

National Institute of Technology Meghalaya

An Institute of National Importance

CURRICULUM

04

04

28

Prog	ramm	e Master of Computer Applications									Year of Regulation				2024-25		
Depa	artmen	nt Con	nputer So	cience an	d Engine	ering						Semes	ter		ı		
Course Code										Credit S	Structure			Marks Distribution			
		Course Name					F	Pre-Requisite	L	Т	Evaluation			z/ Viva Total			
		Computer Organization Lab							0	1	2	2	70	;	30	100	
CA4	53									CO's	O's Stateme					Bloom's Taxonomy	
		Connect	t the theor	ry of comp	outer orga	nization w	vith har	dware		CA453.1	Able to understand different operations or number systems		rations on	Understand			
					ALU opera					CA453.2	Able to acquire knowledge about assembly language code		Understand				
Course Objective	Se ives –	design s	equential	circuits				earning to	Course Outcomes	CA453.3	Multiplication- Booth's, Array			understand			
		To apply the concept of memory design, cache memory and its mapping techniques and virtual memory.								CA453.4	Restoring and non-restoring; Floating point arithmetic				Understand		
		CA453.5 Able to Designing Adder, ALU on a simulator.										tor.	_	Create			
		CA453.6 Exhibit the design of Counters on a simular											ers and Create				
COs	٥ ـ	Mapping with Program Outcomes (POs)													ping with	ing with PSOs	
		PO1	PO2	PO3	PO4	PO5	P06	6 PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2		
CA45		3	3		1					2				3		3	
CA45		3	3		1					2				2		2	
CA45		2	3	3	1	2								2	3	2	
CA453.4		2	2	3		2	2	3		2			1	2	3	2	
CA453.5		2	2	3		2	2	3		2			1	3	3	3	
CA453.6		2	3	2	1	2	2	2		2			1	2	3	3	
CA45	53	2.33	2.67	2.75	1.00	2.00	2.00			2.00			1.00	2.33	3.00	2.50	
	1								LLABUS								
No.		Content Hours												COs			
1	Com	Computer arithmetic										02					
2	Addit	dition and subtraction, Multiplication												02		CA453.1	
3		h's, Arra												02	CA453.2 CA453.3 CA453.4 CA453.5		
4		ion- Res												02			
5 6		on-restoring pating point arithmetic.													CA453.6		
		•	lder, Multi											02			
7	,			·											_		
8	Desig	gn of Re	gisters ar	nd Counte	rs									04	4		

Essential Readings

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10

- 1. Hamacher, Carl, Zvonko Vranesic, and Safwat Zaky. Computer organization. McGraw-Hill, 2002.
- 2. Mano, M. Morris. Computer system architecture. Prentice-Hall of India, 2003.

Designing memory unit on a simulator.

Designing CPU on a simulator.

3. Stallings, William. Computer organization and architecture: designing for performance. Pearson Education India, 2003.

Supplementary Readings

- 1. Hennessy, John L., and David A. Patterson. Computer architecture: a quantitative approach. Elsevier, 2011.
- 2. Bryant, Randal E., O'Hallaron David Richard, and O'Hallaron David Richard. Computer systems: a programmer's perspective. Vol. 2. Upper Saddle River: Prentice Hall, 2003.
- 3. Ramachandran, Umakishore. Computer systems: An integrated approach to architecture and operating systems. Pearson Education India, 2011.

Total Hours