



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Technology for handling means of transport [S1Trans1>TOŚT]

Course

Field of study

Transport

Year/Semester

2/3

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

0

Number of credit points

1,00

Coordinators

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Lecturers

Prerequisites

Knowledge: The student has basic knowledge of physics, mechanics, machine science as well as construction and operation of means of transport Skills: The student is able to integrate the obtained information, interpret it, draw conclusions, formulate and justify opinions Social competences: The student is aware of the importance and understands the non-technical aspects and effects of servicing of means of transport

Course objective

To acquaint students with the basic issues related to the operation of technical means of transport and with the existing technologies of servicing specific units and nodes of these means.

Course-related learning outcomes

Knowledge:

1. Has a structured and theoretically founded general knowledge in the field of key technical issues and detailed knowledge of selected issues in this discipline of transport engineering.
2. Has a basic knowledge of the life cycle of means of transport, both hardware and software, and in particular about the key processes taking place in them.

3. Knows the basic techniques, methods and tools used in the process of solving tasks in the field of transport, mainly of an engineering nature.

Skills:

1. Can obtain information from various sources, including literature and databases, both in Polish and in English, integrate them properly, interpret and critically evaluate them, draw conclusions, and exhaustively justify their opinions.
2. Is able to formulate and solve the tasks in the field of transport, apply appropriately selected methods, including analytical, simulation or experimental methods.

Social competences:

1. Is aware of the importance of knowledge in solving engineering problems, knows examples and understands the causes of malfunctioning transport systems, which have led to serious financial and social losses, or to a serious loss of health and even life.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

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A credit, which consists in written verification the basic knowledge related to the operation of means of transport and technology of its implementation, taking into account the existing operating systems, European directives and national regulations as well as modern organizational forms in relation to individual and collective means of transport.

The threshold for passing the knowledge of the subject is 50% of the points obtained from the written knowledge check, covering all the issues specified in the course programme.

Programme content

The module programme covers the following topics:

1. Formal and terminological aspects of servicing
2. Origins, systems and principles of servicing
3. Handling of collective means of transport
4. Types of servicing of means of transport
5. Cosmetic servicing technology for means of transport
6. Quality of operation of means of transport
7. Infrastructure and servicing variations

Course topics

The lecture programme covers the following topics:

1. Introduction and organisation of the subject - organisational and formal matters; classifications of means of transport, place of servicing in the life cycle of a means of transport and basic concepts related to the servicing of means of transport; servicing versus repair of means of transport.
2. Justification and objectives for the maintenance of means of transport; wear and degradation of parts and consumables; systems of servicing; principles and trends of servicing; organisational methods of servicing against the background of the national servicing system, rationalisation of servicing.
3. Modern methods of servicing collective means of transport; contracts and service packages in authorised and independent service stations for leased and owned means of transport taking into account the current European Union GVO directive.
4. One-time and multiple, deterministic and organisational (adaptation) servicing; daily, seasonal, complaint, warranty and cosmetic servicing; periodic maintenance (OT) of road, rail and air modes of transport - periodic maintenance technology.
5. Cosmetic and maintenance servicing; purposes and methods of cosmetic servicing; washing stands and washing of road, rail and air modes of transport; washing preparations; types of washing facilities; technology of cosmetic servicing, cosmetic servicing of various means of transport; recirculation systems of washing stations.
6. Concept and criteria of quality of servicing of means of transport and factors determining this quality, including technology used, equipment of servicing stations, organisation of the servicing process, qualifications, competences and motivation of servicing personnel.
7. Technical background of servicing and equipment for servicing means of transport; health and safety of

servicing, service stations, documentation and norms of servicing means of transport, service inspection and the role of technical diagnostics, trends in servicing of modern means of transport and transport companies and their fleets.

Teaching methods

Auditorium lecture with multimedia presentation

Bibliography

Basic:

1. Jósko M., Kowalczyk J., Mańczak R., Nosal S., Ulbrich D.: Inżynieria odnowy pojazdów samochodowych. Tom. 1. Inżynieria obsługi. Wydawnictwo Politechniki Poznańskiej / Automotive restoration engineering. Vol. 1. Service engineering. Poznan University of Technology Publishing House, Poznań, 2019 (in Polish).
2. Kozłowski M. (ed.): Budowa i eksploatacja pojazdów, t. II Obsługa, diagnostyka i naprawa zespołów i podzespołów / Construction and operation of vehicles, vol. II Service, diagnostics and repair of assemblies and subassemblies. Ed. Vogel Business Media, Wrocław, 2008 and later (in Polish).
3. Trzeciak K. : Wyposażenie warsztatów samochodowych / Car workshop equipment. Ed. Auto, Warsaw, 2005 (in Polish).
4. Uzdowski M., Abramek K., Garczyński K. : Pojazdy samochodowe. Eksploatacja techniczna i naprawa / Motor vehicles. Technical operation and repair. WKiŁ, Warsaw, 2008 and later (in Polish).

Additional:

1. Orzełowski S. : Naprawa i obsługa pojazdów samochodowych / Repair and maintenance of motor vehicles. WSiP, Warsaw, 2008 and later (in Polish).
2. Zimowa obsługa samochodu / Winter car service. Auto Expert, 2022, No. 12, pp. 27-30 (in Polish).

Breakdown of average student's workload

| | Hours | ECTS |
|---|-------|------|
| Total workload | 30 | 1,00 |
| Classes requiring direct contact with the teacher | 15 | 0,50 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 15 | 0,50 |