FACULTY OF ELECTRICAL ENGINEERING

SUBJECT CARD

Name in Polish:	**Programowanie w języku Delphi**
Name in English:	**Programming in Delphi**
Main field of study (if applicable):	**Electrical Engineering**
Specialization (if applicable):	
Level and form of studies:	**1st level, part-time**
Kind of subject:	**optional**
Subject code:	**ELR053275**
Group of courses:	**NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):			10		
Number of hours of total student workload (CNPS):			60		
Form of crediting:			crediting with grade		
For group of courses mark (X) final course:					
Number of ECTS points:			2		
including number of ECTS points for practical (P) classes :			2		
including number of ECTS points for direct teacher-student contact (BK) classes:			1.40		

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Has a basic knowledge of IT issues.
2. Has a basic knowledge of the development of algorithms.
3. Has the basic skills to related to service PC.
4. Has the basic skills related to programming PC.
5. He understands a need to participate in activities to improve their skills and acquire new knowledge.

SUBJECT OBJECTIVES

C1. Acquiring the ability to create algorithms to solve engineering tasks.

C2. Acquiring the ability to computer programming in Delphi language.

C3. The acquisition and consolidation of of social competence including emotional intelligence involving the ability to work in a group of students with a view to effective problem solving. Responsibility, honesty and fairness in the procedure observance force in academic environment and society.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

relating to skills:

PEU_U01 He can formulate the problem of programming.

PEU_U02 He can write a program in Delphi language using appropriate programming methods.

relating to social competences:

PEU_K01 The acquisition and consolidation of competence in the independent and creative thinking.

PROGRAMME CONTENT

	Form of classes - laboratory	**Number of hours:**
Lab 1	Introductory classes. Getting acquainted with safety rules. Familiarize with laboratory set-up and the development environment. Making the samle project.	2
Lab 2	Writing programs with complex data types and operators	2
Lab 3	Writing programs using the program sequence control procedures	2
Lab 4	Writing programs using a graphical user interface and object-oriented programming elements.	3
Lab 5	Activities program completion.	1
	Total hours:	**10**

TEACHING TOOLS USED
N1. Individual work, preparation for exercise. N2. Consultation. N3. Traditionally carried out laboratory with computer programming.

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT		
Evaluation *F – forming (during semester)* *P – concluding (at semester end)*	**Educational effect number**	**Way of evaluating educational effect achievement**
F1(L)	PEU_U01 PEU_U02 PEU_K01	Activity in laboratory classes.
F2(L)	PEU_U01 PEU_U02 PEU_K01	Rate written programs after each course.
P(L)	P=0,3*F1+0,7*F2	

PRIMARY AND SECONDARY LITERATURE
PRIMARY LITERATURE: [1] Osier D., Grobman S., Batson S., Delphi 2, Wyd. Helion, Gliwice 1997 [2] Baron B., Pasierbek A., Maciążek M., Algorytmy numeryczne w Delphi. Księga eksperta, Wyd. Helion, 2006 **SECONDARY LITERATURE:** [1] Developer's Guide, Borland Delphi for Windows

SUBJECT SUPERVISOR
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