

FACULTY OF ELECTRICAL  
ENGINEERING**SUBJECT CARD**

Name in Polish: **Technologie informacyjne**  
 Name in English: **Computer technology**  
 Main field of study (if applicable): **Control Engineering and Robotics**  
 Specialization (if applicable):  
 Level and form of studies: **1st level, full-time**  
 Kind of subject: **obligatory**  
 Subject code: **INR042501**  
 Group of courses: **NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):	15		15		
Number of hours of total student workload (CNPS):	30		30		
Form of crediting:	crediting with grade		crediting with grade		
For group of courses mark (X) final course:					
Number of ECTS points:	1		1		
including number of ECTS points for practical (P) classes :			1		
including number of ECTS points for direct teacher-student contact (BK) classes:	0.70		0.70		

**PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES**

1. Knowledge of basic problems of computer technics.
2. Abilities of basic handling computer.

**SUBJECT OBJECTIVES**

- C1. Deepening knowledge of basic computer hardware and software, especially the WINDOWS software.
- C2. Deepening practical skills in handling basic computer hardware and software, especially the WINDOWS software.

**SUBJECT EDUCATIONAL EFFECTS***relating to knowledge:*

- PEK\_W01 The student has knowledge in the scope of basic computer hardware.
- PEK\_W02 The student knows basic computer software, especially the WINDOWS software.
- PEK\_W03 The student has knowledge in the scope of utilization of computer systems in computer networks.

*relating to skills:*

- PEK\_U01 The student is able to effectively use I/O devices.
- PEK\_U02 The student is able to effectively manage information and data in the Windows environment on a basic level.
- PEK\_U03 The student is able to effectively utilize Internet.

*relating to social competences:*

- PEK\_K01 The student has good habits in handling computer to ensure high its quality.

## PROGRAMME CONTENT

Form of classes - lecture		Number of hours:
Lec 1	An introduction, the lecture program, requirements. Basic terms of computer science: hardware, software, information technology. Types of computers. Basic parts of PC. Computer performance.	2
Lec 2	Computer hardware: processor, computer memory, input/output devices, mass memory.	2
Lec 3	Computer software: type of software. operating systems, utility software, graphical interface. Structures and development of computer systems.	2
Lec 4	Computer networks: LAN i WAN, Intranet, Extranet, Internet. Utilisation of computers: computer in business, services in computer networks (e-Mail, e-commerce). Information security: basic terms, secure computer system.	2
Lec 5	Information security management: reasons of errors of computer protection, basic strategies to combat security threats	2
Lec 6	Security and health issues: ergonomics, health care, precautions, computers and natural environment.	2
Lec 7	Some of the legal issues: author law, Polish law dealing the protection of personal data.	2
Lec 8	Final test	1
Total hours:		<b>15</b>

Form of classes - laboratory		Number of hours:
Lab 1	Principles of utilisation of PC: creating a work environment, a desktop environment, managing files, antiviral protection, printing.	2
Lab 2	Text processing: general principles of use of application, basic operations of text formatting.	2
Lab 3	Text processing: objects (tables, pictures, drawings), serial correspondence, printing.	2
Lab 4	Spreadsheets: general principles of use of application, creating documents including calculations and text, addressing, the concepts of a worksheet and spreadsheet, formatting cells and worksheets, formulas, functions.	2
Lab 5	Database: general principles of use of application, tables, forms.	2
Lab 6	Database: retrieving information from database, reports, printing	2
Lab 7	Presentation and manager graphics: general principles of use of application; creating presentation including text, pictures, charts and diagrams.	2
Lab 8	Services in computer networks: utilization of Internet (e-Mail, WWW browsers, search engine tools)..	1
Total hours:		<b>15</b>

## TEACHING TOOLS USED

- N1. Multimedia presentation.
- N2. Information lecture.
- N3. Preparation in the form of reports.
- N4. Computer editor.
- N5. Spreadsheets.
- N6. Program for creation and management of database.
- N7. Program for preparing presentations.
- N8. Program for providing services in computer networks.

## EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT

Evaluation <i>F – forming (during semester) P – concluding (at semester end)</i>	Educational effect number	Way of evaluating educational effect achievement
F1(w)	PEK_W01 PEK_W02 PEK_W03	activity at the classes
F2(w)	PEK_W01 PEK_W02 PEK_W03	average of the grades from tests
P(w)	P=0.1 F1 + 0.9 F2	
F1(L)	PEK_U01 PEK_U02 PEK_U03	activity at the classes
F2(L)	PEK_U01 PEK_U02 PEK_U03	reports from the classes
P(L)	P=0.3 F1 + 0.7 F2	

## PRIMARY AND SECONDARY LITERATURE

### PRIMARY LITERATURE:

- [1] Bartoszek J., Brzykcy G., Wybrane elementy środowiska informatycznego, Wyd. Pol. Poznańskiej, Poznań 1999.
- [2] Biernat J., Architektura komputerów, Oficyna Wyd. Pol. Wrocławskiej, Wrocław 2002.
- [3] Buchanan W., Internet. Wkił, Warszawa, 1999.
- [4] Cieslak K., WINDOWS i sieci komputerowe, Helion, Wrocław 1999.
- [5] Calabria J., Burke D., Kirkland R., Poznaj Microsoft Word 2000 PL, Mikom, Warszawa 2000.
- [6] Dodge M., Podręcznik Microsoft Excel 2000: wersja polska, Wyd. RM, Warszawa 1999.
- [7] Durka P.J., Cyfrowy Świat. Jak To Działa., Adamantan, Warszawa 2004.
- [8] Forte S. i inni, Access 2000: księga eksperta, Helion, Gliwice 2001.
- [9] Nelson S. L., Microsoft PowerPoint 2000 PL: przewodnik od A do Z, Mikom, Warszawa 1999.
- [10] Pikoń K., ABC internetu., Helion, Gliwice 2006.
- [11] Wróblewski P., ABC komputera, Helion, Gliwice 2006.

### SECONDARY LITERATURE:

- [1] Comer D. E., Sieci komputerowe i intersieci., WNT, Warszawa 1999.
- [2] Metzger P., Anatomia PC: architektura komputerów zgodnych z IBM PC. Kompedium, Helion Gliwice 2003.
- [3] Trusewicz M., INTERNET od A do Z., MIKOM, Warszawa 1998.
- [4] Nelson S. L., Microsoft Word 2000 PL: przewodnik od A do Z, Mikom, Warszawa 1999.
- [5] Walkenbach J., Biblia Excel 2000, Wyd. RM, Warszawa 1999
- [6] Nelson S. L., Microsoft Excel 2000 PL: przewodnik od A do Z, Mikom, Warszawa 1999.
- [7] Kuciński K., Poznajemy Accessa 2000: wszystko, co chciałeś wiedzieć o MS ACCESS, ale nie wiedziałeś kogo zapytać, "Edition 2000", Kraków 2000.

## SUBJECT SUPERVISOR

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### MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT INR042501 - Computer technology AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY **Control Engineering and Robotics**

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_W01	K1AiR_W11	C.1	Lec1 Lec2	N.1 N.2
PEK_W02	K1AiR_W11	C.1	Lec3 Lec4 Lec5 Lec6 Lec7	N.1 N.2
PEK_W03	K1AiR_W11	C.1	Lec4	N.1 N.2
PEK_U01	K1AiR_U09	C.2	Lab1	N.3
PEK_U02	K1AiR_U09	C.2	Lab2 Lab3 Lab4 Lab5 Lab6 Lab7	N.3 N.4 N.5 N.6 N.7
PEK_U03	K1AiR_U09	C.2	Lab8	N.3 N.8
PEK_K01	K1AiR_K04	C.2	Lec8 Lab1 Lab2 Lab3 Lab4 Lab5 Lab6 Lab7 Lab8	N.3