

# WINTER TRAINING ON MICROELECTRONICS TECHNOLOGY AND VLSI DESIGN



## IC DESIGN & FABRICATION CENTRE

Department of Electronics & Telecommunication Engineering  
Jadavpur University, Kolkata – 700032

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### [1] VLSI Design using EDA Tools

- a) Introduction to EDA Tools
- b) Basic gates design using Schematic Capture
- c) Netlisting Using T-Spice
- d) Verification of design using waveform editor
- e) Layout design using L-edit
- f) Parasitic extraction

### [2] Design Verification Using VHDL and FPGA Implementation of Digital Systems.

- a) Introduction to Digital Systems Modeling using Verilog
- b) Verification of Digital Systems Design using Modelsim
- c) Synthesis of Digital system using Xilinx VIVADO tool
- d) Realization of digital systems on a Xilinx NEXYS4 DDR board
- e) Notion of RTL and Technology Schematic and Power Simulation

### [3] Fabrication and Characterization of semiconductor devices

- a) Mask Fabrication
- b) Theoretical Simulation
- c) Hardware fabrication for all process of Microelectronics: cleaning, etching, oxidation, diffusion, photolithography and Metallization.
- d) Characterization of fabricated device.

**Duration:** 6 weeks, Course starts from 1<sup>st</sup> week of January 2020 tentatively (after WBUT semester examination). Final date will be announced later on.

**Time:** 10.00 AM to 6.00 PM, Monday to Saturday.

**Eligibility:** The Candidate should be at least B.E./B.Tech 3<sup>rd</sup> year and above in Electronics and Communication / Instrumentation / Electrical / Computer Science / Information Technology.

**Admission:** Application form will be issued from the IC Centre, Department of Electronics & Telecommunication Engineering, 3<sup>rd</sup> Floor, Jadavpur University, Kolkata or download from our website [[www.jaduniv.edu.in/www.juiccentre.in](http://www.jaduniv.edu.in/www.juiccentre.in)]. Filled in application form shall be received at IC Centre during working hours (Monday to Friday, 11 AM to 5 PM). Total seat 30, Admission shall be first come first serve basis.

**Fees:** @ Rupees 7,000/- Students Fees + 18% GST (Rs. 1,260/-) = Total Rs. 8,260/- in demand draft should be drawn in favour of "REGISTRAR, JADAVPUR UNIVERSITY", in any branches of "State Bank of India" payable at Kolkata. Once deposited the course fee cannot be refunded. Hostel accommodation cannot be provided.

**Enclosure:** One copy of PP Size Photograph, Xerox copy of Madhyamik Admit Card / Birth Certificate, HS Mark sheet, all Semesters Mark sheet & other certificates. [Attested / Self Attested copies of Mark sheets / Certificates to be enclosed]

*Rimayanti*  
5/1/2019  
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