



Dr. Mamta R. Agarwal,
Advisor-I, P&AP



सत्यमेव जयते

Phone : 011-26131577 - 78, 80
011-29581000
Website : www.aicte-india.org

अखिल भारतीय तकनीकी शिक्षा परिषद्

(भारत सरकार का एक सांविधिक निकाय)

(शिक्षा मंत्रालय, भारत सरकार)

नेल्सन मंडेला मार्ग, वसंत कुंज, नई दिल्ली-110070

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

(A Statutory Body of the Govt. of India)

(Ministry of Education, Govt. of India)

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

Email- advpnep@aicte-india.org

F. No. AICTE/P&AP/Misc/2023/

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CIRCULAR

To

**All Vice Chancellors of Technical Universities and
All Directors/ Principals of AICTE Approved Institutions,**

**Subject: Skilled Manpower Advanced Research and Training (SMART) facility,
set up at NIELIT Calicut as part of Chip to Start-up (C2S) Program-reg.**

Sir/Madam,

The National Institute of Electronics and Information Technology (NIELIT) is an autonomous scientific society of the Ministry of Electronics & Information Technology (MeitY), Government of India, and has its presence at 47 locations across India. It offers Degree/Diploma and Skill Oriented courses on IECT. NIELIT is delivering industry-oriented quality education and training programs in various relevant and emerging areas.

NIELIT Calicut Center has set up a Skilled Manpower Advanced Research and Training (SMART) facility or Virtual Prototyping Lab as part of Chip to Start-up (C2S) program of MeitY for the proliferation of advanced VLSI and Embedded System Design training, research and electronics systems development across the country.

The SMART remote lab facility is available 24x7 and the students, researchers, and start-up industries can access the facility, anytime and anywhere. The facility will enable to produce the skilled manpowers as well as Intellectual Property inculcation in VLSI, Electronics Hardware, and Embedded System design areas.

As per the SemiconIndia Future Skills Talent Committee Report Nov 2022, in India we need 3.3 lakh skilled manpower in electronics design by 2030 and 4.5 lakhs by 2032. The SMART lab facility at NIELIT Calicut will be an enabler for the talent roadmap. A brief write-up on the SMART lab facility along with suggested skilling programs via SMART Lab is attached at Annexure-I.

To make use of this advanced facility and to reach the skilling target of 1 lakh skilled manpower over a period of 5 years, You are requested to disseminate the information among other stakeholders about the facility created by NIELIT among students/faculty members to utilize this facility at NIELIT, Calicut on free-of-cost basis.

Let's collaborate to deliver holistic, quality technical education.

With regards,

Mamta
Yours sincerely,
27 Apr, 23

(Dr. Mamta Rani Agarwal)

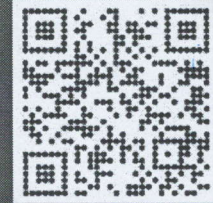


सूचना का
अधिकार

SMART LAB

SKILLED MANPOWER ADVANCED RESEARCH AND TRAINING

(Facility Under Chip to Start up Programme of MeitY)



1. A unique first of its kind National facility for Remote VLSI / Embedded Systems / IOT / Electronic Product Design advanced skill development programs.
2. Skilling of 1 Lakh candidates over a period of 5 years in VLSI, Embedded Systems, IOT and Electronic Product Design.
3. Hand-holding of startups by enabling Remote Hardware / system bring up.
4. Facility for researches and industries to remotely access high end electronic hardware, diagnostic equipment and EDA tools
5. 200+ remote accessible & configurable hardware and flexible systems.



SMART LAB facility at NIELIT Calicut

National Institute of Electronics & Information Technology, Calicut

Ministry of Electronics and Information Technology, Government of India

SMART LAB SUPPORTED TRAINING PROGRAMS

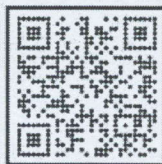
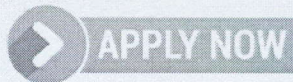
| SI No | Track - 1 VLSI | Track - 2 Embedded / IoT | Duration | Credits |
|------------------------|---|--|----------|---------|
| LAB WORKSHOPS * | | | | |
| 1 | Embedded C and ARM Cortex Microcontrollers | Embedded C and ARM Cortex Microcontrollers | 65 hours | 3 |
| 2 | VLSI Fundamentals | Internet of Things | 65 hours | 3 |
| 3 | FPGA Architecture and Programming using Verilog HDL | Embedded Linux | 65 hours | 3 |
| 4 | ARM based SoC Design | Embedded RTOS | 65 hours | 3 |
| 5 | Advanced ARM SoCs and OS Porting | Industrial IoT | 65 hours | 3 |
| 6 | SoC Verification | Industrial Product Design | 65 hours | 3 |

* Participants successfully completing all the lab workshops and a project is eligible to earn Post Graduate Diploma in the respective tracks.

MOOC COURSES

Approved by KTU for **M-TECH PROGRAMS**

| SI No | Name of the Program | Duration | Credits |
|-------|---|----------|---------|
| 1 | ARM based SoC Design | 65 hours | 3 |
| 2 | Digital India RISC-V (DIR-V) processor based Embedded System Design | 65 hours | 3 |
| 3 | Fundamentals of VLSI Verification | 65 hours | 3 |
| 4 | FPGA Architecture and Programming | 65 hours | 3 |
| 5 | Industrial Electronic Product Design | 65 hours | 3 |



www.nielit.gov.in/calicut/content/C2S



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NIELIT

National Institute of Electronics and Information Technology, Calicut

P. B. No.5, NIT CAMPUS POST, CALICUT, KERALA - 673601, Ph: 0495 2287266