



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Conveyor systems

		Course
Field of study		Year/Semester
Construction and Exploation of Means of Transport		3/5
Area of study (specialization)		Profile of study
Machines		general academic
Level of study		Course offered in
First-cycle studies		Polish
Form of study		Requirements
full-time		compulsory

		Number of hours
Lecture	Laboratory classes	Other (e.g. online)
15	0	0
Tutorials	Projects/seminars	
15	0	
Number of credit points		
3		

		Lecturers
Responsible for the course/lecturer:		Responsible for the course/lecturer:
dr inż. Żaneta Staszak		mgr inż. Jacek Marcinkiewicz
email: zaneta.staszak@put.poznan.pl		email: jacek.marcinkiewicz@put.poznan.pl
tel. 61 665 28 82		tel. 61 665 28 82
Faculty of Civil and Transport Engineering		Faculty of Civil and Transport Engineering
ul. Piotrowo 3, 60-965 Poznan		ul. Piotrowo 3, 60-965 Poznań

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

The 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 knowledge in the field of mathematics, including algebra, analysis, theory of differential equations, probability, analytical geometry necessary to: describe the operation of discrete mechanical systems, understand the methods of computer graphics, describe the operation of electrical and mechatronic systems.

Has knowledge of physics, including the basics of classical mechanics, optics, electricity and magnetism, solid state physics, quantum and nuclear physics, necessary to understand specialist lectures in the field of the theory of construction materials and materials science, theory of machines and mechanisms, theory of electric drives and mechatronic systems .

Has basic knowledge of the basics of machine design and the theory of machines and mechanisms, including mechanical vibrations.

Has a basic knowledge of the standardized rules of notation of structures and engineering graphics.

Has basic knowledge of the strength of materials, including the basics of the theory of elasticity and plasticity, strain hypotheses, calculation methods for beams, membranes, shafts, joints and other simple structural elements, as well as methods of testing the strength of materials and the state of deformation and stress in mechanical structures.

Skills

He 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.

He can search in catalogs and on manufacturers' websites ready-made machine components to be used in his own projects.

Can apply basic technical standards regarding unification and safety and recycling.

He can design a technology of making a simple machine element as well as a technology for assembling and disassembling a machine.

Can create a system diagram, select elements and perform basic calculations using ready-made calculation packages of mechanical, hydrostatic, electric or hybrid machine drive system.

Social competences

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

He is ready to recognize the importance of knowledge in solving cognitive and practical problems and to consult experts in the event of difficulties in solving the problem on his own.

It is ready to fulfill social obligations and co-organize activities for the benefit of the social environment.



Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

For discussion and activity during classes. Written credit for the lecture topics. The student is assessed for tasks that are counted during exercises and independently at home. Final credit of 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.

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	75	3,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for tutorials, preparation of tutorials, execution of lecture tasks, preparation for tests) ¹	45	2,0

¹ delete or add other activities as appropriate