Course Name: Computer Organization	**Course Code:** ITSE305
Pre-Requisite: 1) ITSE101-Programming I 2) MATH2200-Discrete Structures	**Credit Hours: 3**
Passing Grade: Depending on the Type of the course belongs to the Audit Degree.	**Level: Year 3**
No. Of Theory & Practical Hours: 1 : 4	
Goal: To provide concepts of computer organization and to develop skills in assembly language programming.	
Objectives: The course should enable the student to : 1. Understand computer architecture. 2. Work with Boolean expressions. 3. Construct Sequential and Combinational logic circuits. 4. Discuss Micro programmed Control. 5. Discuss Input / Output and Memory Organization. 6. Explain pipelining and Vector Processing. 7. Construct assembly language programs. 8. Design logic circuits using appropriate tool.	
Outcomes: At the end of this course, students should be able to:	**Method**
1. Discuss the organization of computers.	Theory
2. Use methods to simplify Boolean expressions.	Theory and Practical
3. Construct sequential and combinational logic circuits.	Theory and Practical
4. Discuss architecture of a processor including Addressing modes.	Theory
5. Discuss Micro-programmed Controller	Theory
6. Apply instruction set architecture including Data transfer, Arithmetic, Logic instructions, Machine control and interrupt instructions	Theory and Practical
7. Describe Pipelining and Vector Processing and Various interconnection structures.	Theory
8. Discuss different Memory Organizations and operations.	Theory
9. Describe Input-Output Organization.	Theory
10. Construct assembly language programs using appropriate tool.	Practical
11. Design sequential and combinational logic circuits using appropriate tool.	Practical

Software Tools: 8086 Emulator, Logisim
Text Book: 1-Computer Organization and Assembly Language Programming Michael Thorne
Reference Book: 1-Principles of Computer Organization and Assembly Language [Patrick Juola] on Amazon. Com. 2- Computer Organization, Carl Hamacher, Zvonko Vranesic, Safwat Zaki, McGraw Hill.

HoS-IT