



Subject card

Subject name and code	Vehicle safety, PG_00040104						
Field of study	Mechanical Engineering, Mechanical Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject				2022/2023	
Education level	first-cycle studies	Subject group				Optional subject group Subject group related to scientific research in the field of study	
Mode of study	Part-time studies	Mode of delivery				at the university	
Year of study	3	Language of instruction				Polish -	
Semester of study	6	ECTS credits				2.0	
Learning profile	general academic profile	Assessment form				assessment	
Conducting unit	Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor						
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	15		5.0		30.0	50
Subject objectives	Acquainted with the principles of designing safe cars. Translating these principles into concrete design solutions vehicles and their respective teams.						
Learning outcomes	Course outcome		Subject outcome			Method of verification	
	[K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria		Active and passive safety. Principles of constructing safe vehicles. Chassis, chassis, braking systems, lighting, tires, seat belts, airbags, fire extinguishing systems. ABS, ASR and ESP systems. Air conditioning and satellite navigation. Reversing sensors and car radar. Research of vehicles and their assemblies. Influence of the road and road traffic organization. Safe operation of vehicles. Child safety in vehicles.			[SU3] Assessment of ability to use knowledge gained from the subject	
	[K6_W08] possesses basic knowledge including the methodology of designing machine parts, mechanical devices, selection of construction materials, manufacturing and operation, with the lifetime cycle		Active and passive safety. Principles of constructing safe vehicles. Chassis, chassis, braking systems, lighting, tires, seat belts, airbags, fire extinguishing systems. ABS, ASR and ESP systems. Air conditioning and satellite navigation. Reversing sensors and car radar. Research of vehicles and their assemblies. Influence of the road and road traffic organization. Safe operation of vehicles. Child safety in vehicles.			[SW1] Assessment of factual knowledge	
Subject contents	Active and passive safety. Principles of construction of safe vehicles. Bods, chassises, bracking systems, lights, tyres, safety belts, air bags, fire protection systems. ABS, ASR and ESP systems. Air conditioning and GPS. Backing sensors and car radar. Vehicle and it's units researches. Road and traffic organization influence. Safe maintenance of vehicle. Children safety in vehicles.						
Prerequisites and co-requisites	No requirements						

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		Midterm colloquium	50.0%
Recommended reading	Basic literature	1. Wicher J.: Bezpieczeństwo samochodów i ruchu drogowego. WKiŁ, Warszawa, 2004. 2. Afanasjew L. L., Dżakow A. B., Ilarionow W. A.: Czynne bezpieczeństwo samochodu. WKiŁ, Warszawa, 1986. 3. Iwanow W. N., Lalin W. A.: Bierne bezpieczeństwo samochodu. WKiŁ, Warszawa, 1984. 4. Technika Motoryzacyjna - miesięczniki. 5. Auto-Technika Motoryzacyjna - miesięczniki. 6. Auto-International - miesięczniki. 7. Auto- Świat - tygodniki. 8. Materiały reklamowe firm: BMW, Mercedes-Benz, Renault, Opel, Bosch.	
	Supplementary literature	No requirements	
	eResources addresses		
Example issues/ example questions/ tasks being completed	-		
Work placement	Not applicable		