GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00069972		
Field of study	Mechanical Engineering		
Date of commencement of studies	February 2025	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Division of Biomaterials Technology -> Institute of Manufacturing and Materials Technology -> Faculty of Mechanical Engineering and Ship Technology -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Magdalena Jażdżewska	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	45.0	0.0	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	5.0	50.0	100

Subject objectives

The aim of the course is to familiarize Master's degree students with the principles of preparation, analysis, and presentation of research results in the field of mechanical engineering and machine design. Students will acquire the ability to apply advanced statistical methods and computational tools for the processing, interpretation, and visualization of experimental and simulation data.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K81] is able to cooperate in international team at her/his own university, during work placement and during study abroad	The student is able to collaborate in an international group.	[SK3] Assessment of ability to organize work
[K7_W81] has knowledge of complex grammatical structures and diverse lexical resources needed to communicate in foreign language in terms of general and specialist language related to field of study	The student communicates freely in general vocabulary as well as specialized terminology related to the field of study being pursued.	[SW1] Assessment of factual knowledge
[K7_K71] is able to explain the need to apply knowledge from humanistic, social, economic or legal sciences in order to function in a social environment	The student understands the ethical and legal aspects of functioning in the scientific community.	[SK5] Assessment of ability to solve problems that arise in practice

<table>
<tr><td>Subject contents</td><td>Course content – laboratory

The following topics will be covered during the course:

• organization and verification of the completeness of measurement and computational data,
• application of statistical methods in data analysis (including Students t-test and analysis of variance ANOVA),
• use of Microsoft Office software and other analytical tools for processing research results,
• preparation and presentation of data in the form of tables, charts, and technical reports,
• interpretation of results in the context of scientific literature and engineering research objectives.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Report on completed tasks.</td><td>56.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>• Jóźwiak J., Statystyka od podstaw, Polskie Wydawnictwo Ekonomiczne
• Montgomery D.C., Applied Statistics and Probability for Engineers, Wiley</td></tr>
<tr><td>Supplementary literature</td><td>Current scientific publications from reputable journals, eg. Mechanics of Materials, International Journal of Mechanical Sciences</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>• Application of mathematical and statistical methods in the analysis of material and structural research results,
• Analysis of experimental and numerical data in mechanics,
• Preparation of a research report using computational tools.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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