

表 GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Measurement and control software, PG_00052091							
Field of study	Nanotechnology							
Date of commencement of studies	October 2021		Academic year of realisation of subject			2023/2024		
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			4.0		
Learning profile	general academic profile		Assessmer	Assessment form		assessment		
Conducting unit	Department of Solid State Physics -> Faculty of Applied Physics and Mathematics							
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Marek Chmielewski					
	Teachers		dr hab. inż. Leszek Piotrowski					
			dr inż. Marek Chmielewski					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Projec	t	Seminar	SUM
	Number of study hours	15.0	0.0	30.0	0.0		0.0	45
	E-learning hours included: 0.0							
Learning activity and number of study hours	Learning activity	Participation in classes include plan	n didactic led in study	Participation in consultation hours		Self-study		SUM
	Number of study hours	45		6.0		49.0		100
Subject objectives	Acquire knowledge for the programming skills in the LabView graphical programming language in level allowing for the accession to the CLAD certification exam							

K6_U04 In carrying out tasks related to the subject ISU3 Assessment of ability to subject K6_V10 In carrying out tasks related to the subject ISU3 Assessment of ability to subject K6_V10 The subort provide calibration procedures, and offer tessus. Progent provide calibration procedures, and offer tessus. ISV1] Assessment of factual the rescurrent operations to assess the quarky of the test operameters of the measured elements. ISV1] Assessment of factual the rescurrent operations to assess the quarky of the test operameters of the measured elements. ISV1] Assessment of group work. K6_V10 The student hyter subjects of the test operameters of the ressured elements. ISV1] Assessment of group work. K6_V04 The student will know the capabilities of factual acquisition. ISV1] Assessment of ability to use methods and tools the process of handling the measure of tesperation acquisition. ISV1] Assessment of ability to use methods and tools the process of chandling the measure of the process of chandling the process of chandling the process of chandling the proces of chandling the proces of chandling the process of ch	Learning outcomes	Course outcome	Subject outcome	Method of verification				
K6_W10 The student performs and controls INVI Assessment of factual the measurement experiments. K6_K04 Work in the laboratory in group consist with hree students, consist with hree students, skills [SK1] Assessment of group work, skills K6_U05 The student will know the capabilities of advanced digital signal processing [SW1] Assessment of task tufflinent K6_W04 The student will know the programming parkoms and systems presenting results in various forms, including graphic [SW1] Assessment of factual programming parkoms and systems presenting results in various forms, including graphic Subject contents The content of the course is to understand and practical use of the LabWew programming environment. Locure and lab will be plat outer and the start sugresm, measurement and control using LabView. On the lecture and laboratory will be programming and the start sugression of the National Instrument. In contemporary science and industry. Prerequisites and co-requisites Basic interature National Instrument - Internet sources Subject content will herature National Instr		K6_U04	In carrying out tasks related to the topics of laboratory student will know the correct methods of carrying out the experiment, will be able to realize and understand the need for multi-track analysis of the results. Properly provide calibration procedures, and effectively uses these results to determine the unknown parameters of the measured elements	[SU3] Assessment of ability to use knowledge gained from the subject [SU1] Assessment of task fulfilment				
K6_K04 Work in the laboratory in group consist with three students, currently in single groups person. Cooperation in order to achieve the intended results. Planning and allocation of functions and roles in the process of handling the measuring equipment and data aquisition. [SV1] Assessment of group work skills K6_U05 The student will know the capabilities of different measurement techniques, discovers and suggests the possibility of their effective use in areas other than those performed during the dab. Learns software capabilities for advanced digital signal processing [SV1] Assessment of ability to use methods and tools K6_W04 The student will know the capabilities for advanced digital signal processing [SW1] Assessment of factual hopeschilles for advanced digital signal processing K6_W04 The student is able to use the process of communication and data section functions and systems presenting results in various forms, including graphic format. [SW1] Assessment of factual knowledge Subject contents The content of the course is to understand and practical use of the LabView programming networnment. Lecture and alb will be held under the patronage and the strict supervision of the National Instrument. In a series of lectures and labs, students will lass toboratory using a course of control systems, measurement and control using LabView. On the lecture and alboratory will be presented the capacity of the LabView programming in LabView environment. Will explore the issues of control systems, measurement and control using LabView. On the lecture and alboratory will be presented the capacity of the LabView environment and its versatility in contemporary science and industry.		K6_W10	The student performs and controls the measurement experiments to assess the quality of the tested materials and defines and identifies the defects existing in the material.	[SW1] Assessment of factual knowledge				
K6_U05 The student will know the possibility of idferent measurement techniques, discovers and suggests the possibility of their effective use in areas other than those performed during the lab. Learns software capabilities for advanced digital signal processing [SU4] Assessment of task fulfilment K6_W04 The student is able to use the possibility of their effective use in areas other than those performed during the lab. Learns software capabilities for advanced digital signal processing [SW1] Assessment of factual knowledge Subject contents K6_W04 The student is able to use the process of communication between programming performs and systems presenting results in various forms, including graphic format. [SW1] Assessment of factual knowledge Subject contents The content of the course is to understand and practical use of the bab/iew programming environment. Lecture and lab will be held under the patronage and the shrid supervision of the National instrument. Lecture and lab will be held under the patronage and the shrid supervision of the National instrument. Lecture and laboratory the personnet the capacity of the LabView environment and its versatility in contemporary science and lindustry. Prerequisites and co-requisites Subject passing criteria Passing threshold Percentage of the final grade Test funkcjonalnosci i estetyka 60.0% Recommended reading Supplementary literature National Instrument - Internet sources Subject passing criteria Passing threshold Percentage of the final grade Test funkcjonalnosci i estetyka 60.0% 100.0% Example Supple		K6_K04	Work in the laboratory in group consist with three students, currently in single groups person. Cooperation in order to achieve the intended results. Planning and allocation of functions and roles in the process of handling the measuring equipment and data acquisition.	[SK1] Assessment of group work skills				
K6_W04 The student is able to use the programming environment to present the result of the software work, he is able to conduct the process of communication and data exchange informats that enable communication between programming platforms and systems presenting results in various forms, including graphic format. [SW1] Assessment of factual knowledge Subject contents The content of the course is to understand and practical use of the LabView programming environment. Lecture and lab will be held under the patronage and the strict supervision of the National Instrument. In a series of lectures and labs, students will learn about the basic techniques of programming in LabView. On the lecture and laboratory will be presented the capacity of the LabView environment. Will explore the issues of control systems, measurement and control using LabView. On the lecture and laboratory will be presented the capacity of the LabView environment and its versatility in contemporary science and industry. Prerequisites Basic programming skills in scripting programming languages (C, Fortran, etc.). Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade Recommended reading Basic literature National Instrument - Internet sources Supplementary literature ON% Supplementary literature National Instrument - Internet sources Gon% 100.0% Recommended reading Basic literature National Instrument - Internet sources OPIS 2024 - Moode ID: 38527		K6_U05	The student will know the capabilities of different measurement techniques, discovers and suggests the possibility of their effective use in areas other than those performed during the lab. Learns software capabilities for advanced digital signal processing	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment				
Subject contents The content of the course is to understand and practical use of the LabView programming environment. Lecture and lab will be held under the patronage and the strict supervision of the National Instrument. In a series of lectures and labs, students will learn about the basic techniques of programming in LabView environment. Will explore the issues of control systems, measurement and control using LabView. On the lecture and laboratory will be presented the capacity of the LabView environment and its versatility in contemporary science and industry. Prerequisites and co-requisites Basic programming skills in scripting programming languages (C, Fortran, etc.). Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade Test funkcjonalności i estetyka 60.0% 100.0% Recommended reading Basic literature National Instrument - Internet sources Supplementary literature not required eResources addresses Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.gg.edu.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam Work placement Not applicable		K6_W04	The student is able to use the programming environment to present the result of the software work, he is able to conduct the process of communication and data exchange in formats that enable communication between programming platforms and systems presenting results in various forms, including graphic format.	[SW1] Assessment of factual knowledge				
Prerequisites Basic programming skills in scripting programming languages (C, Fortran, etc.). Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade Recommended reading Basic literature National Instrument - Internet sources Supplementary literature not required eResources addresses Adresy na platformic eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam	Subject contents	The content of the course is to understand and practical use of the LabView programming environment. Lecture and lab will be held under the patronage and the strict supervision of the National Instrument. In a series of lectures and labs, students will learn about the basic techniques of programming in LabView environment. Will explore the issues of control systems, measurement and control using LabView. On the lecture and laboratory will be presented the capacity of the LabView environment and its versatility in contemporary science and industry.						
Assessment methods and criteria Subject passing criteria Passing threshold Percentage of the final grade Test funkcjonalności i estetyka 60.0% 100.0% Recommended reading Basic literature National Instrument - Internet sources Supplementary literature not required eResources addresses Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam Work placement Not applicable	Prerequisites and co-requisites	Basic programming skills in scripting programming languages (C, Fortran, etc.).						
and criteria Test funkcjonalności i estetyka 60.0% 100.0% Recommended reading Basic literature National Instrument - Internet sources Supplementary literature not required eResources addresses Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam Work placement Not applicable	Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade				
Basic literature National Instrument - Internet sources Supplementary literature not required eResources addresses Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.ge.du.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam Work placement Not applicable		Test funkcjonalności i estetyka	60.0%	100.0%				
Supplementary literature not required eResources addresses Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam Work placement Not applicable	Recommended reading	Basic literature	National Instrument - Internet sources					
eResources addresses Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38527 Example issues/ example questions/ tasks being completed Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam Work placement Not applicable		Supplementary literature	not required					
Example issues/ Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam tasks being completed Not applicable		eResources addresses	Adresy na platformie eNauczanie: OPIS 2024 - Moodle ID: 38527 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=38527					
Work placement Not applicable	Example issues/ example questions/ tasks being completed	Consistent with the themes available on the website of National Instruments in the subject of the CLAD exam						
	Work placement	Not applicable						