



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Vehicles for the transport of special materials

Course

Field of study

Year/Semester

Mechanics and vehicle construction

2/2

Area of study (specialization)

Profile of study

Refrigerated vehicles

general academic

Level of study

Course offered in

Second-cycle studies

polish

Form of study

Requirements

part-time

elective

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

18

9

0

Tutorials

Projects/seminars

0

0

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

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Wydział Inżynierii Lądowej i Transportu

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Prerequisites

Knowledge: Has extended basic knowledge necessary to understand objects specialist and specialist knowledge about the construction, construction methods, manufacturing and operation of a selected group of working, transport, thermal and flow machines

Skills: He can competently advise on the selection of a machine for a given application in the industry covered by the selected specialty based on the acquired knowledge about a given group of machines,

Social Competence: Is ready to recognize the importance of knowledge in problem-solving cognitive and practical as well as consulting experts in case of difficulties with independent activity the solution to the problem



Course objective

To acquaint students with the specificity of vehicles for the transport of special goods, processes and phenomena related to it; presentation of current regulations, rules and standards functioning of the transport of special goods in the world.

Course-related learning outcomes

Knowledge

Has knowledge of the principles of safety and ergonomics in the design and operation of machines and the threats that machines pose to the natural environment.

Has extended knowledge of modern construction materials such as carbon plastics, composites, ceramics, in terms of their construction, processing technology and applications.

He has in-depth knowledge of the construction, principles of operation and classification of machines from a selected group.

Skills

He can correctly select the optimal material and its processing technology for typical parts of working machines, taking into account the latest achievements in material engineering.

He can design the technology of exploitation of a selected machine with a high degree of complexity.

He can develop a technical description, offer and design documentation for a complex machine from a selected group of machines.

Social competences

He is ready to critically assess his knowledge and received content.

Is ready to recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in case of difficulties in solving the problem on its own.

Is ready to fulfill professional roles responsibly, taking into account changing social needs, including:

- developing the professional achievements,
- maintaining the ethos of the profession,
- observing and developing the rules of professional ethics and acting towards the observance of these rules.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture - final assessment - activity during classes, a test. Final credit of exercises - final test.

Programme content

Preparation of special cargoes for road transport, cargo transportation safety special, legal regulations in the transport of special loads, means of transporting goods special, trailers and semi-trailers for the



transport of oversized cargo, legal regulations concerning animal transport, organization of animal transport, loading and unloading devices (reloading, securing special loads)

Teaching methods

Lecture with a multimedia presentation, Laboratories - problem methods (case study, situational, expert table method)

Bibliography

Basic

1. L. Prochowski, A. Żuchowski Technika transportu ładunków. Wydawnictwo Komunikacji i Łączności Warszawa 2016
2. ADR Umowa europejska dotycząca międzynarodowego przewozu towarów niebezpiecznych
3. CMR Umowa o międzynarodowym przewozie drogowym towarów.
4. D. Starkowski, K. Bieńczak, W. Zwierzycki Samochodowy transport krajowy i międzynarodowy kompendium wiedzy praktycznej T. 1, Zabezpieczenia ładunków oraz zagadnienia technicznoeksploatacyjne w transporcie drogowym Poznań : Systherm D. Gazińska, 2010
5. Przewóz i techniki mocowania ładunków ponadnormatywnych w transporcie / pod red. Wiesław Galor Akademia Morska, 2011.

Additional

1. Pojazdy chłodnicze w transporcie żywności : praca zbiorowa / pod red. Wiesława Zwierzyckiego i Krzysztofa Bieńczaka, Poznań : Systherm D. Gazińska, 2006.
2. A.Korzeniowski, M. Skrzypek, G. Szyszka Opakowania w systemach logistycznych Biblioteka Logistyka Poznań 2010
3. Z. Korzeń (red): Logistyka w transporcie towarów Oficyna wydawnicza Politechniki Wrocławskiej 1998

Breakdown of average student's workload

	Hours	ECTS
Total workload	45	3,0
Classes requiring direct contact with the teacher	27	2,0
Student's own work (literature studies, preparation for tutorials, preparation for tests) ¹	18	1,0

¹ delete or add other activities as appropriate