

Course Name: Computer System Architecture	Course Code: ITNT 303
pre-requisite: ITNT202- Logic Design	Credit Hours: 3
Passing Grade: C	Level: B.Tech
No. Of Theory & Practical Hours : 2:2	
Goal: The course introduces the concept of understanding the performance of processor in the computer design	
Objectives: The course should enable the student to : <ul style="list-style-type: none"> • Implement the concept of instruction-set organization • Understand and analyze the concept of computer architecture and its effect to system performance. • Learn advance techniques in processor design 	
Outcomes	Method
1. Analyze the basic elements of hardware with its functions to form an architecture	Theory
2. Recognize and Understand instruction formats, instruction sets and their design to represent the data and its manipulation.	Theory
3. Illustrate the concept of ALU design with various computer arithmetic methods.	Theory & Practical
4. Use logic simulation software to validate the correctness of the design.	Practical
5. Describe the concept of control design in terms of Hard wired control and micro programmed control.	Theory
6. Recognize PC and memory system architecture and shared memory / distributed memory multiprocessor systems	Theory
7. Analyze the use of standard performance metrics to compare the performance of different digital systems.	Theory & Practical
8. Identify the basic and intermediate concepts of pipelining.	Theory
9. Outline the storage system architecture-RAID Architecture	Theory
Software Tools: <ul style="list-style-type: none"> • Emu8086 simulator or COMSIM simulator 	
Text Books: Computer System Architecture, Morris M. Mano 3 rd edition, Pearson Education Asia. Computer Organization and Architecture, Designing for Performance, William Stallings, 6th Edition: -Publication: Prentice Hall.	
Reference Book: Computer Organization and Design by David Patterson and John Hennessy	