

Course code: MBM PS

Course item: C.1.9.

1. INFORMATION ABOUT THE COURSE

A. Basic information

Course title	Means of transport
Field of study	Transport
Cycle	First cycle
Study profile	Academic
Study mode	Full-time
Specialisation	1. Organization of transport 2. Road transport 3. Road engineering 4. Post-accident engineering in transport 5. Logistics
Unit responsible for the field of study	Faculty of Mechanical Engineering
Lecturer	PhD. Marcin ŁUKASIEWICZ MSc. Ewa KULIŚ
Introductory courses	Vehicle construction
Prerequisites	No prerequisites

B. Semester/ weekly timetable

Semester	Lectures	Classes	Laboratories	Project classes	Seminars	Fieldwork	ECTS credits
winter / summer	45	15					4

C. Assumed outcomes and aims - aims bind the course programme with the study programme and are referred to in learning outcomes point 2

2. LEARNING OUTCOMES (acc. to National Qualifications Framework)

No.	Description of learning outcomes	Reference to learning outcomes for the field of study	Reference to learning outcomes for the area of study
KNOWLEDGE			
K1	has structured knowledge of the principles of construction, operation and modelling of systems, means of transport and devices of transport and logistics infrastructure as well as modelling of processes implemented in these systems	TR K_W02	P6S_WG
K2	has a basic knowledge of safety and environmental	TR K_W07	P6S_WG

	protection rules used in transport and logistics systems		
SKILLS			
S1	can obtain information from literature, databases and other sources; is able to integrate the obtained information, interpret it, as well as draw conclusions and formulate and justify opinions	TR K_U01	P6S_UW
S2	is able to develop and compare the design solutions of vehicles, devices and technical systems with regard to the set utility and economic criteria	TR K_U06	P6S_UW
SOCIAL COMPETENCES			
SC1	is aware of responsibility for their own work and readiness to comply with the rules of teamwork and responsibility for jointly performed tasks	TR K_K03	P6S_KO

3. TEACHING METHODS

multimedia lecture, classes, project, presentation, discussion
--

4. METHODS OF EXAMINATION

written or oral exam, written or oral test, project preparation

5. COURSE CONTENT

Specify the content separately for each type of classes in accordance with point I.B.	<p>Lecture General characteristics and classification of transport means. Evolution in the movement of goods and people, the impact of technical progress. Branch division of transport means. Functional properties and basic technical and operational parameters of means of transport of particular modes of transport. Transport infrastructure. Passive means of transport. Active means of short-distance transport. Construction of structural nodes for various types of transport. Types and construction of means of internal transport. Trolleys, cranes. General characteristics and classification of motor vehicles, rail vehicles, river and sea rolling stock and aircraft. Division of means of transport according to purpose, operating conditions, type of structure, range of operation. Standardization and unification in the construction of means of transport. Development tendencies and directions of changes. Ecological aspects in the operation of means of transport.</p> <p>Classes Determining the transport efficiency of selected means of transport. Describing means of transport by destination, operating parameters and application. Analysis of the transport process of goods from the point of dispatch to the point of receipt, including: selection of means of transport, optimization of the transport route, determination of the time of task completion and drivers' work, selection of transport documentation, cost estimation. Preparation of a computational project.</p>
---	---

6. VALIDATION OF LEARNING OUTCOMES

(Each learning outcome from the list requires validation methods to ensure that it was achieved by a student.)

Learning outcome	Form of assessment (for example:)					
	Oral examination	Written examination	Colloquium	Project	Report
K1	x	x				
K2	x	x				
S1			x	x		

S2			x	x		
SC1			x	x		

7. LITERATURE

Basic literature	<ol style="list-style-type: none"> 1. Rydzkowski W., Wojewódzka-Król K.: 2009; Transport, Wyd. PWE, Warszawa. 2. Mindur L./red.: 2002; Współczesne technologie transportowe, ITE, Radom. 3. Zalewski P., Siedlecki P., Drewnowski A.: 2004; Technologia transportu kolejowego, WKŁ, Warszawa. 4. Prochowski L.: 2005; Mechanika ruchu. Pojazdy samochodowe, WKŁ, Warszawa. 5. Markusik S.: 2011; Infrastruktura logistyczna w transporcie T1. Środki transportu, Wyd. Politechniki Śląskiej, Katowice.
Supplementary literature	<ol style="list-style-type: none"> 1. Krzemieniecki A.: 1989; Tabor kolejowy, WKŁ, Warszawa. 2. Dąbrowa-Bajon M.: 2007; Infrastruktura, logistyka, środki transportu, Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa. 3. Sempruch J., Piątkowski T.: 2002; Środki transportu wewnątrzzakładowego, Wyd. Uczelniane ATR, Bydgoszcz.

8. TOTAL STUDENT WORKLOAD REQUIRED TO ACHIEVE EXPECTED LEARNING OUTCOMES EXPRESSED IN TIME AND ECTS CREDITS

Student's activity		Student workload– number of hours (for example:)
Classes conducted under a direct supervision of an academic teacher or other persons responsible for classes	Participation in classes indicated in point 1B	60
	Supervision hours	10
Student's own work	Preparation for classes	15
	Reading assignments	15
	Other (preparation for exams, tests, carrying out a project etc)	15
Total student workload		115
Final number of ECTS credits		4