



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Global standards in logistics [N1Log2>GSwL]

### Course

Field of study

Logistics

Year/Semester

3/6

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

part-time

Requirements

compulsory

### Number of hours

Lecture

10

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

8

### Number of credit points

2,00

### Coordinators

dr inż. Joanna Oleśków-Szlapka

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### Lecturers

### Prerequisites

The student has a basic knowledge of logistics and supply chains. He also has the ability to think analytically and obtain information from literature and internet sources.

### Course objective

Provide students with knowledge of applicable global standards in logistics and supply chains. Compare global standards and discuss their advantages and disadvantages. Critical assessment of the applicability of standards in the field of traceability and transparency of supply chains. Solving problem tasks related to the selection of standards depending on the type of supply chain, with particular emphasis on the food and pharmaceutical industries.

### Course-related learning outcomes

Knowledge:

1. The student knows extended concepts for logistics from the point of view of global standards and supply chain management in this area [P6S\_WG\_05]
2. The student knows best practices within international transport safety standards and global logistics threats [P6S\_WK\_06]

### Skills:

1. Student apply to the problem within the studied subject the appropriate experimental and measurement techniques, information and communication, including computer simulation as part of supply chain management [P6S\_UW\_06]
2. Student is able to design, using appropriately selected means, an experiment, a process of analysis or a scientific study solving a problem within the framework of logistics and supply chain management from the point of view of applying global logistics standards [P6S\_UK\_01]
3. Student is able to identify changes in requirements, standards, regulations, technical progress in the field of risk management and supply chain analysis [P6S\_UU\_01]

### Social competences:

1. Student is aware of the importance of knowledge in the area of logistics and supply chain management in solving cognitive and practical problems [P6S\_KK\_02]
2. Student is aware of the responsible filling, correct identification and resolution of dilemmas related to the profession of logistics [P6S\_KR\_01]

## Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: As part of completing the lectures, problem tasks will be solved during the lectures and work in the form of design thinking (two problem tasks Z1- 15 points, Z2 - 15 points) and the exam will be conducted - 70 points. Completion of 50% of points.

Project: As part of project activities - problem solving and group work. Scoring sub-tasks, project report and presentation. The pass mark is to obtain a minimum of 50% of points from all activities.

## Programme content

Lecture: The potential of digital transformation. Global standards for the TSL industry. GS1 standards in the customs area. Product traceability in supply chains and networks - Global traceability standard GS1 GTS2, real-time flow transparency in supply chains. Company diagnosis in terms of meeting the traceability requirements. GS1 standards identifiers and carriers. 11 Global IDs. EPC and EPC GEN2 standard. Bar codes and RFID. Standards for the procurement area. Order to cash - EDI messages and GS1 logistics label. Global standards in the supply of food and drugs. The essence of blockchain.

Project: Analysis of the supply chain of a global enterprise. Evaluation of existing standards and traceability possibilities in the supply chain. Designing logistic standards and their selection. Multi-criteria assessment. Implementation schedule. Designing a modern and digital supply chain

## Course topics

1. Delivery conditions in international trade. Containerization
2. Barcodes and RFID
3. Incoterms 2020
4. Standards and norms in logistics – waste, reverse logistics, transport
5. Blockchain and cybersecurity
6. Sustainability and decarbonization. Alternative drives
7. AI and digitalization in logistics. V2X and communication standards

## Teaching methods

Lecture: information lecture, discussion, design thinking, case studies.

Project: work in project groups, brainstorming, discussion, design thinking.

## Bibliography

### Basic:

1. Treacibility reference book 2021, Successful traceability implementations with GS1 standard, GS1 Global Office.
2. Westerlund M., Nene S., Leminen S., Rajahonka M., An Exploration of Blockchain-based Traceability in Food Supply Chains, 2021.
3. Kayıkçı, Yaşanur, and Nachiappan Subramanian, Blockchain Interoperability Issues in Supply Chain:

Exploration of Mass Adoption Procedures, Big Data and Blockchain for Service Operations Management. Springer, Cham, 2022. 309-328.

4. Al-Rakhami, M. S., & Al-Mashari, M. , ProChain: Provenance-Aware Traceability Framework for IoT-Based Supply Chain Systems. IEEE Access, 10, 3631-3642, 2021.

Additional:

1. Oleśków-Szłapka J., Facchini F., Ranieri L., Urbinati A., A maturity model for Logistics 4.0: an empirical analysis and a roadmap for future research, Sustainability, vol.12, iss.1, 2020, s. 86-1-86-18.

2. Oleśków-Szłapka J., Lubiński P., New Technology Trends and Solutions in Logistics and Their Impact on Processes, 3rd International Conference on Social Science (ICSS 2016), 2016, s. 408-413.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	20	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	30	1,00