



INNOVETA

"Sensing the Smartness & Amplifying the Intelligence"



VES Institute of Technology

Newsletter: Department of Instrumentation

Editorial

We, The Instrumentation Department, wish to gradually climb the hierarchy of career and professional life. To do that we instill skills by involving ourselves in innumerable growth activities like research, discussions and personal development which will help us ace our ambitions. We present "INNOVETA" our newsletter scripting our steps towards growth in 2015.

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Message from HOD

It gives me immense pleasure to come out with first issue of INNOVETA which is a newsletter for Instrumentation Department of VESIT. The Instrumentation dept. of VESIT enjoys unique reputation in Mumbai University because of its hi-tech facilities like Process Instrumentation Lab, R&D Lab and because of its highly dedicated and well qualified staff members. These resources in Instrumentation dept. are also utilized by reputed industries to train their work force including graduate engineering trainee officers.

It will be our endeavor to bring out new developments in this department periodically through this newsletter INNOVETA.



Dr.P. P. Vaidya

H.O.D. Instrumentation and R&D

Vision of the Department

To contribute at National as well as International level for excellence in technical education and research in the field of instrumentation and control by creating proactive, noble personalities and integrated individuals who will use the knowledge and be fully dedicated to the progress of society.

Mission of the Department

- To provide superior education to students to develop critical, analytical and imaginative thinking to enter the workplace with confidence.
- To create an environment for promoting new ideas and research to generate innovators and future leaders.
- To promote academic growth by offering state of art education at undergraduate, post graduate and doctoral level and to pursue lifelong learning so as to lead towards the betterment of society.

Program Educational Objectives

- To enable students gain broad knowledge of concepts of instrumentation and control required to formulate, solve and analyse real time problems.
- To develop solid foundation in mathematical, scientific and engineering fundamentals required to excel in various fields and to prepare students for higher studies.
- To familiarize students with professional issues including: ethics, planning & implementation for developing leadership qualities, entrepreneurship and successful careers in core industry and interdisciplinary field.
- To prepare students on various aspects of research & development so as to excel in design & development of instrumentation system.

No of Faculties: 19

Research Publications: 35+

Department Domains

- ♦ Stochastics
- ♦ Process Automation
- ♦ Advanced Control Systems
- ♦ Biomedical Applications
- ♦ Nuclear Instrumentation
- ♦ Embedded Systems
- ♦ Advanced Electronics

Department Activities

- ♦ National Instruments
LabVIEW Academy
- ♦ Campus Connect Program
–Industrial Automation



About LabVIEW Academy

VESIT is one among the two Institutes in Western Region to offer LabVIEW Academy course. Our CLAD certified faculty members conduct Core 1 & Core 2 courses of LabVIEW.

Program Outcomes

- **Basic engineering knowledge:** An ability to apply fundamental concepts in mathematics, science and engineering to solve problems in Instrumentation engineering.
- **Problem analysis and design:** An ability to identify, analyze/ synthesize and interpret data to design/develop solutions for complex engineering problems.
- **Modern tool usage:** Select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling to complex engineering activities, with an understanding of the limitations.
- **Soft Skills:** An ability to communicate, comprehend and document effectively.
- **Program specific skills:** To equip students with a sound knowledge of Instrumentation and allied subjects to meet the latest industrial needs.
- **Multidisciplinary skills:** Function effectively as an individual or as a part of a team in multidisciplinary settings.
- **Professional Engineering practice:** An ability to apply the acquired engineering skills professionally and ethically and understand the impact of engineering solutions in societal and environmental contexts.
- **Life Long Learning:** Recognition of the need for and an ability to engage in lifelong learning.

Research Projects

Our Department has collaborated with industries like L&T & institutes like BARC in taking their R & D projects at institutional level. Some of the listed projects are:

- ♦ Nano second phase shift measurement.
- ♦ Signal processing of Low level Induced voltage in Rogowski coil.
- ♦ High speed peak detector.
- ♦ Low level signal generation.
- ♦ Uncertainty analysis in nuclear data science
- ♦ Fibre Optics in industrial Applications
- ♦ High Speed Data Acquisition systems
- ♦ Picosecond programmable delay generator
- ♦ Applications of Unscented Kalman Filter in Financial Mathematics

*We have also completed a **BRNS** funded Research project-
“**Electronic Radioactivity Simulator**”*

Placements: Our Recruiters



Industrial Visits



Placement Statistics

- ♦ No. of Students placed: 40+
- ♦ Core Placements: 25
- ♦ Highest salary offered: 8.09 Lacs
- ♦ Average Salary: 4.41 Lacs

Knowledge Enhancement

- ♦ L&T Technical Lecture Series
- ♦ NPTEL Lecture Series
- ♦ Workshop on Safety Instrumented System
- ♦ Finishing school on Industrial Automation

Industry Interaction

- ♦ R.K. Control Instruments PVT.LTD, Thane
- ♦ NPCIL, Tarapur
- ♦ Quantum Equipment Co. LTD.
- ♦ Emerson Network Power (India) Private Limited

Quality Improvement Program: P.H.D.

- ♦ Mr. M.D. Patil
- ♦ Mrs. Nilima Warke
- ♦ Mrs. Kadambari Sharma
- ♦ Mrs. Sangeeta P. Ram
- ♦ Mrs. Kanchan Chavan

Staff Forum

Apart from the syllabus, our teachers constantly thrive to upgrade their knowledge in their chosen field of interest by not only attending workshops and courses on new upcoming areas, software's & its applications but also encourage students to follow suit by setting their own example. Some of the courses attended and conducted by our faculty members are:

Courses Attended:

1. **“Neural networks and Applications”**, Jan 2 – Jan 3, 2015
2. **“FDP on enhancing teaching learning experience & IP rights”**, Jan 2- Jan 9, 2015.
3. **“Workshop on Virtual LABs”** COEP, Pune Jan 31, 2015 - Mr.Kader S, Mrs. Nilima Warke
4. **“GPU Programming and applications”** at IITB, Feb 24-26, 2015 - Mrs. Deepti Khimani
5. **“Trainers training module VESIT D-link WLAN”**, Apr 7-10,2015
6. STTP on **“Advances in variable structure and sliding mode control”** at IITB on May 28 - June 1, 2015. - Mr.M.D.Patil
7. **“Campus Connect Workshop”** at AIA, Jun 23- 25, 2015 -Mr. Kader S.
8. **“Research domains in Electronics and Telecommunication engineering”** Jul 7- Jul 11, 2015.
9. **“MEDIC”**, at IITB, Sep 11-15, 2015 -Mrs. Sangeeta P. Ram
10. **“Fiber Optic Sensors & Applications”** at Eagle Photonics, Vashi, Oct 16-17, 2015 -Mrs. Kadambari Sharma

Courses Conducted:

1. NI Labview Core 1 & Core 2 Course.
2. Workshop on PCB designing and Arduino.
3. Spoken tutorial workshop on “Scilab for control system”.
4. STTP on MATLAB for Electronics Engineering

Testimonials

“Our professors are very supportive in terms of research opportunities too, as a fellow classmate of mine is currently engaged in one. I was cynical when I started out, sure I wouldn't like my subjects or this branch. But now, I'm genuinely interested and I feel like studying after so long. I look forward to spending the next two years here”.

- By Anjana Manoj D8

“I chose this field because I believed in phrase “Jack of all trades and master of none”. Professors are really knowledgeable, helpful and very approachable. This VESIT's department provides the best labs and resources. Events conducted involved activities to improve student's ability to interact with seniors and juniors and increase their scope of learning”.

-By Saurabh Lad D18

Student Section

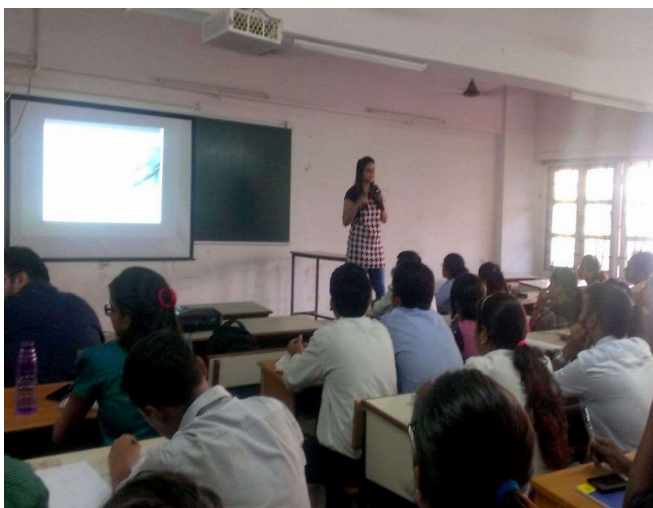
Various lectures are held not only to enhance the technical knowledge of the students but also to prepare the young engineer to face the expectations of the industry.

A special Lecture “*What Industry expects from Fresh Graduates*” was delivered by *Shri. Sunil Khanna, President & Managing Director, Emerson Network Power (India) Private Limited* on 27th August 2015.



Skill Enhancement Lectures

1. “OSI Reference Model”, by Mr. Sudhir Warriar, Cognitio Knowledge Services.
2. “Data Communications”, by Mr. Abhijit Karkare, Alcatel Lucent.
3. “Dust Proofing for Instrumentation & Electrical control rooms”, by Mr.L.M. Ghanshani, CEO, Vapcon Manufacturing.
4. “Noise Removal and Grounding in instrumentation systems”, by Dr.P.P.Vaidya, H.O.D, Instrumentation & R&D, VESIT.
5. “Control Valve flashing cavitation noise”, by Ms.Nilima Singh, Aker solutions.
6. “Compressor Control”, by Mr.Basudeb Das, RCF.
7. “Control Valves, Transducers and applications”, by Mr.Rajesh Shah, Nice consultancy.
8. “Implementation of S88 standard in industry”, by Mr.Sunil Karlekar, ABB Bangalore & Mr. Santosh Pawaskar, Emerson.



Extra Co-Curricular Activities:

Various co-curricular activities are also conducted to ensure the overall development of the students along with technical knowledge. Our students are members of technical society “The International Society of Automation (ISA). Some of the events conducted are:

PCB WORKSHOP

This year, ISA-VESIT organized its very first event, PCB Workshop. The students learnt to use Eagle software and designed a PCB board, under the guidance of Prof. N. Gopalakrishnan. The workshop enabled students to use Eagle software, which would be helpful for their mini-projects. The event was a success and saw huge participation.



JUNKYARD WARS

This is a technical fun event in which students, in teams of three, are asked to make a creative design based on the concepts of simple physics. Going by the idea 'Best out of Waste', the participants are provided with junk materials and depending on the theme of the event, they have to make a working model. The theme for this year was "Mechanics" wherein, the teams had to make a car, from the junk provided, which would further be used to set a ball in motion.



Testimonials

“I chose this field, especially after visiting the college VESIT. The best part of VESIT is the well-equipped labs and highly experienced staff. Working in the process lab gives us the feeling of a small industry. The atmosphere here for a student is very supportive plus competitive which makes us a QUALITY ENGINEER rather than just an ENGINEER”.

-By Amruta Raut D18

“All the labs and the equipment are just well maintained and are always available to the students. Faculties bring out the potential of each and every student and the concept like Instrumentation houses creates strong bonds between seniors and juniors. I am glad to be a coordinator at ISA-VESIT as it is a global platform for the awareness of instrumentation and automation”

-By Pranit Kotgire D8

Alumni Speaks

“Being a 2007 pass out, things have changed drastically, from the old building to the new state of art lab setups to the new class structures. I have been in touch with the Instrumentation department since my graduation. I had the opportunity to be part of the various SEL initiatives.

The enthusiasm shown by the faculty and students was definitely worth appreciating. I can't close without commenting on ISA. The growth shown by ISA is phenomenal. The activities undertaken have been more and more industry and student relevant. ISA paves the way for the students to get connected to the industry and be more industry ready”.

Mr. Hardik Sanghavi
Founder of Iolytics
Batch-2007 Pass out

“The course work provides a disciplined approach that can be applied across a broad industry spectrum. VESIT Process laboratory was as per Industry standards which gave us firsthand experience and enough confidence to bridge the gap between student and professional life. All my batch mates are doing well in their respective jobs which reflect the quality of the students the institute has produced”.

Mr. Vikram Gupta
Assistant Manager-BPCL
Batch-2008 pass out

Editorial Members

Faculty Supervisors

- Dr. P. P. Vaidya
- Mrs. Sangeeta P. Ram

Senior Editors

- Lekshmi A.
- Swapnil Chilap
- Harshavardhan K.
- Sana Khan

Junior Editors

- Amit Vele
- Shivali Dube
- Ganesh More

