COURSE DESCRIPTION CARD - SYLLABUS

Course name
Vehicle maintenance technical facilities [S1MiBP1>ZTUP]

Course

Field of study
Mechanical and Automotive Engineering

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
full-time

Requirements
elective

Number of hours

Lecture
30

Laboratory classes
15

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

3,00

Coordinators

Bartosz Kopeć

Lecturers

Prerequisites

The student has a basic knowledge of the technical infrastructure for vehicle maintenance and knows how to maintain them. The student knows the regulations governing the maintenance process of rail and road vehicles, as well as facilities and equipment in the maintenance process and maintenance planning for rail and road vehicles.

Course objective

The aim of the course is to familiarize the student with the organization of technical facilities for the maintenance of rail and road vehicles and the methods of servicing these vehicles.

Course-related learning outcomes

Knowledge:
Has basic knowledge of the basics of machine design and the theory of machines and mechanisms, including mechanical vibrations. -M1_W05
Is aware of the latest trends in machine construction, i.e. automation and mechatronization, automation of machine design and construction processes, increased safety and comfort of operation, the use of modern construction materials. -M1_W18
Has elementary knowledge of the life cycle of machinery, recycling of machine elements and

construction and consumables. -M1_W20

Skills:
Can obtain information from literature, the Internet, databases and other sources. Can integrate the obtained information, interpret and draw conclusions from it, and create and justify opinions. -M1_U01
Can use computer office packages for editing technical texts, including formulas and tables, technical and economic calculations using a spreadsheet and running a simple relational database. -M1_U03
Can properly use modern equipment for measuring major physical quantities, used in machine research and production control. -M1_U04

Social competences:
Is ready to critically assess his knowledge and received content. -M1_K01
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. -M1_K02
Is willing to think and act in an entrepreneurial manner. -M1_K05

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:
Written or oral test.

Programme content

Organizational structure of rail freight transport of PKP CARGO S.A. and rolling stock resources, regulations governing the maintenance process of rail and road vehicles, the maintenance process of rail vehicles at PKP CARGO S.A. and in bus depots of MPK Poznań Sp. z o. o., infrastructure and equipment in the maintenance process, planning of rail and road vehicle maintenance, logistics.

Course topics

none

Teaching methods

1. Lecture with multimedia presentation

Bibliography

Basic
1. Krawczyński F., Nieliwodzki J.: Zaplecze techniczne służby trakcji PKP. WKŁ, Warszawa.
2. Gruszyński J.: Eksploatacja taboru kolejowego. WKŁ, Warszawa 1984.
Additional
1. Gronowicz J, Kasprzak B.: Lokomotywy spalinowe. WKŁ, Warszawa 1989.
2. Podwozia i nadwozia pojazdów samochodowych. WKŁ Warszawa 2010
3. Silniki pojazdów samochodowych. WKŁ Warszawa 2009

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,00
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)	30	1,00