



Subject card

Subject name and code	Technical Mechanics 2, PG_00049753						
Field of study	Power Engineering, Power Engineering, Power Engineering, Power Engineering, Power Engineering						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2021/2022		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			English		
Semester of study	3	ECTS credits			5.0		
Learning profile	general academic profile	Assessment form			exam		
Conducting unit	Department of Theory and Ship Design -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Maciej Kahsin				
	Teachers		dr inż. Maciej Kahsin				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	15.0	0.0	0.0	0.0	45
	E-learning hours included: 0.0						
	Adresy na platformie eNauczanie: Technical Mechanics 2 (PG_00049753) - Moodle ID: 20404 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20404						
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	45	10.0		70.0	125	
Subject objectives	The aims of lecture is to provide basic knowledge of strength of materials and its exploitation in assessment of structural stress and deformation.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	K6_W04		Student is able to design simple one-dimensional structures.		[SW1] Assessment of factual knowledge		
	K6_U02		Student is able to proceed with basic 1D problems analyses; concerning strength, and flexibility criterions.		[SU1] Assessment of task fulfilment		
Subject contents	1) Introduction, 2) Stress-strain relations, physical interpretation, 3) Axial loading of rods, 4) Moments of inertia, 5) Bending of beams, 6) Beam's line of deflection, 7) Shearing, 8) Torsion, 9) Complex stress – yield criterion, 10) linear buckling of column.						
Prerequisites and co-requisites	Technical Mechanics 2						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Tests		50.0%		50.0%		
	Exam		50.0%		50.0%		
Recommended reading	Basic literature		William Nash: Strength of Materials (any edition)				
	Supplementary literature		.				
	eResources addresses		Technical Mechanics 2 (PG_00049753) - Moodle ID: 20404 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=20404				
Example issues/ example questions/ tasks being completed	1) Define stress and elongation of axially loaded rod, 2) Find principal moment of inertia, 3) Derive formula for line of beam's deflection, 4) Calculate reduces stress.						
Work placement	Not applicable						