

Institute Vision

To achieve excellence in imparting technical education so as to meet the professional and societal needs.

Institute Mission

- Developing technical skills by imparting knowledge and providing hands on experience.
- Creating an environment that nurtures ethics, leadership and team building.
- Providing industrial exposure for minimizing the gap between academics & industry

Program Vision

To produce Electronics and Telecommunication engineers capable of effectively using technical knowledge and interpersonal skills to benefit the industry and society

Program Mission

- Providing state of the art facilities and conducive environment enabling the students to sustain the challenges in the field of Electronics and Telecommunication
- Educating the students to face the competitive world, develop leadership skills and to instill discipline and ethics.
- Promoting industry institute interaction.

Program Educational Objectives

- PE01. Core Competence: To develop expertise amongst students to meet the needs of the employer by using mathematical foundation, electronic fundamentals and enable them to understand and solve engineering problems.
- PE02. Professionalism: To inculcate life-long learning, codes of professional ethics and entrepreneurial mindset.
- PE03. Conducive Learning Environment: To provide encouraging academic learning environment needed for a successful professional career so that students can become a noble soul and an asset to the society.

Program Specific Outcomes

- Test and maintain modern electronic tools and telecommunication systems by applying technical and conceptual knowledge.
- Select appropriate technologies of specified electronic and telecommunication systems based on engineering principles and professional ethics.
- Develop critical thinking with inquiring and flexible attitude towards modern trends in electronics and telecommunication technology.
- Function effectively as an individual or as a leader in multidisciplinary teams with an ability to communicate in both technical and professional environment and by engaging in lifelong learning, and entrepreneurship by engaging in lifelong learning.

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Program Outcomes (PO)

1. **Basic knowledge:** An ability to apply knowledge of basic mathematics, science and engineering to solve the engineering problems.
2. **Discipline knowledge:** An ability to Apply discipline specific knowledge to solve broadly defined Engineering problems.
3. **Experiments and practice:** An ability to plan and perform experiments and practices and to use the results to solve various engineering problems.
4. **Engineering Tools:** Apply the knowledge, techniques, skills, and modern tools with an understanding of limitations.
5. **The engineer and society:** Demonstrate knowledge to assess societal, health, safety, legal, cultural issues along with the consequent responsibilities relevant to engineering practice.
6. **Environment and sustainability:** Understand the impact of the engineering solutions in societal and environmental contexts to demonstrate the knowledge needed for sustainable development.
7. **Ethics:** Apply engineering principles with commitment to professional ethics and responsibilities for the development of society



From HOD's Desk

Greetings to Students and faculty.

I would like to thank all my students, faculty members for making this academic semester successful. In this semester, we witnessed various cultural, technical events along with our college festival, where students were given a platform to showcase their talent.

Also, we organized Industry visits, Guest lectures, Department Committee activities which benefited faculty as well as students. We are happy to start with our new initiative to keep pace with the emerging technology and to get easy and effective connectivity between students, parents and our staff.

Visit to Institute of Satellite Telecom (ISTC) , Kharadi, Pune



Industry Institute Interaction Committee had organized a visit to ISTC, Pune for the VI semester students of Electronics & telecommunication Dept. on 04 February 2017 . The visit was a part of the MSBTE curriculum for the subject Advance Communication System. The main aim of the visit was to provide an exposure to the budding telecom engineers an insight regarding the actual practical problems of satellite communication field. The students were provided a theoretical session followed by a rigorous practical session for the entire day. The ISTC produces beacon receivers, controls, FM SCPC, BDC's/LNB's and converters. ISTC is a hub station which provides test facilities for inspection and training towards operations, repairs and maintenance of entire earth station electronics. This trip not only gave the students a first-hand exposure to contemporary trends in technology; but also allowed them to interact with scientists working in the telecom domain.

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L&T Workshop-Kaushalya



Industry Institute Interaction Committee had organized a 3 week workshop L&T-Kaushalya for EJ department students from 15th May 2017 to 05th June 2017 . The course content covered technical (60%) & soft-skills (20%) along with development of life skills (10%).The Students were given a branch related mini project. Project testing & Project presentation was also a part of the training. The training also included modules of communication skills, presentation skills, interview & GD & time management. Industrial visits were arranged to L&T Madh training center for exposure towards latest products & services. Industrial practices like 5S, 6 Sigma, TQM were taught by industrial experts.

Class Toppers (Sem V - Winter 2016)

Third Year

EJ5G-A



Muktai Sawant

89.33%

EJ5G-B



Maithili Kale

89.44%



EJ5G-C

Visit to Gokul Dairy, Vashi



Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd. well known for its popular brand 'Gokul' is an Operation Flood cooperative dairy project established on 16th March 1963. At present Gokul has a modern 7 Lakh Litres/day capacity dairy plant with 5 owned chilling centres having 5.25 Lakh Litres/day milk handling capacity with modern Packing Unit at Navi Mumbai. Industry Institute Interaction Committee had organized a visit to this dairy plant for the 4th semester students of Electronics & Telecommunication Dept. on 10th February 2017 & 11th February 2017 for their course in Industrial Measurements.

The students got an opportunity to see their packaging unit, cold storage and milk testing methods. The students had an opportunity to view and understand the operation of different processes using varied techniques employed in a dairy plant. Also, the visit created awareness among the students regarding the various valves, actuators, controllers, containers, packing units, control panel being used currently in an automated plant.

Summer break Bridge and Skill Development Course

Industry Institute Interaction Committee had organized a 3 day workshop on Arduino Programming & development on 25th June 2017 to 27th June 2017 for second year & final year EJ students. The workshop was conducted by Prof. Anjum Muja-war – HOD EJ Dept. With the increasing demand of Arduino Programming in various day-to-day applications, the workshop primarily aimed at encouraging students to take simple projects and enhance their programming skills.



Bluetooth controlled home automation, Temperature controller, Intrusion detection and control system, Humidity controller, Gas Leak detection and controller, LCD Rolling display were some of the applications undertaken as a part of the workshop & students were given a home assignment as a food for thought.

Secret of Success

"The man who will use his skills and constructive imagination to see how much he can give for a dollar, instead of how little he can give for a dollar, is bound to success." Henry Ford

Class Toppers (Sem III - Winter 2016)

Second Year

EJ3G-A



Sneha Karnik
84.63%

EJ3G-B



Izhar Ahmed
80%

EJ3G-C



Kota Ganesh
81.38%

Technology Update —MEMS Technology

Micro-Electro-Mechanical Systems, or MEMS, is a technology that in its most general form can be defined as miniaturized mechanical and electro-mechanical elements that are made using the techniques of micro fabrication. The critical physical dimensions of MEMS devices can vary from well below one micron on the lower end of the dimensional spectrum, all the way to several millimeters. The term used to define MEMS varies in different parts of the



world. In the United States they are predominantly called MEMS, while in some other parts of the world they are called “Microsystems Technology” or “Micro Machined Devices”. While the functional elements of MEMS are miniaturized structures, sensors, actuators, and microelectronics, the most notable elements are the micro sensors and micro actuators. Micro sensors and micro actuators are appropriately categorized as “transducers”, which are defined as devices that convert energy from one form to another. In the case of micro sensors, the device typically converts a measured mechanical signal into an electrical signal. The more complex levels of integration are the future trend of MEMS technology. The present state-of-the-art is more modest and usually involves a single discrete micro sensor, a single discrete micro actuator, a single micro sensor integrated with electronics, a multiplicity of essentially identical micro sensors integrated with electronics and a single micro actuator integrated with electronics. MEMS technology is sometimes cited as separate and distinct technology. In reality the distinction is not so clear-cut. The well-known Scanning Tunneling- Tip Microscope (STM) which is used to detect individual atoms and molecules on the nanometer scale is a MEMS device. Similarly the Atomic Force Microscope (AFM) which is used to manipulate the placement and position of individual atoms and molecules on the surface of a substrate is a MEMS device as well. In fact, a variety of MEMS technologies is required in order to interface with the nano-scale domain.

Class Toppers (Sem I- Winter 2016)

First Year

EJ1G-A



Sweta Sharma
87.23%

EJ1G-B



Yash Mengane
74.92%

EJ1G-C



Neel Shah - 86.77%

PLC Automation & PLC programming



Industry Institute Interaction Committee had organized a 5day workshop on automation & PLC programming under the banner of Siemens on 5th June 2017 to 9th June 2017. The curriculum of the workshop comprised of the following course modules: Basic constituents of PLC, How PLC works?, Installation guidelines, powering and wiring of modules with information on addressing Programming language and representation in STL, FBD and LAD, Hardware configuration and setting object properties of modules, Programming instruction, Overview of SIMATIC S&-PLC , Programming units and using PC as programming unit. Hardware configuration and setting object properties of modules in STEP Step 7 instruc-

tions and programming: set/reset, elementary data type , load/transfer, comparison, basic math instructions. Timers/counters list Using symbol table and VAT. Step 7 blocks and structured programming, using data blocks Analog signal processing Introduction to HMI. Students were given enough hand-on on the Siemens PLC and HMI kits. A visit was conducted at Siemens, Airoli factory with demonstration of various PLC, HMI kits. The workshop gave a complete view of the latest automation techniques used in the industries today.

V- Technovation



Vidyalankar Polytechnic's, Project quality assurance committee has successfully organized the project exhibition of final year students on 03 March 2017 and 04 March 2017 to demonstrate their inventive concept. Each group explained their project to the judges. In this exhibition judges selected the best project based on the innovation, presentation & domain knowledge.

Secrets of Excellence

"Persistence is the twin sister of excellence. One is a matter of quality; the other, a matter of time." — Earl Nightingale

Staff

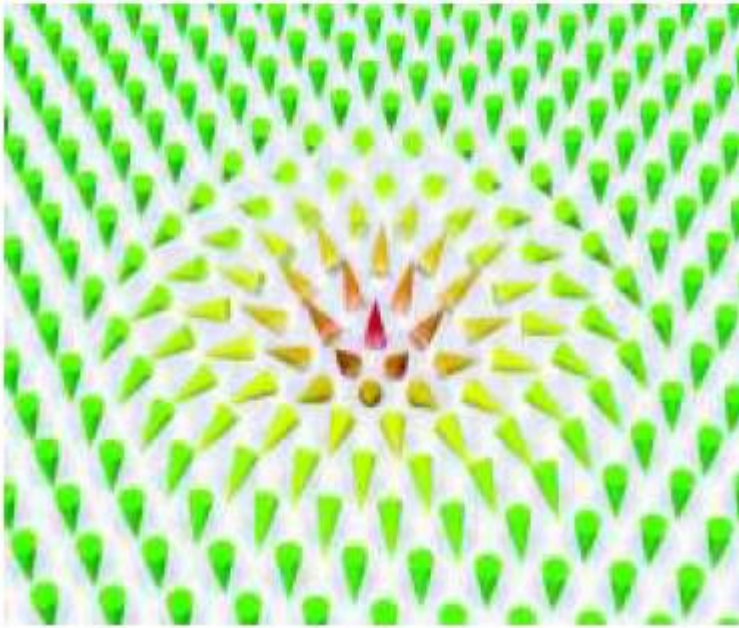
Achievements

- Prof. Anjum Muja-war appointed as a member in academic council at **TATA POWER SKILL DEVELOPMENT INSTITUTE (TPSDI)** on 18th May 2017
- Prof Anjum Muja-war presented the paper "THE NEED OF AC CREDITATION IN PROMOTING QUALITY ASSURANCE OF POLYTECHNICS" in RACEM 2016. It was published in AET-2017 the annual publication of Vidyalankar Institute of Technology with ISSN 2278 1722. Prof. Sandhya K and Prof. Shanti S K were the co-authors.
- Mr. Pratik Tawde appointed as an assistant editor at International Journal of Advance engineering and Technology.
- Mr. Pratik Tawde presented a paper entitled Advance-ment in alternate Energy sources in VISION 2017, A National Level conference on "Emerging Trends in Technology under ISTE Faculty chapter" held on 17 March 2017.

Glimpse of Co- Curricular Activities



“Skyrmions” For Data Storage



Researchers in Germany have used skyrmion tiny magnetic vortices that can be imagined as two dimensional knots in which the magnetic moment rotates about 3600 degrees within a plane for the first time to store data. This technology could be used to create hard disk with higher densities and faster data transfer

speeds.

What Are Skyrmions?

Skyrmions that consist of a small number of atoms were first identified about 80 years ago and have been the object of intensive research in recent years. They are named after a British particle Physicist, Tony Skyrme. This meant the existence or non-existence of a skyrmion could be assigned the digital bit states “1” and “0”, the basis for information technology.

In a Gist:

In their experiment, the researchers used a two atomic layer thick film of palladium and iron on an iridium crystal. They observed the skyrmions, with a diameter of a few nanometers, with a scanning tunneling microscope. The skyrmions were then manipulated with a small spin polarized current from the tip of the microscope. The research team has demonstrated the feasibility of skyrmions in data storage. This new technology can also be introduced in computers, tablets and smart phones. In an impressive feat of engineering, scientists in Denmark have devised a rapid, scalable and industrially viable way to manufacture large sheets of flexible organic tandem solar cells. Their successful application of roll-to-roll processing is a significant achievement for this emerging renewable technology. An Organic Photovoltaic solar cell is a polymer-based thin film solar cell. OPV solar cells have been the focus of much research as they are lightweight, flexible, inexpensive, highly tunable and potentially disposable. They are also unparalleled in the number of times that they can pay back the energy used in their manufacture.

Edited By
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Students Participation

- Sanket S. and Kashyap M of third year won first prize in state level Technical Paper presentation held at Bhausaheb Vartak polytechnic on 7/2/2017& 8/2/2017
- Sanket S. and Kashyap M. of third year also participated in paper presentation held at Pravin patil college of Engg. & Technology on 18/2/2017.
- Sumeet C. and Shreyas M. of third year participated in state level Technical paper presentation held at Padmashree Dr. D.Y. patil polytechnic on 21/2/2017
- Shashank G., Mohammed H., Ajay C., Sameer S., Veenith A., Tarique shaikh of third year participated in state level Technical Quiz Competition held at Bhahusaheb vartak polytechnic
- Maithili k., Omkar S., of third year participated in state level Technical Quiz Competition held at Padmashree Dr. D.Y. patil polytechnic .
- Makrand J., Dhawal M. Of third year participated in state level Technical Quiz Competition held at Padmashree Dr. D.Y. patil polytechnic .