



## Subject card

Subject name and code	Fundamentals of Machine Design II, PG_00040062						
Field of study	Mechanical 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	Part-time studies		Mode of delivery		blended-learning		
Year of study	3		Language of instruction		Polish ..		
Semester of study	5		ECTS credits		6.0		
Learning profile	general academic profile		Assessment form		exam		
Conducting unit	Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Janusz Musiał				
	Teachers		dr hab. inż. Janusz Musiał				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	8.0	0.0	8.0	0.0	46
	E-learning hours included: 30.0						
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	46		14.0		90.0	150
Subject objectives	Giving information and teaching ability to use basic techniques and methods utilized in design of machine parts						

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	Student is able to analyse operation of a mechanical design and compare different design versions	[SU1] Assessment of task fulfilment
	[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	Student can design a standard mechanical device	[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	Student has a basic knowledge on methods of designing machine elements and devices	[SW3] Assessment of knowledge contained in written work and projects
	[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	Student has knowledge in the field of modeling methods and machine design	[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	Student can specify a simple design task	[SU1] Assessment of task fulfilment
Subject contents	welded joints, roller bearings, slider bearings, transmissions, springs, fatigue		
Prerequisites and co-requisites	mechanics, strength of materials		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	exam	56.0%	50.0%
	tutorials	56.0%	20.0%
	project	50.0%	30.0%
Recommended reading	Basic literature	podręczniki PKM - wydawnictwo WNT  skrypty PKM - PG  MArek Dietrych PKM I II i III	
	Supplementary literature	Tim Brown - Change by przez Design	
	eResources addresses	Adresy na platformie eNauczanie: Podstawy konstrukcji maszyn II, W, MiBM, sem. 5, zimowy, 2023/24 - Moodle ID: 34576 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34576">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34576</a> Podstawy konstrukcji maszyn II, W, MiBM, sem. 5, zimowy, 2023/24 - Moodle ID: 34576 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34576">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34576</a> Podstawy konstrukcji maszyn II, W, MiBM, sem. 5, zimowy, 2023/24 - Moodle ID: 34576 <a href="https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34576">https://enauczanie.pg.edu.pl/moodle/course/view.php?id=34576</a>	
Example issues/ example questions/ tasks being completed	graphical form		
Work placement	Not applicable		