



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Safety in transport [S2IBiJ1-BiZK>BwT]

### Course

Field of study

Safety and Quality Engineering

Year/Semester

1/2

Area of study (specialization)

Safety and Crisis Management

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

15

Projects/seminars

15

### Number of credit points

4,00

### Coordinators

dr inż. Tomasz Ewertowski

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### Lecturers

### Prerequisites

The student has a basic knowledge of issues related to the transport and safety in transport. The student has the ability to acquire information from specified sources and is ready to actively search, systematize and present knowledge in the field of transport safety.

### Course objective

Systematising basic knowledge related to safety issues in transport. Showing the specifics of safety in transport, its condition, legal norms, activities of services and institutions responsible for safety in this area, as well as created procedures and applied actions to improve safety in transport. Developing skills to solve problems occurring during the preparation and implementation of tasks related to transport safety.

### Course-related learning outcomes

Knowledge:

1. Student has structured and theoretically based knowledge and knows the facts and phenomena characteristic of management and quality sciences as well as safety engineering in safety of transport [K2\_W01].
2. Student knows in-depth development trends and good practices regarding transport safety

management in organizations in local and global terms [K2\_W04].

3. Student knows in-depth the principles of information flow, communication characteristic of the area of transport safety management in the organization [K2\_W15].

#### Skills:

1. Student is able to properly select sources, including literature, and information derived from them, as well as to evaluate, critically analyze, synthesize and creatively interpret this information, formulate conclusions and comprehensively justify the opinion during the presentation of the results in planning of safe transport [K2\_U01].

2. Student is able to develop and properly apply methods and tools for solving complex problems characteristic of the area of safety and safety engineering in transport and crisis management, or select and apply existing and known methods and tools [K2\_U03].

3. Student is able to design selected elements of transport safety systems in organizations using properly selected means, methods and techniques [K2\_U05].

#### Social competences:

1. Student correctly identifies and resolves dilemmas related to broadly understood security, understands the need to raise public awareness of the need to shape safety in the area of transport and transport of hazardous materials [K2\_K02].

2. Student shows creativity and entrepreneurship in planning of safe transport [K2\_K04].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: The knowledge acquired during the lecture is verified by current answers (formative assessment) one 45-minute test carried out during the 7th lecture (summative assessment). The test consists of 15 to 20 questions (test and / or open-ended), with different scores. Passing threshold: 51% of points.

Tutorials: The skills acquired during the exercises are verified on the basis of the current assessment (formative assessment) of the assigned tasks and on the basis of the activity in the classroom (summative assessment). Passing threshold: 51% of points

Projects: Skills acquired during project classes are verified on the basis of partial evaluation of the progress of the project stages, project defense, final evaluation. Passing threshold: 51% of points.

### Programme content

The program covers the general characteristics of transport and its types, including: road, rail, sea and inland, in-house and air transport.

### Course topics

#### Lecture:

General characteristics of transport and its types. Road transport - legal regulations, statistics, organization and functioning of entities responsible for safety. Rail transport - legal regulations, statistics, organization and functioning of entities responsible for safety. Maritime and inland sailing transport - legal regulations, statistics, organization and functioning of entities responsible for safety. Air transport - legal regulations, statistics, organization and functioning of entities responsible for safety. Internal transport - legal regulations, statistics, organization and functioning of entities responsible for safety. Transport of dangerous goods. Aspects of transport safety in national security systems.

#### Tutorial:

Analysis of legal regulations and scope of competences of basic transport safety systems. Analysis of hazards in different types of transport. Risk estimation in particular types of transport. Rules of conduct in the event of adverse events occurring in individual types of transport and tasks of entities. Safety management systems in different types of transport. Methods for assessing preparedness for emergency situations. Transport of dangerous goods.

#### Project classes:

Analysis of a selected contemporary transport accident consisting of the preparation of factual data, conducting an analysis using, among others taxonomy of the causes of adverse events in a given mode of transport and presentation of the implementation of post-event safety recommendations and assessment of their effectiveness together with own suggestions for recommendations.

## Teaching methods

Lecture: multimedia presentation, illustrated with examples given on the blackboard.

The lecture is conducted using distance learning techniques in a synchronous mode. Acceptable platforms: eMeeting, Zoom, Microsoft Teams.

Tutorials: a multimedia presentation, illustrated with examples given on the board, constituting the basis for the implementation of the tasks given by the teacher. The class uses the classic problem method, as well as the method of cases and exercises.

Projects: multimedia presentation, illustrated with examples given on the board, constituting the basis for the implementation of the tasks given by the teacher. During the classes, the practice and design method is used.

## Bibliography

Basic:

1. (collective work edited by R. Krystek) (2009), Integrated transport safety system, collective work, vol. I, WKŁ, Gdańsk University of Technology.
2. (collective work edited by R. Krystek) (2009), Integrated transport safety system, collective work, vol. II, WKŁ, Gdańsk University of Technology,
3. Gałusza M., Wojciechowska-Piskorska H., Uzarczyk A., (2011), OHS in transport - a guidebook, Publisher TARBONUS Sp. z o. o., Kraków-Tarnobrzeg.
4. Legal regulations regarding the issues discussed.

Additional:

1. Klich E. (2010), Flight safety in air transport, Institute of Sustainable Technologies, Radom.
2. Grzegorzczak K., Buchar R. : Dangerous goods. Transport in practice. ADR 2011-2013 ed. Net Poland. Warsaw 2011.
3. Ewertowski T., Bienias M., Czerniak K., (2019), Preparation of an enterprise for emergency situations and their better communication, Informatyka Ekonomiczna - 2019, nr 3(53), s. 9-22
4. Ewertowski T., Błaszak D., (2018), Analiza procesów transportu wewnętrznego i magazynowania w aspekcie bezpieczeństwa w wybranym przedsiębiorstwie produkcyjnym, Systemy Logistyczne Wojsk - 2018, nr 49, s. 83-100

## 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