GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Organization of welding works, PG_00055260		
Field of study	Management and Production Engineering		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2025/2026
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	6	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Institute of Manufacturing and Materials Technology -> Faculty of Mechanical Engineering and Ship Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Grzegorz Rogalski	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	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 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	3.0	27.0	75

Subject objectives

The aim of the course is to familiarize students with the organization of welding work in a production plant. The elements that determine the profitability of the enterprise will be presented.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U03] is able to communicate using various techniques in the professional environment and other environments, has language skills enabling free communication in the field of technical sciences related thematically to management and production engineering	The student knows the proper nomenclature related to quality management systems and is able to clearly formulate his statements. Uses the technical nomenclature related to the field of study.	[SU3] Assessment of ability to use knowledge gained from the subject
[K6_U02] has the ability of self-learning and expanding knowledge in a specialized field of engineering production	The student is able to analyze the costs associated with the functioning of the enterprise in the field of welding processes and related elements.	[SU3] Assessment of ability to use knowledge gained from the subject [SU4] Assessment of ability to use methods and tools
[K6_W08] has basic management knowledge, including process and product quality management, and detailed knowledge of integrated and standardized quality, environmental, health and safety management systems	The student is able to determine the organizational structure of the company with particular emphasis on areas related to welding processes. His knowledge is based on the requirements of subject standards.	[SW2] Assessment of knowledge contained in presentation
[K6_K02] is able to interact and work in a group, assuming different roles, can inspire and organize the learning process of others, properly identifies priorities for realization of a task specified by themselves or others	The student is able to solve organizational problems and perform cost calculation in the field of welding processes	[SK3] Assessment of ability to organize work

Subject contents

As part of the course, students learn about the issues related to the structure of the plant using welding processes, methods of calculating welding costs, the structure of certification costs in the field of welding processes, methods of increasing welding efficiency, health and safety regulations and the principles of selecting additional materials for bonding

Prerequisites and co-requisites	Not rquire	
Assessment methods and criteria		

Subject passing criteria	Passing threshold	Percentage of the final grade
Lectrure	56.0%	50.0%
Project	56.0%	50.0%

Recommended reading	Basic literature	Klimpel A.: Kontrola i zapewnienie jakości w spawalnictwie. Tom 1, Wydawnictwo Politechniki Śląskiej Szymański A. Kontrola i zapewnienie jakości w spawalnictwie. Tom 2, Wydawnictwo Politechniki Śląskiej Czuchryj J., Świergoł S.: Podstawy organizacji kontroli jakości w spawalnictwie, Instytut Spawalnictwa Gliwice, 2003 Pilarczyk J.: Poradnik inżyniera Spawalnictwo Tom 1, Tom 2 Wydanie II, Wydawnictwo: Naukowe PWN, 2017 Tomasz Chmielewski: Projektowanie procesów technologicznych spawalnictwo, Oficyna Wydawnicza Politechniki Warszawskiej, 2013 Edward Dobaj: Maszyny i urządzenia spawalnicze, WNT Wydawnictwa Naukowo-Techniczne, 2014 Matczak W., Gromiec J.: Zasady oceny narażenia spawaczy na dymy i gazy. Instytut Medycyny Pracy w Łodzi 2003
	Supplementary literature	Not require
	eResources addresses	Adresy na platformie eNauczanie:
Example issues/ example questions/ tasks being completed	1. Explain the structure of welding costs taking into account the available standards 2. What is the preparation and completion time 3. List possible methods of increasing welding efficiency 4. Explain the rules for the selection of welding consumables on the example of austenitic stainless steel type 321 5. Give a typical structure of a production plant using welding processes 6. Present the main hazards of welding work, refer to the relevant regulations	
Work placement	Not applicable	