



J. C. Bose University of Science and Technology, YMCA, Faridabad, Haryana

(A Haryana State Government University)

(Established by Haryana State Legislative Act No. 21 of 2009 & Recognised by UGC Act 1956 u/s 22 to Confer Degrees)

Accredited 'A' Grade by NAAC

DEPARTMENT OF ELECTRONICS ENGINEERING WORKSHOPS

OBJECTIVES:

Workshop practice is the backbone of the real industrial environment which helps to develop and enhance relevant technical hand skills required by an engineer working in the various engineering industries and workshops.

Our workshop intends to impart basic knowledge of various software tools, components, modules, datasheets and equipment to visualize the outputs and their use in different sections of manufacturing. Irrespective of branch, the use of workshop practices in day to day industrial as well domestic life helps to dissolve the real-life problems. The workshop experiences would help to build the understanding of the complexity of the industrial job, along with time and skills requirements of the job.

Workshop curriculum builds the hands-on experiences which would help to learn manufacturing processes, research as well as repair and production technology courses in successive semesters. Workshop practice is also important since only practice can make the man perfect. The students are advised to undergo each skill experience with remembrance, understanding and application with special emphasis on attitude of enquiry to know why and how for the various instructions and practices imparted to them in each shop. Electronics engineering department has established seven instruction shops to learn and practices wide range of manufacturing processes such as circuits designing, pcb designing fabrication as well as circuit testing on software as well as on breadboard. A resource in the workshop not only helps to complete engineering syllabus practical but also supports to undertake various under graduate projects, creative competitive working models manufacturing to the research projects of social and industrial relevance.

Purpose of Workshops:

- Enriching engineering practices by learning while doing.
- To provide under safe environment, knowledge and practice of various electronics Modules like raspberry pi, Arduino, Wi-Fi modules, Blue-tooth, IR, GSM, GPS sensor modules etc., power tools like Power supplies drill machines grinders, ICs, machine tools like soldering iron, multimeter and measuring instruments like Digital oscilloscope, vector analyser, Spectrum analyser to impart skills to design, measure and control size and shape of engineering products.
- To encourage students to use their knowledge, creativity and skills to design and manufacture solutions of social or industrial relevance.







Workshop Details:

Sr. No	Course name	Venue	Work done	Equipment Used
1	Workshop (UG 1 st & 2 nd Sem)	Basic Electronics	To study Basic components and instruments to be used.	CRO, DMM, FG
2	Workshop II (UG 3 rd & 4 th Sem)	Analog/Digital Electronics	To Design, Simulate, Fabricate and test analogue & Digital circuits.	DSO, DMM, FG, PCB Develop tool/Solution, Proteus, ORCAD
3	Workshop III (UG 5 th & 6 th Sem)	Microprocessor Interfacing W/shop	To Design, Simulate, Fabricate and test microprocessor interfacing circuits.	DSO, DMM, FG, PCB Develop tool/Solution, Proteus, ORCAD MPI SOFTWARE/IC BURNER, KEIL
4	Workshop IV (UG 5 th & 6 th Sem)	Analog/Digital Communications, Process Control & Instrumentation	To Design, Simulate, Fabricate and test analogue & Digital communications circuits and process control instruments	DSO, DMM, FG, PCB Develop tool/Solution, Proteus, ORCAD Communications Software GSM. GPS. Optical comm Kits
5	Workshop V (UG 7 th & 8 th Sem)	Microcontroller (RISC/CISC)	To facilitate designing & Fabrication of microprocessor/ microcontroller, Arduino, Raspberry pi circuits advance communications	DSO, DMM, FG, PCB Develop tool/Solution, Proteus, ORCAD Arduino, Raspberry pi circuits MIMO, Antenna & Satellite comm.

Workshop Staff List:

Sr. No	Workshop / Lab	Name	Designation/ experience	Qualification
1	PCI workshop	Dr. Dharamvir	HOS(EIC) 29years	Ph.D.
2	Communications I w/shop	Mr. Lalit Mohan	HOS(ECE) 30years	M-Tech
3	Communications II w/shop	Mrs. Kusum Arora	Sr. Instructor 28years	M-Tech
4	Microprocessor W/Shop	Mr. Mukesh Kumar	Sr. Instructor 24years	M-Tech
5	Control System Lab	Mrs. Deepika Mondal	Instructor 25years	M-Tech
6	Electronics II W/Shop	Mr. Poulami Jana	Instructor 20years	B-Tech
7	VLSI LAB	Mr. Vijay Kumar	Instructor 21years	M-Tech
8	Electronics I W/Shop	Mr. Lavita Virmani	Instructor 7 years	M-Tech
9	Microwave Lab	Mr. RamAvtar	Technician 27years	B-Tech
10	DSD Lab/ Computer Centre	Mr. Varinder Singh	Technician 16 Years	Diploma
11	Communications Lab	Mr. Baijnath	Technician	B-Tech

Safety Measures in Workshops: -

In the Electronics department all the workshops are well fledged with proper safety measures.

Safety measures in various workshops are as follows:

1. Fire Extinguisher is available
2. Earthling for Equipment & Panels is done
3. Do's and don'ts & safety measures are displayed in the workshops / lab
4. Well trained staff monitors the workshops all the time
5. Periodical calibration of workshop / lab equipment is regularly done.