsch M. (red.), Elementy inżynierii logistycznej, Wydawnictwo ILiM, Poznań, 2017.

Additional

1. Pfohl H.- Ch., Systemy logistyczne. Podstawy organizacji i zarządzania, Wydawnictwo ILiM, Poznań, 2002.
2. Don Taylor G., Introduction to logistics Engineering, CRC Press, Taylor& Francis Group, Boca Raton, London, New York, 2009.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation e written pass, laboratory preparation) <sup>1</sup>	20	1,0

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