



“Measure the Attitude & Control the Mind”

V. E. S. POLYTECHNIC
DEPARTMENT OF INSTRUMENTATION
Newsletter: Jan 20

“All the powers in the universe are already ours. It is we who have put our hands before our eyes and cry that it is dark.”

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Editorial

It gives us an immense pleasure to bring our 9th edition of iTECH, the half-yearly newsletter of Department of Instrumentation, V. E. S. Polytechnic. The name of our newsletter- iTECH- signifies bright technology, and it signifies the prospects of our Department. The current newsletter highlights the activities of our students and the achievements of faculty during the past half year. The determination of iTECH is to disseminate information about our Department, and we hope that the readers find the issues informative and useful. We are thankful to the faculty and staff of our department for their valuable inputs, and we welcome suggestions and feedback that will help us improve further.

Message from HOD

The department started in the year 1984, strives hard to create instrumentation technocrats with value based professionalism. Well-equipped laboratories and highly competent, motivated staff are our major strengths. The curriculum is a perfect blend of theoretical and practical knowledge in Instrumentation field. Various technical activities are conducted under the student chapter of ISA to make the students aware of the technological changes in the field. The department leaves no stones unturned to make its students well prepared to face this challenging world and aspires for their bright future.

Department Profile

- ❖ Location: Main Building
- ❖ Total no of Classroom: 3
- ❖ Total no of Laboratories:4
- ❖ Faculty Student Ratio:1-25
- ❖ Total Faculty:10
- ❖ Supporting Technical Staff:2



Department Vision

- ⊗ To excel in the field of Instrumentation by creating technocrats with value based professionalism.

Department Mission

- ⊗ To ensure that the students achieve necessary expertise in the field of Instrumentation, Control and Automation through dedicated and innovative teaching.
- ⊗ To create technically educated youth for flourishing career with a desire for lifelong learning.
- ⊗ To provide a platform for overall personality development of students with professional ethics, social awareness and moral values so that they would be well equipped to realize their potential and reach their aspirations.

Program Educational Objectives

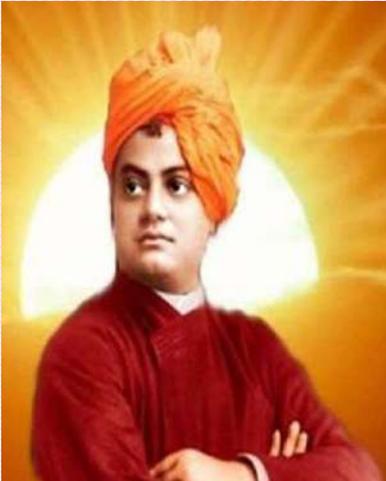
- ⊗ Provide socially responsible, environment friendly solutions to Instrumentation engineering related broad-based problems adapting professional ethics.
- ⊗ Adapt state-of-the-art Instrumentation engineering broad-based technologies to work in multi-disciplinary work environments.
- ⊗ Solve broad-based problems individually and as a team member communicating effectively in the world of work.

Program Specific Objectives

- ⊗ Instrumentation Equipment: Maintain various types of field instrumentation equipment.
- ⊗ Instrumentation Control Systems: Maintain different types of process control systems.

✚ *“Our duty is to encourage everyone in his struggle to live up to his own highest idea, and strive at the same time to make the ideal as near as possible to the Truth”*

✚ *“The Vedanta recognizes no sin it only recognizes error. And the greatest error, says the Vedanta is to say that you are weak, that you are a sinner, a miserable creature, and that you have no power and you cannot do this and that”*



-- Swami Vivekananda

Training Attended by Staff

- ⊗ Mrs. Saroj Desai, participated in training program on “Conduction and organisation of one day Faculty Development Training program” sponsored by M. S. B. T. E. and organized and conducted by V. E. S. Polytechnic, Mumbai 10th Aug 2019.
- ⊗ Mr. Kalpesh Bagal, Mrs. Lata R Upadhye, Mrs. Vidya Harpude participated in 1 day training program on “Preparation of Question paper profile and sample question paper of I Scheme 6th semester” sponsored by M. S. B. T. E. and organized and conducted by BANDRA Polytechnic, Mumbai 31st Aug 2019.
- ⊗ Mrs. Vidya Harpude, participated in 1 day training program “IIT Bombay workshop for Faculty members of Engineering Colleges & Polytechnic” organized and conducted by IIT Bombay, AICTE Mumbai 21st Sep 2019.
- ⊗ Mrs. Lata R Upadhye, Mrs. Shubhra Tonge, Mrs. Sangita Bhoyar participated in one week training program on “Machine Learning and Deep Learning” approved by ISTE, AICTE and organized and conducted by Vivekanand Education Societies Institute of Technology, Mumbai from 30th Dec 2019 to 04th Jan 2020.
- ⊗ Mrs. Lata R Upadhye, Mrs. Shubhra Tonge, Mrs. Sangita Bhoyar participated in one week training program on “Machine Learning and Deep Learning” approved by ISTE, AICTE and organized and conducted by Vivekanand Education Societies Institute of Technology, Mumbai from 30th Dec 2019 to 04th Jan 2020.

Various Investigation Techniques in Nuclear Medical Instrumentation

Nuclear medicine imaging non-invasively provides functional information at the molecular and cellular level that contributes to the determination of health status by measuring the uptake and turnover of target-specific radio tracers in tissue. These functional processes include tissue blood flow and metabolism, protein—protein interactions, expression of cell receptors in normal and abnormal cells, cell—cell interactions, neurotransmitter activity, cell trafficking and homing, tissue invasion, and programmed cell death. By providing information on these processes, nuclear medicine imaging offers a broad array of tools for probing normal and disease-related states of tissue function and response to treatment.

The special camera and imaging techniques used in nuclear medicine include the gamma camera and single-photon emission-computed tomography (SPECT).PET (Positron emission tomography)

The gamma camera, also called a scintillation camera, detects radioactive energy that is emitted from the patient's body and converts it into an image.

SPECT is a nuclear imaging scan that integrates computed tomography (CT) and a radioactive tracer. The tracer is what allows doctors to see how blood flows to tissues and organs.

Before the SPECT scan, a tracer is injected into your bloodstream. The tracer is radiolabeled, meaning it emits gamma rays that can be detected by the CT scanner. The computer collects the information emitted by the gamma rays and displays it on the CT cross-sections. These cross-sections can be added back together to form a 3D image of your brain.

Positron-emission tomography (PET) is a nuclear medicine functional imaging technique that is used to observe metabolic processes in the body as an aid to the diagnosis of disease.



Gamma Camera



PET Scan Machine



Mrs. Vidya Harpude
Lecturer in IS Department

Motivational Quotes

“The Pessimist Sees Difficulty In Every Opportunity. The Optimist Sees Opportunity In Every Difficulty.”

“You Are Working On Something That You Really Care About, You Don’t Have To Be Pushed. The Vision Pulls You”

“The Man Who Has Confidence In Himself Gains The Confidence Of Others.”

“Fake It Until You Make It! Act As If You Had All The Confidence You Require Until It Becomes Your Reality.”



By Mukul Raut

Students Activities

As per the program and curriculum requirement, expert lectures, industrial visits and workshops are arranged for the students in order to keep them in touch with the current development and trends in the field of engineering. The students also participate in extra-curricular activities apart from the co-curricular activities.

- ⊗ Ajay Lingoji, Rashma Dhende secured second prize in State Level MSBTE Technical Paper Presentation Competition at V.P.M polytechnic, Thane, Mumbai on 20th Sept 2019.
- ⊗ Shah Devanshi, Simran Jadhav participated in State Level MSBTE Technical Paper Presentation Competition at V.P.M polytechnic, Thane, Mumbai on 20th Sept 2019.
- ⊗ Ajay Lingoji, Rashma Dhende, Datta Kinjal, Shah Devanshi, Simran Jadhav participated in Technical Paper Presentation Competition “TECHNOCRATZ 2019” at Father Agnel Polytechnic, Vashi, Mumbai on 21st Sept 2019.
- ⊗ Rashid Ashish, Vaishnavi Hule secured first prize in Technical Paper Presentation Competition “TPP GENESIS-19” at B.V.I.T., Mumbai on 11th Oct 2019.
- ⊗ Ajay Lingoji, Rashma Dhende, Datta Kinjal, Simran Jadhav secured first prize in department level TPP organized on account of Engineer’s Day Celebration at V. E. S. Polytechnic, on 16th Sept 2019.
- ⊗ Shaikh Danish, Kolmbekar Anuya, Daware Anushka secured second prize in department level TPP organized on account of Engineer’s Day Celebration at V. E. S. Polytechnic, on 16th Sept 2019.
- ⊗ Malik Santosh, Shah Devanshi, Panchal Devang, Pandey Vikas secured third prize in department level TPP organized on account of Engineer’s Day Celebration at V. E. S. Polytechnic, on 16th Sept 2019.

Child Labor

*Many children have smiling faces,
And fun many a time,
But there are some children,
who never even have enough
to dine.*

*They have to work all day,
To earn their daily pay.
Some of them do cleaning and
Some of them do weaving.
But still it's difficult for them,
To eke out a decent living.*

*Why can't these children
smile and enjoy if we can?
Only because they are the
children of poor man.*

*Why do they have to bear
their masters reed?*

*It is because they are children
of a God.*

*Please stop the child labor,
No more mournful sighs
But only innocent faces with
happy smiles and Sparkling
eyes.*



By: Vaishnavi Hule

- ⊗ Ajay Lingoji, Kinjal Datta, Ajinkya Waghmare, Fadhil Mohammed, Devanshi Shah, Danish Shaikh, Simran Jadhav, Arshan Khan, Devang Panchal, Vedant Kadam, Anuya Kolmbekar attended “24TH One day National Conference on “Smart Technologies in Occupational Health, Safety & Environment” at V. P. M. Polytechnic on 21st Dec 2019.
- ⊗ Devanshi Shah participated and awarded with “uttama purskar” in interinstitute level Singing competition “VIVEKINI” on 15th Aug 2019
- ⊗ Ajinkya Waghmare, Manthan Nyaynit, Virajas Tare participated in institute level Essay competition organized on account of Guru poornima in V. E. S. Polytechnic on 16th July 2019.
- ⊗ Hrishikesh Walanj, Harsh Jadhav participated in institute level Card Making competition organized on account of Engineer's Day in V. E. S. Polytechnic on 16th Sept 2019.
- ⊗ Anuya Kolmbekar, Priyal Mahulkar, Kajal Ghusale, Shivani Kokate, Bhushra Shaikh, Sejal Madhavi, Sanjana Kamble, Vaishnavi Hule, Reshma Dhende, Sumaiya Sayyed secured third place in Kho Kho in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019
- ⊗ Reshma Dhende, Kajal Ghusale, Shivani Kokate, Priyal Mahulkar, Sanjana Kamble, Sejal Madhavi secured third place in DODGE BALL in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019
- ⊗ Vikas Pandey, Yash Patil, Rushikesh Tilak, Harsh Jadhav, secured third place in Relay in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019
- ⊗ Harsh Jadhav secured first place in Athletics 100 Mtrs in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019

⊗ Vikas Pandey secured third place in Athletics 100 Mtrs in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019.

⊗ Reshma Dhende, Sumaiya Sayyed, Anushka Dhavare, Kajal Ghusale, Shivani Kokate, Priyal Mahulkar, Vaishnavi Hule, Divya Koli, Sejal Madhavi, Sanjana Kamble, Bhushra Shaikh secured third place in Cricket in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019.

⊗ Reshma Dhende secured first place in Chess in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019

⊗ Akash More, Abhishek Dhavare, Aniket Yadav, Hamza Ansari, Amish Bhoir, Vedant Kadam, Sumedh Sonawane, Devesh Patel, Jimmy Melela, Rushikesh Tilak,

Harsh Jdhav secured first place in Foot ball in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019.

⊗ Siddhesh Jadhav, Aditya Parse, Matin Shirgavkar, Ajay Lingoji, Gaurang Meher, Harsh Jadhav, Jimmy Melela, Yash Patil, Rushikesh Tilak secured third place in Volley ball in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019.

⊗ Amish Bhoir, Siddhesh Jadhav, Jimmy Malela, Yash Patil secured third place in Kabaddi in annual sports “sphurti” conducted at institute level from 26th Dec 2019 to 31st Dec 2019.

Expert Lectures

⊗ Mrs. Preeti Vasudevan, faculty from VESLARC, Mumbai, delivered lecture on “Transitions from school to college” for the students of IS1I on 27th Aug 2019.

⊗ Mrs. Meeta Brahmabhatt & Mrs. Preeti Vasudevan, faculty from VESLARC, Mumbai, delivered lecture on “Santulan-Smart and sound students” for the students of IS3I on 15th July 2019.

⊗ Mrs. Meeta Brahmabhatt, faculty from VESLARC, Mumbai, delivered lecture on “Role of Responsible Students” for the students of direct second year admission IS3I on 28th Aug 2019.

⊗ Mr. Sachin Bhandarkar, faculty from V.E.S. College of Arts, Science & Commerce Mumbai, delivered lecture on “ABC of Business Money Matter?” for the students of IS5I on 2nd Aug 2019.

Industrial Visit

⊗ Students of IS5I visited CST Station control room, CST under the guidance of Mrs. Manju K, on 14th Sept 2019 for fulfillment of CSY course requirement.

- ⊗ Students of IS5I visited Advanced Training Institute (ATI), Sion, Mumbai under the guidance of Mrs. Shubra Tonge, on 27th Sept 2019 for fulfillment of PIN course requirement.
- ⊗ Students of IS3I visited Perfect instrumentation Controls, Thane, Mumbai under the guidance of Mrs. Saroj Desai, on 20th Sept 2019 for fulfillment of EIM and IME course requirement.
- ⊗ Students of IS3I visited PLC and DCS laboratory, VESIT, Mumbai under the guidance of Mrs. Sangita Bhojar, on 12th Oct 2019 for fulfillment of IDC course requirement.
- ⊗ Students of IS3I visited PLC and DCS laboratory, VESIT, Mumbai under the guidance of Mrs. Sangita Bhojar, on 12th Oct 2019 for fulfillment of IDC course requirement.
- ⊗ conducted lecture on “Business Plan Workshop” for some students of IS3I and IS5I on 20th Sept 2019.
- ⊗ Mrs. Krishnashalaka Raorane, Asst Sales and Marketing Manager, Aker Solutions, Mumbai delivered lecture on “Role of Control System and Automation in process industry” for the students of IS5I on 21st Sep 2019.
- ⊗ Mr Rakesh Gopalkrishnan, Chief engineer, Technip India Ltd, Mumbai delivered lecture on “Practical applicability of Transducers & concept of Process Instrumentation” for the students of IS3I and IS5I on 24th Sept 2019.
- ⊗ Mr. Kartik Patel, Asst Professor, K J Somaiya college of engg., Vidyavihar, Mumbai, delivered lecture on “Application of Amplifiers” for the students of IS3I on 28th Sept 2019.
- ⊗ Ms. Netranjali Koli, Manager, RCF, Mumbai delivered lecture on “PLC Automation and Communication” for the students IS3I on 28th Sept 2019.
- ⊗ Mr. Bhushan Shinde, Lecturer, VES COLLEGE OF LAW delivered lecture on “Social Issues and Environmental Education” for the students of IS5I on 01st Oct 2019.

Expert Lectures

- ⊗ Mr. Premanand Shenoy, Coordinator, Lakshya Team, Mumbai, delivered lecture on “Attitude & Attribute for Business” for the students of IS5I on 2nd Aug 2019.
- ⊗ V.E.S.I. Management



Eagle eye camera

“When it comes to medical devices in India, most innovations are based on re-engineering. We developed this product from scratch”

K. Chandrashekhara, an alumnus of BITS Pilani and IIM Calcutta, began his stint in the semiconductor business in 1988, little did he imagine that a couple of decades down the line he would be trying his hand at healthcare. In 2009, he quit his job, and the next year, launched Forus Health, which makes cameras used to diagnose preventable retinopathy (damage to the retina) in adults. Chandrashekhara's team developed cameras that were portable, rugged, easy to use and affordable. "No one had anything like it in India," says Chandrashekhara. "When it comes to medical devices in India, most innovations are based on re-engineering. We developed this product from scratch." At one-fifth the price of imported devices, this product (alongside some 2,400 others from Forus) is

now used in 36 countries, impacting 5 million lives.

Dr Anand Vinekar of Narayana Nethralaya, an eye hospital in Bengaluru, was looking for a portable imaging device to scan babies to cure preventable blindness, when he was introduced to the work that Forus Health was doing. The challenge Dr Vinekar brought to the table was to develop a camera with a greater field of view (130 degrees, compared to the 50-degree field of view in adult eye-scanners) which would allow the corners of a baby's eyes-where the disease originates-to be scanned. In 2013, Narayana Nethralaya and Forus Health collaborated with the government's department of biotechnology (which funded the project) to develop 'Neo' cameras.

Pre-term babies and those born weighing less than 2 kg, need to have their eyes scanned within 30 days for a condition known as retinopathy of prematurity (ROP). At 3.5 million, India has the highest number of pre-term births in the world. Cameras like these are invaluable in such situations. "There are 20,000 registered ophthalmologists in India. Of this, only 2,000 are retina specialists and less than 200 are specialists in ROP," says Dr Vinekar. "Our model allows this camera to be taken to the hinterland, to scan babies even in remote areas. The images are uploaded to a telemedicine platform and examined by specialists." On average, 2,500 to 3,000 babies are screened every month under the Karnataka Internet Assisted Diagnosis of Retinopathy of Prematurity programme alone. The network comprises 137 hospitals in 30 districts of the state. "This is probably one of the largest telemedicine networks in the world," says Vinekar.



By: Rashid Zahid Sarang

Petroleum from waste plastic

“The world is changed by your example, not by your opinion.”

A 45-year-old mechanical engineer from Hyderabad has come up with a novel idea of making petrol out of used plastic. Professor Satish Kumar, who has founded a company registered with the ministry of micro, small and medium enterprises, said the three-step process of converting plastic into fuel is known as plastic pyrolysis.

“The process helps recycle plastic into diesel, aviation fuel and petrol. About 500-kg of non-recyclable plastic can produce 400 litres of fuel. It is a simple process which requires no water and doesn't release wastewater. Neither does it pollute the air as the process happens in a vacuum,” Kumar said. Since

2016, the professor has converted 50 tonnes of ‘end-life’ plastic (that cannot be recycled) into fuel. At present, his company is producing 200 litre of petrol on a daily basis out of 200kg of plastic and selling the same at local industries for Rs 40/50 per litre. However, the usability of this fuel for vehicles is yet to be tested.

All kinds of plastics, except PVC (polyvinyl chloride) and PET (polyethylene terephthalate), can be used without the need for segregation. “Our main aim behind starting this plant is to help the environment. We are not expecting commercial benefits. We are only trying to do our bit to ensure a cleaner future. We are ready to share our technology with any interested entrepreneur,” he said.



By: Rashid Zahid Sarang

**Rank Holders of Winter
2019 Exam:-**

First Year



Rashid Zahid Sarang

Second Year



Virajas Tare

Third Year



Devanshi Shah

Result Analysis

<i>Year/ Semester</i>	<i>Program Code</i>	<i>Total No. of students appeared</i>	<i>Total No. of students passed</i>	<i>Passed %</i>
First/ First	IS1I	27	14	51.85
Second/ Third	IS3I	41	19	46.34
Third/ Fifth	IS5I	26	26	100

Rank Holders

The rank holders of Winter 2019 examination are –

First Year

<i>Rank</i>	<i>Name</i>	<i>Percentage</i>
I	RASHID ZAHID SARANG	86.57
II	HULE VAISHNAVI RAJU	84.57
III	SINGH ASHISH KUMAR	80.43

Second Year

<i>Rank</i>	<i>Name</i>	<i>Percentage</i>
I	TARE VIRAJAS ANIL	82.82
II	MONYE AHMAD ABBAS	80.59
III	TANDALE ARYAN DEEPAK	80.35

Third Year

<i>Rank</i>	<i>Name</i>	<i>Percentage</i>
I	DEVANSHI KAPIL SHAH	91.62
II	DHENDE RESHMA GULAB	91.52
III	PANDEY VIKAS RAMPRATAP	91.33

Quotes

“Vision without action is merely a dream; action without vision is merely passing time; but vision and action together can change the world.”

“If you try to please everyone, you will please no one. It is impossible to lead your life for others’ happiness.”

“Money is one thing which rarely unites and mostly divides people”

“You should not be so sensitive. Sensitive people suffer a lot in life”

“Money should come slowly over a period of time. Then only does one respect it. Whether it’s a man or a woman, earning too much money in too short a period is as bad as excess liquor.”



By: Sudha Murty

Editorial Team Members:

Faculty Incharge:

- ❖ Mrs. Sangita Bhoyar

Editors:

- ❖ Ajay Lingoji (Third Year)
- ❖ Simran Jadhav (Third Year)
- ❖ Virajas Tare (Second Year)
- ❖ Kajal Ghusale (Second Year)
- ❖ Sanket Chavhan (Second Year)

