



DEPARTMENT OF INFORMATION TECHNOLOGY

TEACHING PLAN

Course Code	Course Title	Semester	Branch	Contact Periods /Week	Academic Year	Date of commencement of Semester
20IT3T02	COMPUTER ORGANIZATION	III	IT	5	2023-2024	07-08-2023

COURSE OUTCOMES

1	Explain knowledge on structure of computers and computer arithmetic.
2	Analyze Micro operations such as Arithmetic micro operations, Shift micro operations and Logic micro operations.
3	Define the appropriate addressing modes and instructions for writing programs.
4	Demonstrate the Peripheral devices for efficient operation of system.
5	Describe the basic knowledge on parallel and vector processing.

5	Describe the basic knowledge on parallel and vector processing.					
UNIT	Out Comes / Bloom's Level	Topics No.	Topics/ Activity	Text Book/ Reference	Conta ct Hour	Delivery Method
I	CO – 1	1.1	Introduction	T1	1	Chalk & Board Power point presentations Assignment Test
		1.2	Basics of computer	T1	1	
		1.3	Von Neumann Architecture	T1	1	
		1.4	Generation of Computer	T1	1	
		1.5	Types of Computer	T1	1	
		1.6	Functional unit	T1	1	
		1.7	Basic Operational Concepts	T1	1	
		1.8	Bus Structures	T1	1	
		1.9	Arithmetic Addition	T3	1	
		1.10	Arithmetic Subtraction	T3	1	
		1.11	Multiplication algorithms	T3	1	
		1.12	Division Algorithms	T3	1	
	Content beyond syllabus		1.13	Floating point arithmetic operations	T3	1
Total					13	
II		2.1	Register Transfer language	T3	1	Chalk & Board Power point
		2.2	Register Transfer Bus	T3	1	
		2.3	Memory transfers	T3	1	
		2.4	Arithmetic Micro operations	T3	1	
		2.5	logic micro operations	T3	1	



Y

Date of
commencement
of Semester

07-08-2023

ro operations

grams.

Delivery
Method

Chalk
&
Board

Power point
presentations

Assignment

Test

Chalk
&
Board

Power point

	CO – 2	2.6	shift micro operations	T3	1	presentations Assignment Test
		2.7	Arithmetic logic shift unit	T3	1	
		2.8	Instruction codes	T3	1	
		2.9	Computer Registers	T3	1	
		2.10	Computer Instructions	T3	1	
		2.11	Timing and control	T3	1	
		2.12	Instruction Cycle	T3	1	
		2.13	Memory – Reference	T3	1	
		2.14	Input – Output and Interrupt Instructions	T3	1	
		2.15	Design of basic computer	T3	1	
		2.16	Design of Accumulator logic	T3	1	
		Content beyond syllabus		2.17	Hardware description languages	
Total				17		
III	CO – 3	3.1	General Register Organization	T3	1	Chalk & Board Power point presentations Assignment Test
		3.2	STACK organization	T3	1	
		3.3	Instruction formats	T3	1	
		3.4	Addressing modes	T3	1	
		3.5	Data Transfer and manipulation	T3	1	
		3.6	Program control	T3	1	
		3.7	Reduced Instruction Set Computer	T3	1	
		3.8	Control Memory	T3	1	
		3.9	Address sequencing	T3	1	
		3.10	micro program example	T3	1	
		3.11	design of control unit	T3	1	
		Content beyond syllabus		3.12	Problems on Micro programmed control	
Total				12		
IV	CO – 4	4.1	Peripheral Devices	T3	1	Chalk & Board Power point presentations Assignment Test
		4.2	Input-Output Interface	T3	1	
		4.3	Asynchronous data transfer	T3	1	
		4.4	Modes of Transfer	T3	1	
		4.5	Priority Interrupts	T3	1	
		4.6	Direct memory Access	T3	1	
		4.7	Memory Hierarchy	T3	1	
		4.8	Main Memory	T3	1	
		4.9	Auxiliary memory	T3	1	



		4.10	Associative Memory	T3	1	
		4.11	Cache Memory	T3	1	
		4.12	Virtual Memory	T3	1	
					Total	12
V	CO – 5	5.1	Parallel Processing	T3	1	Chalk & Board
		5.2	Pipelining	T3	1	
		5.3	Arithmetic Pipeline	T3	1	
		5.4	Instruction Pipeline	T3	1	Power point presentations
		5.5	RISC Pipeline	T3	1	
		5.6	Vector Processing	T3	1	
		5.7	Three segment instruction pipeline	T3	1	Assignment
		5.8	Array Processors	T3	1	
Content beyond syllabus		5.9	Super scalar processors	T3	1	Test
					Total	
CUMULATIVE PROPOSED PERIODS					63	

Text Books:

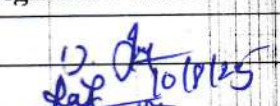
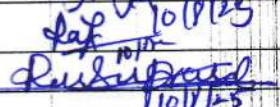
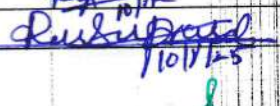
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Carl Hamacher, Zvonks Vranesic, SafeaZaky. Computer Organization, 5th Edition, McGraw Hill, 2016.
2	John L. Hennessy and David A. Patterson. Computer Organization, a quantitative approach, Fifth Edition, 2011.
3	M. Moris Mano, Computer System Organization, 3rd Edition, Pearson / PHI, 2007.

Reference Books:

S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	William Stallings, Computer Organization and Architecture, Ninth Edition, Pearson / PHI, 2012.
2	Andrew s. Tanenbaum, Structured Computer Organization, 6th Edition, PHI/ Pearson, 2012.

Web Details:

1	https://www.javatpoint.com/computer-organization-and-architecture-tutorial
2	https://www.geeksforgeeks.org/computer-organization-and-architecture-tutorials/

	Name	Signature with Date
i. Faculty	Ms. U Jenny Grace	
ii. Module Coordinator	Mr. Ch Rama Krishna Raju	
iii. Programme Coordinator	Dr. RVVS Prasad	


Principal