GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	, PG_00067895		
Field of study	Technical Physics		
Date of commencement of studies	February 2026	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Specialty 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	1	Language of instruction	Polish
Semester of study	2	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Institute of Physics and Applied Computer Science -> Faculty of Applied Physics and Mathematics -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Bartosz Reichel	
	Teachers	dr inż. Bartosz Reichel	

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

E-learning hours included: 0.0

eNauczanie source address: https://enauczanie.pg.edu.pl/2025/course/view.php?id=1937

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

Familiarizing students with programming platforms (such as .NET, Blazor, Unity, Juice, React, Zephyr, Android Java, ...) showing the advantages, disadvantages and problems in using such solutions.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_K01] knows limitations of own knowledge, understands the need to learn and improve professional and personal competencies	A prepared action plan on how to use the platform and whether it will meet the requirements set for it in the project (analysis)	[SK3] Assessment of ability to organize work
[K7_U02] has enhanced knowledge of programming languages and can use software packages	Evaluation of the completed task.	[SU1] Assessment of task fulfilment
[K7_W04] has enhanced knowledge of mathematical, numerical and simulation methods applied in the description and modelling of physical phenomena	Implementation of individual algorithms.	[SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>Course content – lecture
Zadanie polegające na:

1) Wybraniu tematu realizowanego przedsięwzięcia

2) Wybór platform, ocena możliwości realizacji

3) Wybór ostatecznie platformy, bardziej szczegółowy test możliwości

4) Implementacja rozwiązania

Course content – laboratory
The task involves:
1) Selecting the topic of the project
2) Selecting platforms, assessing feasibility
3) Final platform selection, more detailed feasibility testing
4) Implementing the solution</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>none</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>Lab</td><td>50.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>1. Advanced ASP.NET Core 8 Security : Move Beyond ASP.NET Documentation and Learn Real Security, Scott Norberg, 2024
2. Core Java: Fundamentals, Volume 1 ,2020,Cay Horstmann
3. The Road to React: Your journey to master plain yet pragmatic React., Robin Wieruch</td></tr><tr><td>Supplementary literature</td><td>Docker in Action, Second Edition,2019, Jeff Nickoloff , Stephen Kuenzli
Kubernetes in Action, Second Edition, 2025, Marko Luksa , Kevin Conner</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Implement a video streaming app on your chosen platform</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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