UNIVERSITY OF MITROVICA "ISA BOLETINI"

Course Curriculum Model (Syllabus)

Fakulty:	Faculty of Mechanical and Computer Engineering	
Department:	Computer Science and Engineering	
Level:	VI	
Code of the course:	210-CSE	
Course:	MICROPROCESSORS & MICROCOMPUTERS	
Course Status:	Obligatory	(mandatory)
Semester:	IV	(spring)
Number of hours per week:	2+2	
ECTS:	5	
Time / location:		
Year of studies	II	
Lecturer:	Prof. Ass. Dr. Artan Rexhepi	
Assistent:	Msc. Berat Ujkani	
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Content	Integrated circuits, identification of logic circuits, reading the characteristics of logic circuits from manufacturer's documentation. Bistables. Flip-Flops. Characteristics and flip-flops applications. Counters, asynchronous counters. Applications and design of the asynchronous counters. Synchronous counters, application and design synchronous counters. Shift registers, applications and design of the shift registers. Memories and their type. Special type of memories.
Purpose	Students become acquainted on the basic concepts of the memory elements (bistable devices), to design and use counters, to design and use different type of shift register, as well to know memories function in computer system.
Accessibility	Upon completion of this course students will be able to: - realize and use the different bistable elements, - design asynchronous and synchronous counters with the different modulus, - design counters with different modulus using the integrated circuits, - realize cascading counters, - design the shift registers according by length of words, - use integrated circuits and adopt them according by the requirements of users, - use memory modules to increase the word capacity and word length.

Program	weeks	Lecture
	First week:	Integrated circuits, identification of the logic gates, Qarqet e integruara, reading the characteristics of logic circuits from manufacturer's documentation.
	Second week:	Bistabiles
	Third week:	Flip-Flops
	Fourth week:	Flip-Flops applications and their characteristics
	Fifth week:	Counters, asynchronous counters
	Sixth week:	Applications and design of the asynchronous counters
	Seventh week:	Synchronous counters
	Eighth week:	Design the synchronous counters
	Ninth week:	Shift registers
	Tenth week:	Types of the shift registers.
	Eleventh week:	Applications of the shift registers
	Twelfth week:	Memories
	Thirteenth week:	RAM, ROMs.
	Fourteenth week:	Special type of memories.
	Fifteenth week :	Mikroprocesors
Literature	**Principal literature:** [1] Thomas L. Floyd,"Digital Fundamental" Eleventh Edition, Prentice Hall, 2015. *[2] Stephen Brown, Zvonko Vranesic, "Fundamentals of Digitaln and Computer Design with VHDL", Mc Graw Hill, 2005.* **Recommended Literature:** *[1] Thomas L. Floyd,"Digital Fundamental" Tenth Edition, Prentice Hall, 2010.*	

Teaching methodology	Lectures, numerical exercises, laboratory exercise, discussions and work in groups.

Contribution to student workload (which should correspond to student learning outcomes - 1 ECTS credit = 25 hours)

Activity	Hours	Days/weeks	Total
Lectures	2	15	30
Exercise sessions (with TA)	2	15	30
Practical work	0	0	0
Office hours	1	15	15
Fieldwork	0	0	0
Midterms, seminars	2	2	4
Homework	2	2	4
Self-study	1	20	20
Final exam preparation	2	9	18
Time spent in exams	2	1	2
Projects, presentations, etc	2	1	2
Total			**125**

Evaluation

Teaching methodology: (according to the Statute and Regulation for studies of UMIB)	
Tests / Colloquia	40%
Practical test during exercises	
Home work	15%
Interpretation and presentation of artistic creativity and other works	
Final exam and attendance	40%+5%

Mitrovica   **Course provider:**

(Name Surname)

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(Signature)