Kielce University of Technology

FACULTY OF MANAGEMENT AND COMPUTER MODELLING

MODULE DESCRIPTION

Module code	full-time studies:	**Z-ZIP1-E-724**
	part-time studies:	**Z-ZIPN1-E-724**
Module name	**Contemporary Computer Systems**	
Module name in Polish	**Współczesne systemy komputerowe**	
Valid from academic year	**2019/2020**	

MODULE PLACEMENT IN THE SYLLABUS

Field of study	**MANAGEMENT AND PRODUCTION ENGINEERING**
Level of education	**1st degree**
Studies profile	**General**
Form and method of conducting classes	**Full-time and Part-time**
Specialisation	**Computer Science for Management and Modelling**
Unit conducting the module	**Department of Computer Science Technologies**
Module co-ordinator	**Sławomir Koczubiej, PhD**
Approved by:	**Dariusz Bojczuk, PhD, DSc**

MODULE OVERVIEW

Type of subject / group of subjects	**Specialist subject**
Module status	**Non-compulsory**
Language of conducting classes	**English**
Module placement in the syllabus - semester	**Semester VII**
Initial requirements	**Information Technologies** **Fundamentals of Computer Science**
Examination (YES/NO)	**NO**
Number of ECTS credit points	**2**

Method of conducting classes		**Lecture**	**Classes**	**Laboratory**	**Project**	**Other**
Per semester	full-time studies:	**15**		**15**		
	part-time studies:	**9**		**9**		

TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS

Category	Symbol	Learning outcomes	Assignations to the directional learning outcomes
Knowledge	W01	A student has knowledge of the structure and architecture of a computer, hierarchy and organization of memory. He knows the terms: interrupts, exception, bus, input-output circuit.	ZIP1_W04
	W02	A student knows the methods of data representation used in computer systems.	ZIP1_W05
	W03	A student knows the structure of the operating system. He knows and understands the principle of operation of the operating system. Understands problems related to the execution of programs.	ZIP1_W04
Skills	U01	A student is able to assess the possibilities of modern hardware solutions and evaluate the existing hardware solutions.	ZIP1_U03
	U02	A student is able to install and configure the selected operating system. He can administer the operating system and install the necessary software.	ZIP1_U07
	U03	A student is able to take care of the security of computer systems. He can archive data.	ZIP1_U07
Social competences	K01	A student understands the need for constant replenishment of knowledge. Has competences in the use of Internet resources for self-education.	ZIP1_K01
	K02	He is ready to work in a team, as its member or leader.	ZIP1_K04

TEACHING CONTENTS

Method of conducting classes	Teaching contents
Lecture	Introduction. Computer structure and architecture. Architecture and organization of memory. Data and their representation. Program model and computer utility structure. Computer resources. Contemporary computer architectures. Operating system, definition, tasks, classification. Construction of the operating system, processes. File systems and types. File operations. Virtualization. Features of selected modern operating systems.
Laboratory	Virtualization software. Installation of the operating system. Initial operating system configuration. Files, directories, access rights, file search. Installing the software. Archiving. User and disk resource management. Start the operating system. Process and service management. Monitoring the operating system. Automation.

METODS OF ASSESSING TEACHING RESULTS

Symbol	Methods of checking the learning outcomes *(select X)*					
	Oral exam	**Written exam**	**Test**	**Project**	**Statement**	**Other**
W01			X			
W02			X			
W03			X			
U01			X		X	
U02			X		X	
U03			X		X	
K01			X		X	
K02					X	

FORM AND CONDITIONS OF PASSING

Form of classes	Form of credit	Passing conditions
Lecture	Credit with grade	Obtaining a credit for laboratory classes, active participation in lectures.
Laboratory	Credit with grade	Obtaining at least 50% of tests, active participation in laboratory classes.

STUDENT WORKLOAD

Balance of ECTS points												
No.	Type of student's activity	Student's workload										Unit
		full-time					part-time					
1.	Participation in the activities	Lc	C	Lb	P	O	Lc	C	Lb	P	O	h
		15		15			9		9			
2.	Other (consultation, exam)	2		2			2		2			h
3.	**Number of hours of a student's assisted work**	**34**					**22**					h
4.	**Number of ECTS credit points which are allocated for assisted work**	**1,4**					**0,9**					ECTS
5.	**Number of hours of a student's unassisted work**	**16**					**28**					h
6.	**Number of ECTS credit points which a student receives for unassisted work**	**0,6**					**1,1**					ECTS
7.	**Work input connected with practical classes**	**25**					**25**					h
8.	**Number of ECTS credit points which a student receives for practical classes**	**1,0**					**1,0**					ECTS
9.	**Total number of hours of a student's work**	**50**					**50**					h
10.	**Punkty ECTS za moduł** *1 ECTS=25 hours*	**2**										ECTS

LITERATURE

1. Ledin J. (2022), *Modern Computer Architecture and Organization: Learn x86, ARM, and RISC-V architectures and the design of smartphones, PCs, and cloud servers*, Packt Publishing.
2. Harris S., Harris D. (2021), *Digital Design and Computer Architecture*, Morgan Kaufmann.
3. Shotts W. (2019), *The Linux Command Line*, No Starch Press.
4. Negus C. (2020), *Linux Bible*, Wiley.