GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Manufacturing Engineering II, PG_00060460						
Field of study	Mechanical and Naval Engineering						
Date of commencement of studies	October 2025		Academic year of realisation of subject	2026/2027			
Education level	first-cycle studies		Subject group	Obligatory subject group in the field of study			
Mode of study	Part-time studies		Mode of delivery	at the university			
Year of study	2		Language of instruction	Polish			
Semester of study	3		ECTS credits	5.0			
Learning profile	general academic profile		Assessment form	assessment			
Conducting unit	Division Of Structural Materials Technology And Welding -> Institute Of Manufacturing And Materials Technology -> Faculty Of Mechanical Engineering And Ship Technology -> Wydziały Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Jacek Tomków				
	Teachers						

Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	18.0	0.0	18.0	0.0	0.0	36
	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	36	8.0	81.0	125

Subject objectives	Presenting basic manufacturing techniques, especially issues related to casting, metal forming and welding engineering.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U04] is able to perform a critical analysis of the existing technical solutions, present the specification of the technology of manufacturing basic construction elements of machines and engineering assemblies	The student is able to prepare and modify technological documentation.	[SU4] Assessment of ability to use methods and tools
[K6_U15] is able to select appropriate measuring tools and techniques for qualitative verification of manufactured or in-service machinery and ship parts, is able to make basic measurements using basic measuring tools for qualitative verification of machinery and ship parts	The student is able to apply appropriate research techniques.	[SU1] Assessment of task fulfilment
[K6_U08] is able to design a technological manufacturing process for typical elements of machines or devices, using analytical and numerical calculating tools	The student is able to modify a manufacturing technology with appropriate parameters.	[SU3] Assessment of ability to use knowledge gained from the subject
[K6_U09] is able to plan the manufacturing, assembly and quality control processes of typical constructions and mechanical devices, estimating their costs	The student is able to propose a manufacturing technology with appropriate parameters.	[SU3] Assessment of ability to use knowledge gained from the subject
[K6_W16] has a knowledge of technologies for the manufacture of machine parts, is able to select the appropriate manufacturing process for a given mechanical component, has the ability to use tool catalogues to select tools and processing parameters	The student is able to propose appropriate manufacturing methods depending on the element being produced. The student is able to select the basic tools used in a given method as well as the necessary equipment.	[SW1] Assessment of factual knowledge

Subject contents

Metallurgy, steelmaking processes, casting methods, metal forming, strain hardening, metal forming methods, weldability, construction of a welded joint, welding methods.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Laboratories	51.0%	49.0%
Lectures	51.0%	51.0%

Recommended reading

Basic literature

1. Robert Skoblik, Lech Wilczewski. TECHNOLOGIA METALI Laboratorium, Wydawnictwo Politechniki Gdańskiej, 2006.

2. Jan Pilarczyk . Poradnik inżyniera Tom 1 Spawalnictwo, Wydawnictwo Naukowe PWN, 2022.

3. Jan Pilarczyk. Poradnik inżyniera Tom 2 Spawalnictwo, Wydawnictwo Naukowe PWN, 2022.

4. Włodzimierz Walczak i inni. Spawalnictwo ćwiczenia laboratoryjne, Wydawnictwo Politechniki Gdańskiej, 2000.

Supplementary literature

1. Erbel S., Kuczyński K., Marciniak Z.: Obróbka plastyczna .Warszawa. PWN 1986.

2. Romanowski W.P.: Poradnik obróbki plastycznej na zimno. Warszawa: WNT 1976.

3. Klimpel A.: Technologia spawania i cięcia metali. Wyd. Politechniki Śląskiej, Gliwice 1997.

eResources addresses

Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed	Metal forming methods, welding methods, casting methods.
Work placement	Not applicable

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