4-YEAR B. TECH.
IN
COMPUTER SCIENCE & ENGINEERING

IV SEMESTER B. TECH - CSE					
Course No.	**Name of the Courses**	**L**	**T**	**P**	**Credit Hrs.**
CSC14101	Computer Organization	3	1	0	**7**
CSC14102	Algorithm Design & Analysis	3	1	0	**7**
EICP14101	Microprocessors & Applications	3	0	0	**6**
	Numerical & Statistical Methods	4	0	0	**8**
	English for Professional Communication	3	0	0	**6**
CSC14201	Computer Organization Lab	0	0	3	**3**
CSC14202	Algorithm Design & Analysis Lab	0	0	3	**3**
	Numerical & Statistical Methods Practical	0	0	3	**3**
CSC14501	Composite Viva-Voce				**0**
SWC14701	Co-Curricular Activities	0	0	0	**3**
Total		**16**	**2**	**9**	**50**
Contact Hrs					**27**

CSC14101	**COMPUTER ORGANIZATION**	**3-1-0**

Number Systems And Codes: Introduction, Data Representation, Number System Conversion, Complements, Integer/Floating Point Representation, Weighted and Un-weighted Codes, Alphanumeric Codes, Binary Addition, Binary Subtraction, Error Detection and Correction.

Basics of Digital Circuits: Basic Logic Gates, Universal Logic Gates, Boolean Algebra, Combinational Circuits, Sequential Circuits.

Register Transfer and Micro-operations: Register, Shift Register, Bus System (Multiplexer, Tri-State Buffer), Micro-operations (Arithmetic, Logic, Shift), Arithmetic Logic Shift Unit.

Faster Algorithms: Addition, Subtraction, Booth Algorithm and Bit-Pair Recoding Method for Signed Operand Multiplication, Restoring and Non-Restoring Integer Division Method.

Basic Computer Organization and Design: Process and Memory Interconnection, Instruction Codes, Instruction Cycle, Single-Bus Organization, Multiple Bus Organization, Addressing Modes.

Control Unit: Hardwired and Micro-programmed.

Memory Organization: Memory Hierarchy, Memory Types, Main Memory Architecture, Memory Address Map, Cache Memory, Virtual Memory, Paging, DMA.

Input-Output Organization: Introduction, I/O Versus Memory Bus, Asynchronous Data Transfer, Modes of Transfer (Programmed I/O, Interrupt-Initiated I/O, DMA).

Assembly Language Programming.

Computer Peripheral Organization.