GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Mobile applications, PG_00069109		
Field of study	Hydrogen Technologies and Electromobility		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2026/2027
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	4	Language of instruction	Polish
Semester of study	7	ECTS credits	4.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Control Engineering -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Paweł Kowalski	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	10.0	0.0	20.0	0.0	0.0	30

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	30	0.0	0.0	30

Subject objectives

Introduction to the process of designing and building mobile applications for the Android operating system.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_U12] can formulate a specification of simple engineering tasks of a practical nature related to the field of study	Defines the functional requirements of the mobile application.	[SU1] Assessment of task fulfilment
[K6_W15] he has knowledge of the construction, principles of operation and operation of electromagnetic energy converters used in transport systems and systems.	Develops a mobile application demonstrating the operation of electromagnetic energy converters in transport systems.	[SW2] Assessment of knowledge contained in presentation
[K6_U05] can use analytical and simulation methods, prepare and for the formulation and solution of tasks in the field of hydrogen technologies, automation and robotics, electrical engineering, use various techniques to carry out engineering tasks related to electrical devices, hydrogen installations, control and robotics systems	Uses analytical and simulation methods to design and test mobile applications.	[SU4] Assessment of ability to use methods and tools
[K6_U08] can design and build systems and devices related to automation systems, mechatronics and robotics in energy storage devices and in hydrogen installations	Develops a mobile application supporting the operation of devices in hydrogen systems and energy storage.	[SU1] Assessment of task fulfilment
[K6_K02] can work in a group taking on different roles in it	Designs a mobile application collaboratively	[SK1] Assessment of group work skills
[K6_W13] knows the properties of materials used in the field of hydrogen energy and electromobility	Develops a mobile application demonstrating the properties of materials used in hydrogen energy and electromobility.	[SW3] Assessment of knowledge contained in written work and projects

<table>
<tr><td>Subject contents</td><td>Course content – lecture
• Syntax of the Kotlin language.
• Handling Android Studio.

Course content – laboratory
Creating graphical applications for the Android operating system.</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>Project</td><td>50.0%</td><td>60.0%</td></tr>
<tr><td>Lecture assignment</td><td>50.0%</td><td>40.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Kotlin docs, https://kotlinlang.org/docs/home.html

Android Developer guides, https://developer.android.com/docs</td></tr>
<tr><td>Supplementary literature</td><td>Developer documentation for Firebase, https://firebase.google.com/docs?hl=pl</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>Development of a selected application for the Android operating system.</td></tr>
<tr><td>Practical activites within the subject</td><td>Not applicable</td></tr>
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