

SHORT TERM COURSE 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 VHDL
- b) Verification of Digital Systems Design using Modelsim
- c) Synthesis of Digital system using Xilinx ISE tool
- d) Realization of digital systems on a Xilinx Spartan 3 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 June-August and December-January in every year tentatively. Final date will be announced later on in our website]

Time: 10.00 AM to 5.00 PM

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

Admission: Application form will be issued after advertisement from the IC Centre, Department of Electronics & Telecommunication Engineering, Jadavpur University on payment Rs. 50/- in cash. Filled in application form shall be received at IC Centre during working hours (11 AM to 5 PM). Total seat 30 per batch, Admission shall be first come first serve basis.

Fees: As per advertisement in our website (www.juiccentre.in).

Enclosure: One copy of PS Photograph, **Xerox copy** of Madhyamik Admit Card, HS Marksheet, all Semesters Marksheet & other certificates. [Attested copies of Marksheets/Certificates to be enclosed]