

	GURGAON INSTITUTE OF TECHNOLOGY & MANAGEMENT	
	Department: Electronics and Communication Engineering Subject Name & Code: Digital System Design (EE-310-F)	Session: Jan-May, 2018 Branch/Sem : ECE / EE 6 th Sem
COURSE PLAN		TEACHER: Ms. Sunita

Books Referred:

1. "A VHDL Primer": Bhasker Prentice Hall 1995
2. "Digital System Design using VHDL": Charles H. Roth; PWS (1998)
3. "Fundamentals of Digital Logic with VHDL Design": Brown & Vranesic, TMH(2000)

Lecture No.	Topics to be Covered
1.	SECTION-A Introduction to CAD tools for digital Systems, Hardware Description Language.
2.	Introduction to VHDL
3.	Data objects & Classes
4.	Data types
5.	Operators, Overloading & Logical Operators
6.	Entity & Architecture Declaration, Introduction to Behavioral, Dataflow & Structural Modeling
7.	SECTION-B VHDL statements, assignment statements
8.	sequential statements & process
9.	Resolution statement & Concurrent statement
10.	Packages & Library
11.	Subprograms: Application of functions & Procedures
12.	Continue.....
13.	Continue.....
14.	Structural modeling, Component declaration
15.	Structural layout & generics
16.	SECTION-C VHDL models and simulation of combinational circuit such as Multiplexer

17.	Demultiplexer
18.	Decoder, Encoder
19.	Code Convertor
20.	Comparator
21.	Implementation of boolean function
22.	VHDL models and simulation of sequential circuit
23.	Shift Register SISO, PIPO ,SIPO, PISO
24.	Counters
25.	Section-D Basic component of a computer Specifications, Architecture of a simple microcomputer system
26.	Implementation of a simple microcomputer system using VHDL
27.	Programmable Logic Device
28.	ROMs, PLAs, PALs
29.	GALs, PEELs
30.	CPLDs, FPGAs
31.	Design implementation using CPLDs & FPGAs
32.	Revision
33.	Revision
34.	Revision

Tools and Accessories:

Digital System Design (DSD) is a theory and practical subject. So we need the software to do the experiments of Digital System Design (DSD) lab.

1. ModelSim Xilinx Edition-III/Starter v6.2g
2. Spartan-3 Generation Platform FPGAs.
3. Xilinx Project Navigator ISE 9.2i