



CERTIFICATE COURSE ON EMBEDDED SYSTEMS

IC DESIGN & FABRICATION CENTRE

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

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[Basic Electronics]

Basic Electronics Syllabus for 2 weeks = 2 x 5 x 4 hours	
Day	Topics
1	AC & DC theory
2	Electronics Components
3	Amplifiers
4	Capacitors
5	Diodes
6	Binary Numbers
7	Boolean Algebra
8	Combinational Logic
9	Counters
10	Logic Gates Computer Basic Architectures

[Microprocessor – 8085]

Microprocessor Syllabus for 2 weeks = 2 x 5 x 4 hours	
Day	Topics
1	History of Microprocessor How CPU is made
2	Pin Diagram of 8085
3	Architecture of 8085 Working of 8085 (Block level approach)
4	8085 instruction set
5	Use Simulator
6	Programming Style
7	Practical Session Using Simulator (Some programs & programming approach using algorithm & flowchart)
8	Memory Interfacing & RS232 communications
9	8085 Interrupts Interfacing 8279, 8251, 8253 with 8085
10	Hardware Demonstration Application

[Microcontroller – Arduino]

Microcontroller Syllabus for 2 weeks = 2 x 5 x 4 hours	
Day	Topics
1	Fundamentals of Embedded system Demonstration of Interesting project(s) (real life)
2	Getting Started with Arduino Exploring the Board of IDE (with its installation procedure) Concept of Electricity & Basic Electronic Components
3	LED & Switch Interfacing Using Arduino
4	Sevel Segment LED & Matrix keypad Interfacing Using Arduino
5	LCD & Buzzer Interfacing Using Arduino
6	Serial Communication Using PC & Relay Interfacing Using Arduino
7	Temperature & Humidity Sensor, Light Sensor & PIR Sensor Interfacing Using Arduino
8	IR remote control & Motors Interfacing Using Arduino
9	Ping Sensor & RTC Interfacing Using Arduino
10	Combine Project & Instruct them to submit a Training Report & Make a Project with Project Reoport

Duration: 6 weeks, Course starts from 17th August 2015.

Time: 12 Noon to 4.00 PM (Approx.)

Eligibility: The Candidate should be at least Madhyamik pass.

Admission: Application form will be issued from the IC Centre, Department of Electronics & Telecommunication Engineering, Jadavpur University or download from our website [www.juicentre.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 **4,000/-** 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 & Mark sheet. *[Attested copies of Mark sheets/Certificates to be enclosed]*

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