



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Logistic systems engineering

### Course

Field of study

Management and Production Engineering

Area of study (specialization)

Production Company Logistics

Level of study

Second-cycle studies

Form of study

part-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

elective

### Number of hours

Lecture

12

Laboratory classes

Tutorials

Projects/seminars

10

Other (e.g. online)

### Number of credit points

3

### Lecturers

Responsible for the course/lecturer:

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Faculty of Mechanical Engineering

Piotrowo 3, 60-965 Poznań

Responsible for the course/lecturer:

### Prerequisites

The student should have knowledge of the basics of production management. He can indicate the main, auxiliary and service processes on a selected example in the company, from the inquiry to the shipment of the final product.

### Course objective

Presentation of the functioning of the logistics system in a production and distribution company.

Indication of the areas of logistics activities and their importance in various types of enterprises.

### Course-related learning outcomes

Knowledge

The student achieved knowledge of the basics of logistics, the basics of production management.



### Skills

The student knows the type and form of production organization, can analyze the flow of materials.

### Social competences

The student is able to use engineering, logistic and IT knowledge to define specific problems in production and propose a solution to them. Understanding the need to expand your competences, readiness to cooperate within the team.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

#### Lecture:

Case study summarizing the tasks carried out during the exercises. Completing 55% of correctly completed transport tasks.

#### Project:

The project is carried out in groups of 2. The condition for passing the project is:

- handing over the complete version of the project during the last class,
- correctly answers for min. 2 questions given by the teacher.

### Programme content

#### Lecture:

Characteristics of logistic subsystems in enterprises of different nature, production, distribution). Organizational structures in the logistics system. Creation of decision algorithms in logistic activities. The importance of logistic subsystems depending on the company profile. Logistics supply chain analysis (case study).

#### Project:

The project concerns the design of a logistic linkage scheme in terms of order preparation, production, transport and storage:

- company characteristics,
- order handling (description of the process of dealing with inquiries and orders),
- inventory management (number of items to be stored, use of the economic order quantity method to order deliveries, building up safety stocks),
- production,
- warehouse (number and types of warehouses used and their equipment, construction of warehouses),
- transport (type of means of transport, organization of transport),
- packaging (creation of logistic units).

### Teaching methods

#### Lecture:

Multimedia presentation illustrated with examples given on a blackboard, problem solving.



**Project:**

Solving tasks in a team. Brainstorm. Discussion.

**Bibliography**

Basic

1. Pfohl H-Ch., Logistics systems. Fundamentals of organization and management, Ed. Institute of Logistics and Warehousing, Poznań, 2001.
2. Dembińska-Cyran I., Gubała M. : Basics of transport management in the examples. Institute of Logistics and Warehousing. Poznań 2003.
3. Coyle J. et al., Logistics management, Wyd. Polish Economic Publishing House, Warsaw 2002.

Additional

1. Fertsch M., Logistyka Produkcji, Wyd. Institute of Logistics and Warehousing, Poznań 2003.
2. Twaróg J., Mierniki and logistic indicators, Wyd. Institute of Logistics and Warehousing, Poznań 2003.

**Breakdown of average student's workload**

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	22	1,0
Student's own work (literature studies, preparation for lecture, project, preparation for tests) <sup>1</sup>	53	2,0

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