Semester II

Advanced Digital Systems

Course No: **PHY15206DCE**	Max. Marks:	50
	External Examination:	40
No. of credits: **02**	Internal Assessment:	10

UNIT – I

Review of Basic Digital Concepts and logical gates,Brief introduction of VLSI Design and Implementation, Traditional vs. Hardware Description Languages, Digital System Design Flow, The Role of Hardware Description, VHDL, Levels of Abstraction, Scope of VHDL, Benefits of using VHDL, VHDL Examples.

UNIT – II

Intro to FPGA, Xilinx ISE , FPGA Prototyping by VHDL Examples: ISE/Spartan 3 FPGA Implementation Walkthrough , Xilinx Spartan-3, Design Examples with Xilinx ISE and Spartan 3**E,** Programming the FPGA, Project.

References :

Digital Integrated Circuits second edition by John M Rabaey, Anantha Chandrakasan

Text

VHDL Starters Guide Sudhakar Yalamanchili Publisher: Prentice Hall , ISBN: 0-13-145735-7

Forms of examination

The student's knowledge will be tested by a written exam in combination with written and/or oral presentations of the Projects.

Aims: To familiarize students with the basic principles of digital systems design and the use of a hardware description language, VHDL, and xilinx software in the design process..
