



Department of Instrumentation
Bhaskaracharya College of Applied Sciences
(University of Delhi)
Sec -2, Phase - 1, Dwarka, New Delhi -110075

About the Department

Instrumentation is a specialized field which deals with the science and technology of measurement that provides service to not only physical, chemical and biological sciences; but also to all branches of engineering and medicine. Bhaskaracharya College of Applied Sciences is the only co-educational college in the University of Delhi, offering a Bachelor of Sciences (Hons.) course in Instrumentation. This course imparts knowledge and prepares skilled manpower that can design, develop, use and maintain various advanced instruments and creates bright career prospects. The students are also eligible for pursuing M.Sc. Instrumentation, M.Sc. Electronics, M.Sc. IT, M.Sc. Operational Research, M.Sc. Forensic Science, MCA and MBA from various Universities across India.

The College has a specialized Instrumentation Laboratory which provides practical expertise to the students and trains them to design, develop, maintain and troubleshoot instruments that are being used in varied fields like Automation and Control, Process Industries, Medicine, Quality Control etc. The Laboratory is equipped with state-of-the-art instruments like NI My RIO, NI My DAQ, NI ELVIS-II Educational Laboratory Virtual Instrumentation Suite supported by LabVIEW full development system from National Instruments and NI USB Data Acquisition Card, to help students interface and integrate real time signals and data. The laboratory also acquaints students with devices used in Process and Control Industries like ratio control trainer, differential pressure transmitter, circular chart recorder, various flowmeters such as electromagnetic, orifice meter, ultrasonic etc. It also has advanced transducer and instrumentation trainer, temperature transducers, LVDT, strain gauge trainer etc. Students learn to design and develop small projects on high performance microcontroller and microprocessor kits which are provided with interfacing modules like Temperature Controller, Keyboard, Elevator Simulator Interface, Stepper Motor etc. The Instrumentation Laboratory also boasts of training students in sophisticated biomedical and analytical instruments like 3 to 6 Channel Electrocardiograph, Heart Rate Monitor cum ECG trainer, Respiration Rate Monitor, UV-VIS Spectrophotometer, flame photometer etc. Students also find opportunity to do hands on training on power electronics devices like induction motor and other drives.

Department of Instrumentation, BCAS, Dwarka

The Instrumentation Department society “Sensors” has been organizing various academic activities outside the classroom to support the complete development of students. It provides them a platform to organize, manage and coordinate various activities along with learning, interacting with experts from the industry and other fellow students. It is with this endeavor that the society has been regularly organizing various seminars, workshops, talks by experts and industrial visits which apart from facilitating the learning process; help students in exploring and honing their creative, communication and problem solving skills. Department of Instrumentation organized an invited talk on September 25, 2019 by Shri Satish, Senior Scientist, Electrical and Electronics Metrology Division, CSIR, National Physical Laboratory (NPL). The topic of his talk was “Metrology and its role in improving quality of life. The workshop was attended in large numbers by students of all streams. Society also organized one day Technical Festival “Mnemonics 2020” on February 11, 2020. On this occasion Prof. Avinashi Kapoor (Head Dept. of Electronic Science, University of Delhi) delivered a motivational lecture. Various technical and cultural events like Circuit Making Competition, Debate Competition on “Artificial Intelligence”, Harry Potter Quiz, Alumni Meet, Photography Competition “Instrugraphy”, Open Mic Competition were also organized during the festival. The event witnessed a huge participation from students of the college as well as other colleges from all over Delhi. During this festival some of the very bright and talented alumni of the Department were also present and shared their experiences among the students. One of the Alumni of the department, Mr. Manish has recently joined leading Integrated Device Manufacturer ST Microelectronics.

Admission Eligibility Criteria

The overall percentage in Physics, Chemistry and Mathematics should be 55% and one compulsory language should be 50%.

Faculty Details

S.No	Name of Faculty	Qualifications	Specialization
1)	Dr. Geeta Bhatt (On leave and lien)	Ph.D. (Univ. of Mumbai)	Material Science (Semiconductor Thin Films)
2)	Dr. Avneesh Mittal* (Teacher-in-charge)	M.Sc., M.Tech., Ph.D. University of Delhi	Genetic Algorithm based Adaptive Control

*Faculty in the Department of Electronics

Information about Department of Instrumentation, BCAS, Dwarka, New Delhi 75. Any information given here is subjected to change as per the guidelines of DU as and when received



Special achievements of students graduating in 2020

1. A placement drive was conducted by Tata Consultancy Services Limited for the profile of Graduate Trainee in which two students were selected.
2. In another placement drive conducted by Wipro Limited; seven students were selected in Wipro Work Integrated Learning Program, Talent Hunt 2020.

Semester-wise distribution of Courses under CBCS (Revised)

SEMESTER I		SEMESTER II	
C1	Basic Circuit Theory and Network Analysis	C3	Analog Devices and Circuits
C2	Applied Physics	C4	Transducers and Sensors
AECC1	English/MIL Communication or EVS	AECC2	EVS or English/MIL Communication
GE1	Generic Elective	GE2	Generic Elective
SEMESTER III		SEMESTER IV	
C5	Biomedical Instrumentation	C8	Operational Amplifiers and Applications
C6	Digital Electronics and VHDL	C9	Analytical Instrumentation
C7	Engineering Mathematics	C10	Electronic Instrumentation
SEC1	Skill-Enhancement Elective Course	SEC2	Skill-Enhancement Elective Course
GE3	Generic Elective	GE4	Generic Elective
SEMESTER V		SEMESTER VI	
C11	Measurement Technology	C13	Power Electronics
C12	Microprocessor	C14	Control Systems
DSE1	Discipline Specific Elective	DSE3	Discipline Specific Elective
DSE2	Discipline Specific Elective	DSE4	Discipline Specific Elective

Information about Department of Instrumentation, BCAS, Dwarka, New Delhi 75. Any information given here is subjected to change as per the guidelines of DU as and when received

Department of Instrumentation, BCAS, Dwarka

Abbreviations used for Course					
C	Core Course				
AECC	Ability Enhancement compulsory Course				
GE	Generic Elective course				
SEC	Skill Enhancement Elective Course				
DSE	Discipline Specific Elective course				
SEC: Skill-Enhancement Elective Courses <i>(any one paper per semester in semesters 3rd and 4th)</i>			SEC-1: Programming in C SEC-2 : VLSI Design and Verification SEC-3 : Testing and Calibration SEC-4: PLC and SCADA SEC-5 : Virtual Instrumentation SEC-6: Programming using MATLAB		
DSE: Discipline Specific Elective <i>(any two paper per semester in semesters 5th and 6th)</i>			DSE-1. Signals and Systems DSE-2. Advanced Analytical Instrumentation DSE-3. Communication System DSE-4. Advanced Biomedical Instrumentation DSE-5. Embedded System and Robotics DSE-6. Process Control Dynamics DSE-7. Reliability and Quality Control DSE-Techniques DSE-8. Artificial Intelligence DSE-9. Dissertation		
GE : Generic Electives <i>(any one paper per semester in semesters 1st to 4th.</i>			GE 1: <i>Sensors and its applications (for 2020-21)</i>		
Category wise seat distribution					
Total Seats	UR	SC	ST	OBC	EWS
59	24	9	4	16	6