COURSE DESCRIPTION CARD - SYLLABUS

Course name
Transport systems [S1MiBP1>UT]

Course

Field of study
Mechanical and Automotive Engineering

Year/Semester
3/5

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
15

Laboratory classes
15

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

2,00

Coordinators

dr inż. Żaneta Staszak
zaneta.staszak@put.poznan.pl

Lecturers

Prerequisites

KNOWLEDGE: the student has basic knowledge of the basics of machine construction, technical drawing and mathematics in the field of high school. SKILLS: the student can read and understand technical drawings. SOCIAL COMPETENCES: the student has basic communication skills.

Course objective

SThe role of transport systems in working machines. Learning about the construction, principles of operation and application of individual groups of conveyors Understanding the principles of functional and strength calculations of individual types and varieties of conveyors. Transport systems occurring in individual groups of working machines

Course-related learning outcomes

Knowledge:
Has basic knowledge of the basics of machine design and the theory of machines and mechanisms, including mechanical vibrations.
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.
Has extended basic knowledge necessary to understand specialist subjects and specialist knowledge about the construction, construction methods, manufacturing and operation of a selected group of working, transport, thermal and flow machines covered by the diploma path.

Skills:
Can apply basic technical standards regarding unification and safety and recycling.
Can perform basic functional and strength calculations of machine elements such as traction, gear, friction, bearings, rolling and sliding gears, clutches, brakes.
Can draw a diagram and a simple machine element by hand in accordance with the rules of technical drawing.

Social competences:
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 social obligations and co-organize activities for the benefit of the social environment.
Is ready to fulfill professional roles responsibly, including:
- observing the rules of professional ethics and requiring this from others,
- caring for the achievements and traditions of the profession.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures: For active participation in class and written assignments. A written test on the lecture topics.
Laboratory: The student is graded based on tasks solved during the exercises and independently at home. Final assessment of the exercises.

Programme content

Characteristic features of materials processed / transported / in technological systems of working machines. Conveyors with and without cables. Conveyors with an intermediate medium. Auxiliary devices and devices cooperating with conveyors. Transport systems for individual groups of working machines. Characteristics of Transport and Issues Related to Driver Training and Working Hours.

Course topics

1. General characteristics of transport, division.
2. Rules for the operation of road transport for the purpose of transporting machines, devices, spoil.
3. Issues related to the training of drivers and operators of transport means.
4. Issues related to the working time of drivers and operators of transport means.
5. Characteristics of materials processed and transported in the technological systems of working machines.
6. Traction and non-traction conveyors.
7. Conveyors with an intermediary medium.
8. Auxiliary and cooperating devices with conveyors.

Teaching methods

1. Lectures with multimedia presentation.
2. Sending didactic materials in the form of films, pdf and presentations.
3. Calculation of tasks.
4. Independent task counting.

Bibliography

Basic
1. Goździecki M., Świątkiewicz H.: Przenośniki. WN-T, 1975.
2. Gładysiewicz, L. (2003). Przenośniki taśmowe: teoria i obliczenia. Oficyna Wydawnicza Politechniki Wrocławskiej.
Additional
1. Wojciechowski Ł., Wojciechowski A., Kosmatka T. (2009). Infrastruktura magazynowa i transportowa.

Wyższa Szkoła Logistyki.
2. Raczyk R. (2013). Środki transportu bliskiego i magazynowania. Wydawnictwo Politechniki Poznańskiej.
3. Kawalec, W. (2009). Przenośniki taśmowe dalekiego zasięgu do transportu węgla brunatnego. Transport Przemysłowy i Maszyny Robocze, (1), 6-13.

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00