

## About Us:

DOEACC Centre Calicut is a Premier Training Institute under Ministry of Communications and Information Technology, Govt. of India. The centre is situated close to the Calicut NIT Campus and is engaged in development of designers and entrepreneurs in the field of Application of Electronics and Computers for industrial problem solving through quality training programs and consultancy services.

We offer special training programs for fresh graduates to become more adaptable to the professional requirements of industry and for working engineers to keep abreast with the latest technology in the related fields. For more details contact:

**The Training Officer**  
**DOEACC CENTRE CALICUT**  
P.O NITC, Calicut 673 601  
Kerala

Phone : 0495 – 2287266,2287124

Fax : 0495 - 2287168

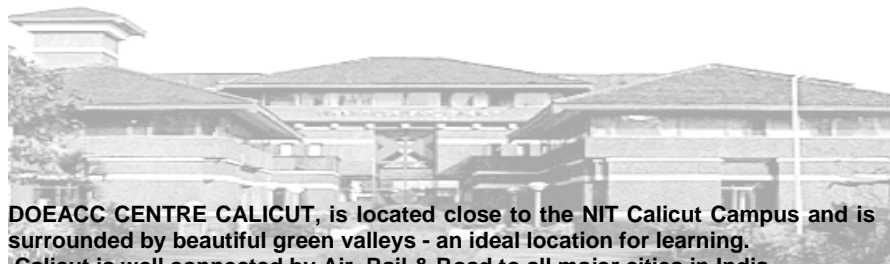
Email : [trng@doeaccalicut.ac.in](mailto:trng@doeaccalicut.ac.in)

Website: [www.doeaccalicut.ac.in](http://www.doeaccalicut.ac.in)

*If you need any assistance in deciding upon the course modules or any other points to be clarified regarding the course please feel free to contact the Training Officer directly by phone / fax /e-mail. We will be glad to help you. Our working hours are from 9.00AM - 5.30 PM Monday to Friday.*

*You can also register online through our website*

[www.doeaccalicut.ac.in](http://www.doeaccalicut.ac.in)



DOEACC CENTRE CALICUT, is located close to the NIT Calicut Campus and is surrounded by beautiful green valleys - an ideal location for learning.

Calicut is well connected by Air, Rail & Road to all major cities in India.

## DOEACC CENTRE CALICUT

(A unit of DOEACC Society)

An Autonomous Body of Department of Information Technology,  
Ministry Communication & Information Technology, Government of India  
CDS/CA/7.5.1/F 38/R0

CERTIFICATE PROGRAM  
IN  
DIGITAL SYSTEM DESIGN USING VHDL AND FPGA.



*Govt. of India Institution*

*Most advanced and well equipped laboratory facilities  
Highly experienced faculty –Great emphasis on hands-on training.*

## EXCLUSIVE BATCH UPON REQUEST



**VL 300 CERTIFICATE PROGRAM IN DIGITAL SYSTEM DESIGN USING VHDL AND FPGA.**

1. FUNDAMENTALS OF VLSI DESIGN.
2. FIELD PROGRAMMABLE GATE ARRAY (FPGA).
3. FUNDAMENTALS OF DIGITAL DESIGN.
4. HARDWARE DESCRIPTION LANGUAGE- VHDL.
5. COMBINATIONAL LOGIC DESIGN.
6. SEQUENTIAL LOGIC DESIGN.
7. MINI PROJECT.
8. EXIT TEST.

### How To Apply\*

Applications for the course should be in the prescribed Application Form available with this brochure or can be downloaded from our website. Filled in application forms along with a Demand Draft towards advance fee of Rs.1000/- drawn in favour of Director, DOEACC Centre, Calicut, Payable at State Bank of India, CREC Branch, Chathamangalam should be sent to the **Training Officer, DOEACC Centre Calicut, P. B. No. 5, NITC Post, CALICUT – 673 601, Kerala. The Name of the Course Applied for should be super scribed on the top of the cover in which the application form is forwarded.** Hostel accommodation (if required) can be reserved on payment of Rs.500/- along with the advance fee.

### Fees and Duration\*

The Fee for the Course is Rs.1750/  
The Duration of the Course is 9 DAYS.

### Objective of the Course

This course is a gateway for fresh engineers into the vast VLSI field. This Course offers a range of topics of immediate relevance to Advance Level Courses in VLSI System Design. This course is also an excellent preparation for those who wish to engage in application research in this rapidly developing area. This course also helps students to select a relevant topic for their project work as part of their curriculum.

### Facilities\*

- Altera Trainer kits. Spartan Trainer Kits
- Xilinx ISE, FPGA Design Tools,
- Complete range of Simulation, Synthesis Tools from Mentor Graphics
- FPGA Design and Verification Tools
- ASIC Design and Verification Tools
- Hardware-Software Co-verification Tools
- System Modeling Tools, Universal Programmer,
- Digital Storage & Mixed Signal Oscilloscopes
- Logic Analyser, SMD Reworkstation.

### Faculty

The centre has a team of enthusiastic and competent engineers with postgraduate qualifications who have undergone specialized training in various International Universities and Industries.

\*For further details please refer our website

### Eligibility\*:

FINAL AND PRE-FINAL YEAR ME/M.TECH/BE / B.TECH/ MSc/BSc  
(ELECTONICS/ELECTRICAL/COMMUNICATION/CS/IT)

### Course Contents\*: CERTIFICATE PROGRAM IN DIGITAL SYSTEM DESIGN USING VHDL AND FPGA.

#### FUNDAMENTALS OF VLSI DESIGN

- *Basics of VLSI Design Technology*
- *Emerging trends in VLSI.*
- *Scope of VLSI in Engineering Design Field.*

#### FIELD PROGRAMMABLE GATE ARRAY (FPGA).

- *FPGA architecture Overview.*
- *Popular FPGA Families.*
- *FPGA Programming.*

#### FUNDAMENTALS OF DIGITAL DESIGN.

- *Number Systems & Conversions.*
- *Error Correction & Detection Codes.*
- *Boolean algebra.*
- *Logic Gates*

#### HARDWARE DESCRIPTION LANGUAGE- VHDL.

- *Programming Styles in VHDL*
- *Simulation using Mentor Graphics ModelSim.*
- *Synthesis Using Xilinx Project Navigator.*

#### COMBINATIONAL LOGIC DESIGN.

- *Derivation of Canonical forms of Boolean Expressions*
- *Combinational Logic Design using Gates.*
- *Combinational Logic Design –Problems*
- *Combinational Logic Design using MSI.*

#### SEQUENTIAL LOGIC DESIGN.

- *Flip-Flop and Conversions.*
- *Counters, Registers, Memory.*
- *Finite State Machines.*

#### MINI PROJECT

- *Implementation of a Digital System in Xilinx FPGA Broad.*

#### EXIT TEST (only those who clear the test which be issued with Certificate)

- *Logic Design.*
- *FPGA Programming.*

