SUBJECT NO-EC31003, SUBJECT NAME- DIGITAL ELECTRONIC CIRCUITS

LTP- 3-1-0,CRD- 4

SYLLABUS :-

Pre-requisites: EC21002 Switching algebra. Minimizing functions using maps, Minimization using QM method, Different logic families: TTL, ECL, I2L. NMOS, CMOS. Pass transistor logic. Combinational logic circuits: adders/subtractors, fast adder, magnitude comparator, multiplexer demultiplexers, encoders, decoders, ROMs, PLAs etc. Sequential logic circuits: flip flops and latches, shifters, counters. Finite state machine â state transition diagrams and state transition tables. HDL implementation. Asynchronous sequential Logic. Memory elements: ROM, PROM, RAM-SRAM, DRAM. Case studies: a simple computer, RTL â micro-instruction, instruction decoders timing and controller circuits, data path unit.H