

## § GDAŃSK UNIVERSITY § OF TECHNOLOGY

## Subject card

, PG_00058882								
Mechanical Engineering								
		Academic year of realisation of subject			2023/2024			
second-cycle studies		Subject group						
Full-time studies		Mode of delivery			at the university			
		•			Polish			
		ECTS credits			4.0			
general academic profile		Assessment form			assessment			
Zakład Technologii Materiałów Konstrukcyjnych i Spajania -> Institute of Manufacturing and Materials Technology -> Faculty of Mechanical Engineering and Ship Technology							aterials	
Subject supervisor		dr inż. Aleksandra Świerczyńska						
Teachers								
Lesson type	Lecture	Tutorial	Laboratory		t	Seminar	SUM	
Number of study hours	30.0	0.0	0.0	15.0		0.0	45	
E-learning hours included: 0.0								
Learning activity			Participation in consultation hours		Self-study		SUM	
Number of study hours	45		0.0		0.0		45	
The aim of the course is to familiarize students with advanced methods of materials testing.								
Course outcome		Subject outcome			Method of verification			
		Recognizes the role of an engineer in society.			[SW3] Assessment of knowledge contained in written work and projects			
information from specialist literary sources and other sources regarding the construction and operation of machines and related disciplines in polish and in a foreign language, is able to conduct a self-learning process, is able to synthesize the information, form conclusions and justify opinions [K7_W06] possesses organized, profound knowledge necessary for designing and optimization of complex technological processes, modelling and calculations using numerical methods, knows modern manufacturing methods and tools for designing manufacturing processes of		bistinguishes research methods. Student knows the principle of implementation, the conditions for conducting and the application of materials testing methods			[SU2] Assessment of ability to analyse information [SW1] Assessment of factual knowledge			
	February 2023 second-cycle studies Full-time studies 2 3 general academic pro Zakład Technologi M Technology -> Facult Subject supervisor Teachers Lesson type Number of study hours E-learning hours inclu Learning activity Number of study hours The aim of the course Course oute [K7_W11] possesses knowledge useful in understanding ex-tec conditioning connect performing the profes engineer and taking i consideration in engi practice; possesses v established knowledg range of intellectual p manufacturing proces including the manage cycle of a product [K7_U01] is able to a information from spen- sources and other so regarding the constru- operation of machine disciplines in polish a foreign language, is a conduct a self-learnir able to synthesize thh- form conclusions and opinions [K7_W06] possesses profound knowledge designing and optimi complex technologic: modern manufacturir and tools for designir manufacturing proces	February 2023     second-cycle studies     Full-time studies     2     3     general academic profile     Zakład Technologii Materiałów Kons     Technology -> Faculty of Mechanica     Subject supervisor     Teachers     Lesson type   Lecture     Number of study hours   30.0     E-learning hours included: 0.0     Learning activity   Participation in classes includ plan     Number of study hours   45     The aim of the course is to familiariz     Course outcome     [K7_W11] possesses organized knowledge useful in understanding ex-technical conditioning connected with performing the profession of an engineer and taking it into consideration in engineering practice; possesses well- established knowledge within the range of intellectual property, management and organization of manufacturing processes, including the management and life- cycle of a product     [K7_U01] is able to acquire information from specialist literary sources and other sources regarding the construction and operation of machines and related disciplines in polish and in a foreign language, is able to conduct a self-learning process, is able to synthesize the information, form conclusions and justify opinions     [K7_W06] possesses organized, profound knowledge necessary for designing and calculations using numerical methods, knows modern manufacturing methods and tools for designing manufacturing processes	February 2023   Academic realisation     second-cycle studies   Subject grownelisation     second-cycle studies   Mode of de     2   Language     3   ECTS cred     general academic profile   Assessment     Zakład Technologii Materiałów Konstrukcyjnych i S     Technology -> Faculty of Mechanical Engineering i     Subject supervisor   dr inż. Aleksa     Teachers   Imachines included: 0.0     Learning activity   Participation in didactic classes included in study plan     Number of study hours   0.0     Number of study hours   45     The aim of the course is to familiarize students with     Course outcome   Sub     [K7_W11] possesses organized knowledge useful in understanding ex-technical conditioning connected with performing the profession of an engineer and taking it into consideration in engineering processe, including the management and life-cycle of a product   Student unde challenges re development testing metho independently technical profession of an engineer in solution from specialist literary sources and other sources regarding the construction and foreign language, is able to conduct a self-learning process, is able to synthesize the information of conduct a self-learning process, is able to synthesize the information of complex technological processes, modelling and calculations using numerical methods, knows modern manufacturing methods and tools for designing	February 2023     Academic year of realisation of subject       second-cycle studies     Subject group       Full-time studies     Mode of delivery       2     Language of instruction       3     ECTS credits       general academic profile     Assessment form       Zaklad Technologii Materiałów Konstrukcyjnych i Spajania -> Insti Technology -> Faculty of Mechanical Engineering and Ship Techr       Subject supervisor     dr inż. Aleksandra Świerczyf       Teachers     Lesson type       Lesson type     Lecture     Tutorial       Lesson type     Lecture     Tutorial       Number of study hours     30.0     0.0     0.0       Learning nours included: 0.0     Learning nours included: 0.0     Learning activity     Participation in didactic classes included in study plan     Participation i consultation h plan       Number of study hours     45     0.0     0.0       Course outcome     Subject outcome     Recognizes the role of an engineer in society.       [KT_W11] possesses organized knowledge useful in understanding ex-technical conditioning connected with performing the profession of an engineer and taking it into consideration in engineering practice; possesses well- established knowledge within the range of intellectual property, management and	February 2023     Academic year of realisation of subject       second-cycle studies     Subject group       Full-time studies     Mode of delivery       2     Language of instruction       3     ECTS credits       general academic profile     Assessment form       Zaklad Technologii Materiałów Konstrukcy/nych i Spajania -> Institute of I Technology -> Faculty of Mechanical Engineering and Ship Technology       Subject supervisor     dr inz. Aleksandra Świerczyńska       Teachers     Eesson type       Lesson type     Lecture     Tutorial       Learning activity     Participation in didactic classes included in study plan     0.0       Number of study hours     45     0.0       Number of study hours     45     0.0       The aim of the course is to familiarize students with advanced methods o Course outcome     Subject outcome       [K7_W11] possesses organized infining connected with the range of intellectual property, management and organization of manufacturing processes, including the management and life-cycle of a product     Student understands the challenges related to the development of modem metal testing methods and is able to independently look for solutions to technical problems.       [K7_W06] possesses organized, profound knowledge necessary for denel-learning process, is able to synthesize the information	February 2023     Academic year of realisation of subject     2023/ 2023/       February 2023     Academic year of realisation of subject     2023/       Second-cycle studies     Subject group     at the       Full-time studies     Mode of delivery     at the       2     Language of instruction     Polish       3     ECTS credits     4.0       general academic profile     Assessment form     assess       Zaklad Technologi Materiałów Konstrukcynych i Spajania -> Institute of Manufa Technology -> Faculty of Mechanical Engineering and Ship Technology     Subject supervisor     dr in2. Aleksandra Świerczyńska       Teachers	February 2023     Academic year of realisation of subject     2023/2024       second-cycle studies     Subject group     at the university       Full-time studies     Mode of delivery     at the university       2     Language of instruction     Polish       3     ECTS credits     4.0       general academic profile     Assessment form     assessment       Zaklad Technologi Materiałów Konstrukcyjnych i Spajania -> Institute of Manufacturing and M Technology -> Faculty of Mechanical Engineering and Ship Technology     Subject supervisor       Teachers     Image: Consultation in didactic classes included in study plan     0.0     15.0     0.0       Learning neurs included: 0.0     E-learning hours included: 0.0     Image: Consultation in or consultation in or consultation in ours     Self-study       Number of study hours     45     0.0     0.0     Image: Consultation in or consultation in general set familiarize students with advanced methods of materials testing.       Image: Information Represent Study hours     45     0.0     0.0     Image:	

Subject contents	Basic concepts in the field of materi	Basic concepts in the field of material testing					
oubjeet contents							
	Quality assurance systems in research						
	Testing the mechanical properties of materials						
	Testing of technological properties of materials						
	Testing of physical properties of materials						
	Testing of chemical properties of materials Testing of welded joints						
	Methods of testing metallic materials						
	Mathada of tasting agromic materials						
	Methods of testing ceramic materials						
	Methods of testing polymeric materials						
	Methods of testing composite materials						
Prerequisites							
and co-requisites							
Assessment methods	Subject passing criteria	Passing threshold	Percentage of the final grade				
and criteria	Project	60.0%	30.0%				
	Final test	60.0%	70.0%				
Recommended reading	Basic literature	1.Kubiński, W. (2016). Wybrane metody badań materiałów. PWN,					
J		). Ocena jakości wyrobów zoj Szkoły Zawodowci w Elblagu					
	hutniczych. Wydaw. Państw. Wyższej Szkoły Zawodowej w Ell 3.Dobrzański, L. (2007). Wprowadzenie do nauki o materiałach						
		Wydaw. Politechniki Śląskiej, Gliwic	e. 4.Mirski, Z. (2010). Technologia i				
		badanie materiałów inżynierskich. Oficyna Wydawnicza Politechniki Wrocławskiej. 5.Kulik, J., Olszak Kulik, H. (2003) Badanie własności technologicznych metali. Wydawnictwo Uczelniane Politechniki					
	Supplementary literature	Koszalińskiej. Standards, articles					
	eResources addresses	Adresy na platformie eNauczanie:					
Example issues/	List the methods of testing metal/ceramic/polymer/composite materials.						
example questions/							
tasks being completed							
	Characterize tests on technological properties.						
	Net applicable						
Work placement	Not applicable						