



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Logistics Engineering

### Course

Field of study

Logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

2/4

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

15

Projects/seminars

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

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

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Faculty of Engineering Management

ul. J. Rychlewskiego 2, 60-965 Poznań

Responsible for the course/lecturer:

### Prerequisites

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

### Course objective

Mastering the student's knowledge, skills and social competences related to the applications of logistics engineering

### Course-related learning outcomes

Knowledge



1. Student knows the basic concepts of logistics and its specific issues and supply chain management [P6S\_WG\_05]
2. Student know the basic issues of the life cycle of socio-technical systems (logistics systems) and the life cycle of industrial products [P6S\_WG\_06]
3. Student knows the basic management issues specific to logistics and supply chain management [P6S\_WG\_08]

#### Skills

1. Student is able to apply the right experimental and measuring techniques to solve the problem within the studied subject, including computer simulation in logistics and its specific issues, and supply chain management [P6S\_UW\_03]
2. Student is able to prepare the means of work necessary to work in an industrial environment and knows the safety principles associated with this work, including safety problems in logistics [P6S\_UW\_05]
3. Student is able to assess and make a critical economic analysis of the selected problem, which falls within the framework of logistics and its specific issues, and supply chain management [P6S\_UW\_06]
4. Student can design an object, system or process that meets the requirements of logistics and its specific issues and supply chain management using appropriate methods and techniques [P6S\_UW\_07]
5. Student can present, using properly selected means, a problem that falls within logistics and its specific issues, and supply chain management [P6S\_UK\_01]

#### Social competences

1. Student is aware of the recognition of the importance of knowledge in the field of logistics and supply chain management in solving cognitive and practical problems [P6S\_KK\_02]
2. Student is aware of initiating activities related to the formulation and transfer of information and cooperation in society in the field of logistics [P6S\_KO\_02]
3. Student is aware of the responsible fulfillment, correct identification and resolution of dilemmas related to the logistics profession [P6S\_KR\_02]

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

Learning outcomes presented above are verified as follows:

Lecture: The knowledge gained during the lectures is verified by the college in the last classes and / or by tests (quizzes) in individual classes (through the Moodle platform). Passing threshold: 50% of points.

Tutorials: Skills acquired as part of assessing the progress of project tasks or the progress of project tasks or the progress of project tasks. Passing threshold: 50% of points.

#### Programme content



Lecture: Logistic systems. Logistics processes. Logistic system and logistic process as an object of design. Logistics development phases. The place of logistics engineering in the development of logistics. Methodological foundations of logistics engineering. Planning in logistics. Information exchange in logistic systems.

Tutorial: Modeling of logistic processes, BPMN methodology, IDEF0 methodology, index evaluation of logistic process implementation.

### Teaching methods

Lecture: informative (conventional) lecture, supported by a multimedia presentation, illustrated with examples and tasks.

Tutorial: the case study method - analysis of specific illustrative (illustrative) or problematic (problem identification) cases.

### Bibliography

#### Basic

1. Blanchard B., Logistics engineering and management, Prentice – Hall, Inc., Englewood Cliffs, New Jersey 1992.
2. 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.
3. Wener-Lewandowska K., Kosacka-Olejnik M., Logistics engineering application in the logistics maturity model for the service enterprises, Proceedings of the 14th International Conference of Logistics and SCM systems: Smart Supply Chain in an Uncertain World - the past, the present, and the future, Yu V.F., Kachitvichyanukul V., Tsai K.-M. (red.), Chinese Maritime Institute, 2019, s. 229-236.

### 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 for exam, project preparation) <sup>1</sup>	20	1,0

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