



Subject card

Subject name and code	Selected issues of Manufacturing Engineering, PG_00024939						
Field of study	Medical and Mechanical Engineering, Mechanical and Medical 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	Full-time studies	Mode of delivery			at the university		
Year of study	3	Language of instruction			Polish		
Semester of study	5	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Manufacturing and Production Engineering -> Faculty of Mechanical Engineering and Ship Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Michał Landowski				
	Teachers		dr inż. Michał Landowski				
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	15.0	0.0	30
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	30		8.0		37.0	75
Subject objectives	The aim of the course is to provide with state of the art. manufacturing technologies. Possibilities of process planning of different part types. Get to know the selected processing methods of the cylindrical, conic and thread element. Methods and means of plastic and abrasive finishing processes.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	K6_U08	Student can use framework technological processes to prepare technological documentation. Selects the right data to describe the technological process.			[SU5] Assessment of ability to present the results of task		
	K6_W07	He can prepare a technological project for typical machine parts such as a shaft and single body.			[SW3] Assessment of knowledge contained in written work and projects		
	K6_U06	Determines informations for realization of selected process plan. Student is able to regard additional criteria relating to process economics.			[SU3] Assessment of ability to use knowledge gained from the subject		
Subject contents	LECTURE Systematic of advanced shaping processes. Structure of technological process and documentation. Starting data for production process plan, manufacturing equipment, semi-workpiece selection. Shaping external surfaces. Processing of the cylindrical, conic and thread elements. Methods and means of plastic and abrasive finishing processes. Shaping internal cylindrical surfaces and threads. Methods and means of plastic and abrasive finishing processes. Fixing, clamping and setting of workpiece. symbols. PROJECT Manufacturing process plan of shaft (technological documentation, tool and fixture selection). Manufacturing process plan of frame (technological documentation, tool and fixture selection).						
Prerequisites and co-requisites	Cutting processes, Metrology						
Assessment methods and criteria	Subject passing criteria		Passing threshold		Percentage of the final grade		
	Project		60.0%		40.0%		
	Colloquium		60.0%		60.0%		

Recommended reading	Basic literature	<p>Feld M.: Podstawy projektowania procesów technologicznych typowych części maszyn. WNT, Warszawa, 2003.</p> <p>Olszak W.: Obróbka skrawaniem. WNT, Warszawa, 2008.</p> <p>Żebrowski T.: Techniki wytwarzania. Obróbka wiórowa, ścierna, erozyjna. WPW, Wrocław, 2004.</p> <p>Poradnik inżyniera. Obróbka skrawaniem. T. I-III, WNT, Warszawa 1993.</p>
	Supplementary literature	<p>M. Feld Uchwyty obróbkowe WNT.</p> <p>P. Cichosz Narzędzia skrawające WNT.</p>
	eResources addresses	<p>Adresy na platformie eNauczanie: Wybrane zagadnienia z technologii maszyn, W/P, IMM, sem 5, zima 22-23(PG_00024939) - Moodle ID: 27247 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=27247</p>
Example issues/ example questions/ tasks being completed	<p>Present a sequence of processes in manufacturing process plan. (for sleeve without hardening).</p> <p>Characterize broaching process.</p>	
Work placement	Not applicable	