

## Registration Form

Name

Department

College/Organization

Address for Correspondence

Email

Phone/Mobile Number

Accommodation Required  YES  NO

Demand Draft Details

Amount

DD Number

Issuing Bank

Dated

Signature

1. Please attach a photocopy of the College ID card
2. Use photocopy of the above form, if required

### Co-coordinators:

Dr.Alex Noel Joseph Raj  
Prof. Vidhyapathi CM

### Resource Persons:

Mr Balachander, Manager FAE.  
Mr Mamidi Nagaraju.  
Mr SenthilMurugan.  
[upt@coreel.com](mailto:upt@coreel.com)

### Registration Form & DD to be sent to

Prof. C. M. Vidhyapathi  
Assistant Professor(Sr)  
School of Electronics Engineering  
VIT University, Vellore – 632014.  
Mobile: +91 9790995827  
Email : vidhyapathi.cm@vit.ac.in

### Registration Fee Details

Participants are requested to register by filling in the accompanying slip and sending the same to the Workshop coordinator. The registration fee (non-refundable) is as follows:

**Faculty : Rs. 1, 750/-**

**Students: Rs. 1, 500/-**

### Mode of Payment

DD drawn in favour of “VIT University” payable at **vellore** along with the registration form.

### Accommodation

Accommodation (including food) will be provided in the University hostel **only for the female participants** based on request at extra cost.



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## Two Day Workshop on

## Embedded System Design using FPGA

(Nexys™4 Artix-7 FPGA Board)

27th and 28th March 2015

Organized  
by

**Embedded Systems Division**  
**School of Electronics Engineering**  
In Collaboration with

**CoreEL Technologies, Bangalore.**



Enabling Excellence



VIT University  
A place to Learn; A chance to grow  
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## About VIT University

VIT University, one of the premier institutes in Tamil Nadu was established in 1984. It is a major, comprehensive, student-centered research University dedicated to excellence in teaching, research and service. The University was established with the aim of providing higher education at par with internationals. The campus has a cosmopolitan atmosphere with students from all the corners of the globe. Our Memoranda of Understanding with various international universities are our major strength. It provides an exchange of students and faculty, encourage joint research projects for the mutual benefit of these Universities. VIT University is the first Indian Institute to get International Accreditation from IET and EI, UK and ABET from USA. VIT University obtained the highest possible grade of "A" from NAAC for all the programs offered by the University during the re-accreditation process in January 2009.

## About School of Electronics Engineering

The school offers B.Tech (ECE) and five M.Tech programs. Facilities for research leading to Ph.D are available in many emerging areas. A major emphasis in both the undergraduate and post graduate program is the teaching and learning process that makes the student industry ready. The School is actively involved in R&D activities and has sponsored projects from various agencies like DRDO, DST, ISRO (RESPOND), and BRNS. It has MoU's with industries and other reputed Institutions and R&D organizations of our country and other parts of the world.



## About CoreEL Technologies

CoreEL Technologies is a Customer Application Specific Product & Solutions (CASPS) company offering innovative solutions from its diverse portfolio of offerings that include Intellectual Property (IP) cores, System Design, Prototype Development, Manufacturing, Sustenance, Next-gen products, Semiconductor solutions, EDA tools, COTS products and Technology Training. CoreEL is a leading developer of advanced electronic system level products and solutions to three primary markets – Aerospace & Defence, Digital Media Broadcast, and Universities & Institutions of higher learning. CoreEL's products and solutions enable its customers to further add value, create innovative and competitive products for their end users.

## About CoreEL University Program

CoreEL University Program provides Eco-System support to Indian Academia in Engineering Higher Education, in the field of Embedded Systems thereby enabling the delivery of quality education. CoreEL achieves this by providing state of the art products from **XILINX, MENTOR Graphics, MATLAB, ANSYS, VxWorks, Speedgoat (RCP,HIL simulation & development), PCB Design Tools from Mentor, VLSI, Embedded Students Training, Faculty Training** etc., with multiyear application engineering support on these products, faculty & student training, providing industry specific inputs to update the curriculum & helping Universities set up Centers of Excellence in Embedded Systems. arena

## Target Audience

Faculty members and Students from Engineering colleges and Universities

## Important Dates

Last date for Registration	: 20/03/2015
Intimation of selection	: 22/03/2015
Workshop Dates	: 27 – 28, March 2015

## Course Overview:

**Day 1:** 7-Series Architecture Overview

### Lab 1: Vivado Design Flow

- Use Vivado IDE to create a simple HDL design. Simulate the design using the XSIM HDL simulator available in Vivado design suite. Generate the bitstream and verify in hardware.

- Synthesis Technique

### Lab 2: Synthesizing a RTL Design

- Synthesize a design with the default settings as well as other settings changed and observe the effect.

- Implementation and Static Timing Analysis

- Architecture of Nexys™4 Artix-7 FPGA Board.

### Lab 3: Implementing the Design

- Implement the synthesized design of previous lab, perform timing analysis, generate bitstream, download the bitstream and verify the functionality.

**Day 2:** IP Integrator

### Lab 4: Using the IP Catalog and IP Integrator

- Use the IP Catalog to generate a clock resource and instantiate in a design. Use IP Integrate to generate a core and instantiate in the design.

- MicroBlaze and its feature

- Extend the hardware system by adding AXI peripherals from the IP catalog. Adding your own IP Peripherals and Microblaze Soft core processor.

### Lab 5: Writing basic C application to access the peripheral with Micro

- Software Development and Debugging & Cross Debug using SDK.

### Lab 6: Accessing peripherals of the board

- Interfacing MicroBlaze with UART Peripheral to control temperature sensor application using SDK.

- Use Mark Debug feature and also available Integrated Logic Analyzer(ILA) core (available in IP Catalog) to debug the hardware.