

**SKILL ORIENTED COURSE 3**  
**EMBEDDED SYSTEM DESIGN USING FPGA**

**Introduction to Embedded System Design using Zynq**

- Lab 1: Simple Hardware Design**
- Lab 2: Adding Peripherals in Programmable Logic**
- Lab 3: Creating and Adding Your Own Custom IP**
- Lab 4: Writing Basic Software Applications**
- Lab 5: Software Debugging Using SDK**
- Lab 6: Create a SoC-Based System using Programmable Logic**
- Lab 7: Debugging using Vivado Logic Analyzer cores**
- Lab 8: Extending Memory Space with Block RAM**
- Lab 9: Direct Memory Access using CDMA**
- Lab 10: Configuration and Booting**
- Lab 11: Profiling and Performance Tuning**
- Lab 12: Build and Boot Linux**
- Lab 13: Application Development and Debug**
- Lab 14: Networking**
- Lab 15: Drivers and Modules**
- Lab 16: Vivado IP Integrator and Board Bringup**
- Lab 17: Custom Hardware Development**
- Lab 18: A Driver for the New Hardware**
- Lab 19: Create a Processor System using IP Integrator**
- Lab 20: Creating a Processor System using Accelerator**

**SOFTWARE:** XILINX VIVADO

**HARDWARE:** PYNQ2/ZYBO Z-20 DEVELOPMENT BOARD

**ROOM NO:** 433, NI ACADEMY/ADVANCED INSTRUMENTATION LAB  
EIE DEPARTMENT

<b>DATE</b>	<b>TIME</b>
MONDAY	2:00 PM TO 12:00 PM
WEDNESDAY	2:00 PM TO 5:00 PM
THURSDAY	2:00 PM TO 5:00 PM
SATURDAY	9:00 AM TO 12:0