



Subject card

Subject name and code	Fundamentals of Machine Design II, PG_00039881						
Field of study	Mechanical Engineering, Mechanical 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 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	2	Language of instruction	Polish				
Semester of study	4	ECTS credits	8.0				
Learning profile	general academic profile	Assessment form	exam				
Conducting unit	Department of Machine Design and Vehicles -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor	prof. dr hab. inż. Michał Wasilczuk					
	Teachers	mgr inż. Katarzyna Mazur prof. dr hab. inż. Michał Wasilczuk mgr inż. Bartosz Bastian mgr inż. Marek Łubniewski mgr inż. Tomasz Żochowski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	30.0	0.0	90
	E-learning hours included: 0.0 Podstawy Konstrukcji Maszyn II - Moodle ID: 23179 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=23179						
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	90	6.0	104.0	200		
Subject objectives	Presenting the knowledge and acquiring the skills of calculation methods used in machine design as well as practical designing of a simple mechanical device						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K6_U07] is able to design a typical construction of a mechanical device, component or a testing station using appropriate methods and tools, adhering to the set usage criteria	not relevant	[SU1] Assessment of task fulfilment
	[K6_U11] is able to analyse the operation of devices and compare the construction solutions applying usage, safety, environmental, economic and legal criteria	not relevant	[SU1] Assessment of task fulfilment
	[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	not relevant	[SW1] Assessment of factual knowledge
	[K6_U03] is able to identify, formulate and develop the documentation of a simple design or technological task, including the description of the results of this task in Polish or in a foreign language and to present the results using computer software or other aiding tools	not relevant	[SU1] Assessment of task fulfilment
[K6_W04] possesses knowledge on mechanics, including the processes of modelling mechanical systems, statics, kinematics and dynamics of rigid objects and basic knowledge on vibrations	not relevant	[SW1] Assessment of factual knowledge	
Subject contents	lecture and tutorials: welded joints, compliant elements, roller element bearings, slider bearings, mechanical transmissions, clutches and couplings, design methodology, exerting forces and torques in mechanical systems. Design: making technical documentation and a project of a mechanical device		
Prerequisites and co-requisites	mechanics, strength of materials, engineering drawing and drafting, Machine Design I		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Excercise in 3th semestr	56.0%	10.0%
	Excercise in 4th semester	56.0%	20.0%
	Written exam	56.0%	50.0%
Project	100.0%	20.0%	
Recommended reading	Basic literature	Prezentacje do wykładów ze strony www.pg.gda.pl/~mwasilcz Wykład z Podstaw Konstrukcji Maszyn z Ćwiczeniami Rachunkowymi - skrypty PG, wyd. PG	
	Supplementary literature	Podstawy Konstrukcji Maszyn (Fundamentals of Machine Design - series of handbooks) edited by PWN Podstawy Konstrukcji Maszyn (Fundamentals of Machine Design), WNT, editor M. Osiński	
	eResources addresses		
Example issues/ example questions/ tasks being completed	design problem with graphical elements exam problems with graphical elements cannot be shown here		
Work placement	Not applicable		