# Lecture 0

- Welcome !

# CSE211

# Computer Organization and Design

**Lecture : 3** **Tutorial: 1** **Practical: 0** **Credit: 4**

- **Course Outcomes :**Through this course students should be able to

- CO1 :: recall the circuits and design of the various functional units and components of computers, in relation of register transfers
- CO2 :: define the basics of organization and architecture of a digital computer
- CO3 :: explain the concept of Instruction sets, microprocessor design and addressing modes
- CO4 :: examine the input-output unit and its processing in a digital computer
- CO5 :: articulate(expressed) the performance of various computer memory systems and understand their functionality
- CO6 :: analyze the parallel processing in multiprocessors and understand latest trends in computer architecture

# The course contents

**Unit-1**

**Basics Of Digital Electronics :** registers, shift registers, Introduction to combinational circuit, introduction to sequential circuits

Register Transfer and Micro Operations : Bus and Memory Transfer etc..

**Unit-2**

**Computer Organization :** instruction codes, computer registers, common bus system, computer instructions, timing and control, instruction cycle etc..

# The course contents

**Unit-3**

**Central Processing Unit :** General Register Organization, Stack Organization, Addressing Modes etc…

**Unit-4**

**Input-Output Organization :** Peripheral Devices, Input Output Interface, Data Transfer Schemes, Program Control and Interrupts, Direct Memory Access Transfer etc..

# The course contents

**Unit-5**

**Memory Unit :** Cache memory, main memory etc..

**Unit-6**

**Computer Arithmetic :** Addition and Subtraction Algorithm, Multiplication Algorithm etc..

**Text Books:**

1. COMPUTER SYSTEM ARCHITECTURE by M. MORRIS MANO, RAJIB MALL, PEARSON

**References:**

1. COMPUTER ORGANIZATION AND ARCHITECTURE by WILLIAM STALLINGS, PEARSON

# Evaluation System

- Attendance (ATT): 5
- Continuous Assessment (CA): 25
  - ❑Best 2 out of 3
- Mid Term Exams: 20
- End Term Exams: 50

# Get Set Go!!!