FACULTY OF ELECTRICAL ENGINEERING

SUBJECT CARD

Name in Polish:	**Programowanie obiektowe**
Name in English:	**Object programming**
Main field of study (if applicable):	**Electrical Engineering**
Specialization (if applicable):	
Level and form of studies:	**1st level, full-time**
Kind of subject:	**optional**
Subject code:	**ELR042510**
Group of courses:	**NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):			15		
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. Knowledge of structured programming.
2. Abilities of handling computer.
3. Abilities of programming in the C language,

SUBJECT OBJECTIVES

C1. Writing programs according to rules of the object-oriented programming.
C2. Developing programs with the use of the C++ language.

SUBJECT EDUCATIONAL EFFECTS

relating to knowledge:

relating to skills:

PEK_U01 The student is able to use the idea of the object-oriented programming.
PEK_U02 The student is able to write programs in the C++ language.

relating to social competences:

PEK_K01 The student can independently develop computer programs.

PROGRAMME CONTENT

	Form of classes - laboratory	Number of hours:
Lab 1	Introduction. Object programming. Creating objects.	2
Lab 2	Implementation of member functions – static functions, inline functions, constant functions.	2
Lab 3	Friend function and operator functions. Constructors and destructors.	2
Lab 4	Function and operator overloading.	2
Lab 5	Inheritance	2
Lab 6	Polymorphism.	2
Lab 7	Templates.	2
Lab 8	Utilization of different elements of the C++ language.	1
	Total hours:	**15**

TEACHING TOOLS USED
N1. Preparation in the form of reports. N2. The C++ programming environment. N3. Study consultations.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT		
Evaluation *F – forming (during semester)* *P – concluding (at semester end)*	**Educational effect number**	**Way of evaluating educational effect achievement**
F1(L)	PEK_U01 PEK_U02	entrance tests, oral answers, activity at the classes
F2(L)	PEK_U01 PEK_U02 PEK_K01	reports from the classes
P(L)	0.3 F1 + 0.7 F2	

PRIMARY AND SECONDARY LITERATURE

PRIMARY LITERATURE:

[1] Grębosz J., Symfonia C++, Kraków, Kallimach 2000.
[2] J. Kisilewicz, Język C++.Programowanie obiektowe, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2005.
[3] Sexton C., Programowanie w C++ - to proste, RM, Warszawa 2001.

SECONDARY LITERATURE:

[1] Kubiak M. J., Programuję w językach Turbo Pascal i C/C++: programowanie strukturalne z elementami programowania obiektowego, Mikom, Warszawa 2001.
[2] I. Pohl, C++ by Dissection, Boston, Addison-Wesley 2002.

SUBJECT SUPERVISOR

Kazimierz Wilkosz, kazimierz.wilkosz@pwr.edu.pl

MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT
ELR042510 - Object programming
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY **Electrical Engineering**

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)	Subject objectives	Programme content	Teaching tool number
PEK_U01	K1ETK_U13	C.1	Lab1 Lab2 Lab3 Lab4 Lab5 Lab6 Lab7 Lab8	N.1 N.2 N.3
PEK_U02	K1ETK_U13	C.2	Lab1 Lab2 Lab3 Lab4 Lab5 Lab6 Lab7 Lab8	N.1 N.2 N.3
PEK_K01	K1ETK_K05 K1ETK_K06	C.1 C.2	Lab1 Lab2 Lab3 Lab4 Lab5 Lab6 Lab7 Lab8	N.1