



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Carriage of dangerous goods [S2Log2-MPTS>PTN]

### Course

Field of study

Logistics

Year/Semester

1/2

Area of study (specialization)

Manager of a Transport and Forwarding Company

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

### Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

30

### Number of credit points

4,00

### Coordinators

dr inż. Mirosław Kruszyński

miroslaw.kruszynski@put.poznan.pl

### Lecturers

### Prerequisites

The student knows the basic issues related to multimodal transport chains in logistics, such as: the importance of individual transport carriers and their specificity, the role of transshipment sites, basic information on various forms and criteria for the selection of means of transport, types of cargo used in modern logistics, issues related to the selection of the form of packaging as part of production logistics, basic issues related to containerization.

### Course objective

The aim of the course is to familiarize students with the specifics of the transport of dangerous goods within multimodal logistics chains, and in particular to equip them with the knowledge necessary to determine the obligations incumbent on individual participants in dangerous goods transport operations resulting from international regulations applicable to individual modalities. In addition, the student should be able to independently determine the relationships existing between the choice of the form of packaging and cargo, as well as modality, and the possibility of optimizing these duties.

### Course-related learning outcomes

Knowledge:

1. Student knows the extended concepts for logistics and its detailed issues and supply chain management, and in particular is able to define the most important elements related to the safety of dangerous goods transport operations [P7S\_WG\_05]
2. Student knows the detailed methods, tools and techniques characteristic of the subject being studied in the field of logistics, and in particular is able to determine the relationships between individual elements of the supply chain for dangerous goods [P7S\_WK\_01]
3. The student knows the conditions for the functioning of transport companies as participants in logistics processes in the transport of dangerous goods and the strategies of their operation [P7S\_WK\_02]

#### Skills:

1. The student is able to use appropriate experimental, measurement, information and communication techniques to solve a problem related to the use of multimodal logistic chains for the transport of dangerous goods, including computer simulation within logistics and its detailed issues and the management of such a supply chain [P7S\_UW\_03]
2. Student is able to make a critical analysis of formal and factual solutions related to the safety of transport operations of dangerous goods, used in the analyzed logistics system, and in particular can assess their compliance with the standards of international and national law applicable to these processes [P7S\_UW\_04]
3. Student is able to formulate and solve tasks through interdisciplinary integration of knowledge from the fields and disciplines used in the planning and implementation of multimodal transport of dangerous goods, with particular consideration of the links between individual modalities, selected forms of cargo and the specificity of means of transport [P7S\_UO\_01]

#### Social competences:

1. Student notices cause-and-effect relationships in the implementation of the set goals and grade the significance of alternative or competitive tasks [P7S\_KK\_01]
2. Student correctly identifies and resolves dilemmas related to the profession of logistics manager, compliance with the principles of professional ethics and respect for the diversity of views and cultures [P7S\_KK\_02]
3. Student is able to plan and manage business ventures in a creative way [P7S\_KO\_01]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: On the basis of a test (written work) on the issues discussed in the lecture. You can take the exam after obtaining your project and laboratory grades. The exam is passed after providing factually correct answers to most of the issues raised.

Project: Based on the substantive quality of the implemented project and the defense of the completed project.

### Programme content

The program content includes knowledge in the field of transport of dangerous goods in road transport

### Course topics

Lecture: Definition of dangerous goods in transport. Sources of international regulations governing the carriage of dangerous goods. Recognition of dangerous goods and the basis for their classification. Methods of transport of dangerous goods. Rules for marking pieces of shipment containing dangerous goods. Issues of transport of dangerous goods within multimodal logistics chains. Dangerous goods and their importance in production logistics. Forms of transport of dangerous goods divided into individual modalities.

Project: Best Practices and Case Study Studies on the Transport of Dangerous Goods.

### Teaching methods

Lecture: conversation lecture, information lecture.

Project: case studies, project method.

Independent work: work with the book and source materials and international regulations.

## Bibliography

### Basic:

1. Grzegorz K, Buchcar R., Przewóz drogowy towarów niebezpiecznych - ADR 2021-2023, Buchcar.
2. Kołdys K., Bezpieczeństwo przewozu towarów niebezpiecznych w transporcie morskim - IMDG Code, ODDK, Gdańsk, 2018.
3. Ustawa z dnia 19 sierpnia 2011 r. o przewozie towarów niebezpiecznych (Dz.U. 2011 nr 227 poz. 1367).
4. Umowa europejska dotycząca międzynarodowego przewozu drogowego towarów niebezpiecznych (ADR), tekst aktualny.
5. Ustawa z dnia 15 listopada 1984 r. Prawo przewozowe (Dz.U. 1984 nr 53 poz. 272) - tekst jednolity.

### Additional:

1. Międzynarodowy kodeks ładunków niebezpiecznych IMDG - wersja obowiązująca.
2. Instrukcje Techniczne Bezpiecznego Transportu Materiałów Niebezpiecznych Droga Powietrzną - wersja obowiązująca.

## Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,00
Classes requiring direct contact with the teacher	45	2,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	55	2,00