



Subject card

Subject name and code	Strength of Materials II, PG_00039810						
Field of study	Materials Engineering, Materials Engineering, Materials Engineering						
Date of commencement of studies	October 2021		Academic year of realisation of subject		2023/2024		
Education level	first-cycle studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	Full-time studies		Mode of delivery		at the university		
Year of study	3		Language of instruction		Polish		
Semester of study	5		ECTS credits		1.0		
Learning profile	general academic profile		Assessment form		assessment		
Conducting unit	Institute of Mechanics and Machine Design -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		mgr inż. Katarzyna Pytka				
	Teachers		mgr inż. Katarzyna Pytka				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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		1.0		9.0	25
Subject objectives	The purpose of the course is to familiarize students with the basic mechanical methods of materials testing.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	K6_W06	The student has the ability to estimate the strength properties and technological properties of materials (static tensile/ compression/torsion test of metals), has the ability to determine the behavior of a material subjected to dynamic loading, has the ability to determine the longitudinal modulus of elasticity, learns the methods of testing the hardness of metals (Brinell, Rockwell, Vickers, Shore and Poldi hammer) and acquires the ability to estimate the deflection of a beam	[SW2] Assessment of knowledge contained in presentation [SW3] Assessment of knowledge contained in written work and projects
	K6_W05	The student has the ability to analyze the basic issues related to the strength of materials, in terms of theory and solving simple tasks and practical problems.	[SW1] Assessment of factual knowledge
	K6_U01	The student is familiar with the testing machines used for each test and the types of specimens used, and has the ability to properly measure the specimens used for testing.	[SU4] Assessment of ability to use methods and tools
	K6_U08	The student has the ability to prepare a report on the research carried out in class.	[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment [SU5] Assessment of ability to present the results of task
Subject contents	Testing the hardness of metals. Tension/compression/torsion of metals.		
Prerequisites and co-requisites	The student should have knowledge of mathematics, mechanics and basic knowledge of general properties of metals.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		56.0%	50.0%
		56.0%	50.0%
Recommended reading	Basic literature	Wojnicz W.,Wittbrodt E.:Mechanical Methods of Materials Testing, Gdansk University of Technology Publishing House, Gdansk 2020.	
	Supplementary literature	Katarzyński S., Kocańda S., Zakrzewski M.:Investigations of mechanical properties of metals, WNT, Warsaw 1967.	
	eResources addresses	Podstawowe https://enauczanie.pg.edu.pl/moodle/course/view.php?id=33955 - E-learning course to support laboratory classes. Adresy na platformie eNauczanie:	
Example issues/ example questions/ tasks being completed	Realisation of tensile/compression diagrams. Determination of strength properties/determination of technological properties.		
Work placement	Not applicable		