



Code	Subject Title	Cr. Hrs	Semester
PHY-310	Digital Electronics	3	VI
Year	Discipline		
3	Physics		

Number Systems: Binary, octal, hexadecimal number system, conversion of different systems, Digital codes.

Implementations of Logic Functions by Logic Gates:

Boolean algebra, logic gates and their application in logic design, Karnaugh maps and its use in some design problems, code converter logic design.

Analog to Digital Conversion: Digital to analog conversion, converter Specifications.

Synchronous Logic: Sequential logic, Flip Flops; R-S, T, D, Master-Slave J-K Flip Flop, basic binary ripple counter, modulus counters, parallel and up-down counter application as digital time (clock), arithmetic functions, shift registers, semi-conductor memory, programmable logic devices, (GAL, PAL).

Digital Computer: Concept of computer system

Books Recommended:

1. *Introduction to Digital Computer Technology* by Mashelsky (Wiley),
2. *Pulse Digital and Switching Wave forms* by Millman and Taub (McGraw-Hill)
3. *Electronic and Radio Engineering* by F.E. Terman McGraw-Hill.