Computer Organization and Programming (MC112 and MC113) (BTech(MnC))

Timetable:

- Lecture mon: 8:30-9:45 wed: 10:15-11:30
- Lab sat: 8:30-12:30

Instructors:

- Nidhi Desai (nidhi.desai@daiict.ac.in)
- Archana Nigam (archana.nigam@daiict.ac.in)

Mode of conduct: Online lectures as per institute timetable.

- Lectures and Lab: Google classroom, google meet
- Assignments, material, submission: moodle

Evaluation scheme

- **Evaluation Lectures (MC113):** One in-semester exam (30%), one end-semester exam (30%), Quiz (10%), and Project and viva (30%)
- **Evaluation Lab (MC112):** Attendance (10%), Assignment (40%), Lab Exam and Viva (50%)

Course credit: (L-T-P-C)

- Lecture: MC112(3-0-0-3)
- Lab: MC113(0-0-4-2)

Prerequisites: Basic knowledge about computer language terminology and willingness to learn new things.

Topics To Be Covered In The Course:

Computer organization, component of computer, memory unit, computation unit, control unit, input/output unit, Bits, data types, operation, logic structures, Von Neumann model, language programming:- Basic Syntax, Memory Segments, Registers, System Calls, Addressing Modes, Variables, Constants, Arithmetic and logical Instructions, Conditions and Loops, Numbers, strings and arrays, C Programming:- Brief Overview, Basic Syntax, Program Structure, Data Types, Variables, Constant, Conditions and Loops, Arrays, Function, Pointers, Structures and Unions
Suggested textbook/references:

Plenty of material related to computer organization, assembly level language and C programming is available on internet.

Main textbook:

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

Other reference material:

- Computer Organization and Programming by C. William Gear
- Computer organization and architecture designing for performance by William Stallings
- Computer organization by Carl Hamacher
- 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