**Course Title:** Computer Organization and Programming Lab

**Programme and Semester:** B.Tech MnC Semester 1

**Course Code:** MC113

**Course credit (L-T-P-C):** 0-0-4-2

**Lab Time Table:** Saturday 8:30 to 12:30

**Mode of conduct:** Online

- Lab: Google classroom, google meet
- Assignments, material, submission: Moodle

**Evaluation scheme:** Assignment (30%), Mid Sem Exam (20%), End Sem Exam (30%), Lab Quiz (10%), Attendance (10%).

**Instructor:** Nidhi Desai (nidhi.desai@daiict.ac.in)

**Suggested textbook/references**

**Suggested Textbook:**

- INTRODUCTION TO COMPUTING SYSTEMS: FROM BITS AND GATES TO C AND BEYOND By Patt and Patel

**Other reference material:**

- Computer organization and architecture designing for performance by William Stallings
- Computer Organization and Assembly Language Programming, by James L. Peterson
- C Programming by Deitel and Deitel
- C Programming by Dennis Ritchie
- C Programming by Balaguruswamy

**Course Content:**

C programming: Environment setup, program structure, basic syntax, Variables, Constant, Decision instruction: if, if-else, nested if-else, conditional operator. Switch Case, Bitwise/logical/relational operator, Loops: while, do-while, for, nested loops, break and continue, arrays, strings, function, pointers and recursion.

Assembly Level Programming: Environment setup, Setting up NASM/LC3, basic syntax, Instructions, variables, constant, Registers, I/O Basics, Condition, loops, Subroutines.