EXTC DEPARTMENT

NEWSLETTER   2015-2016
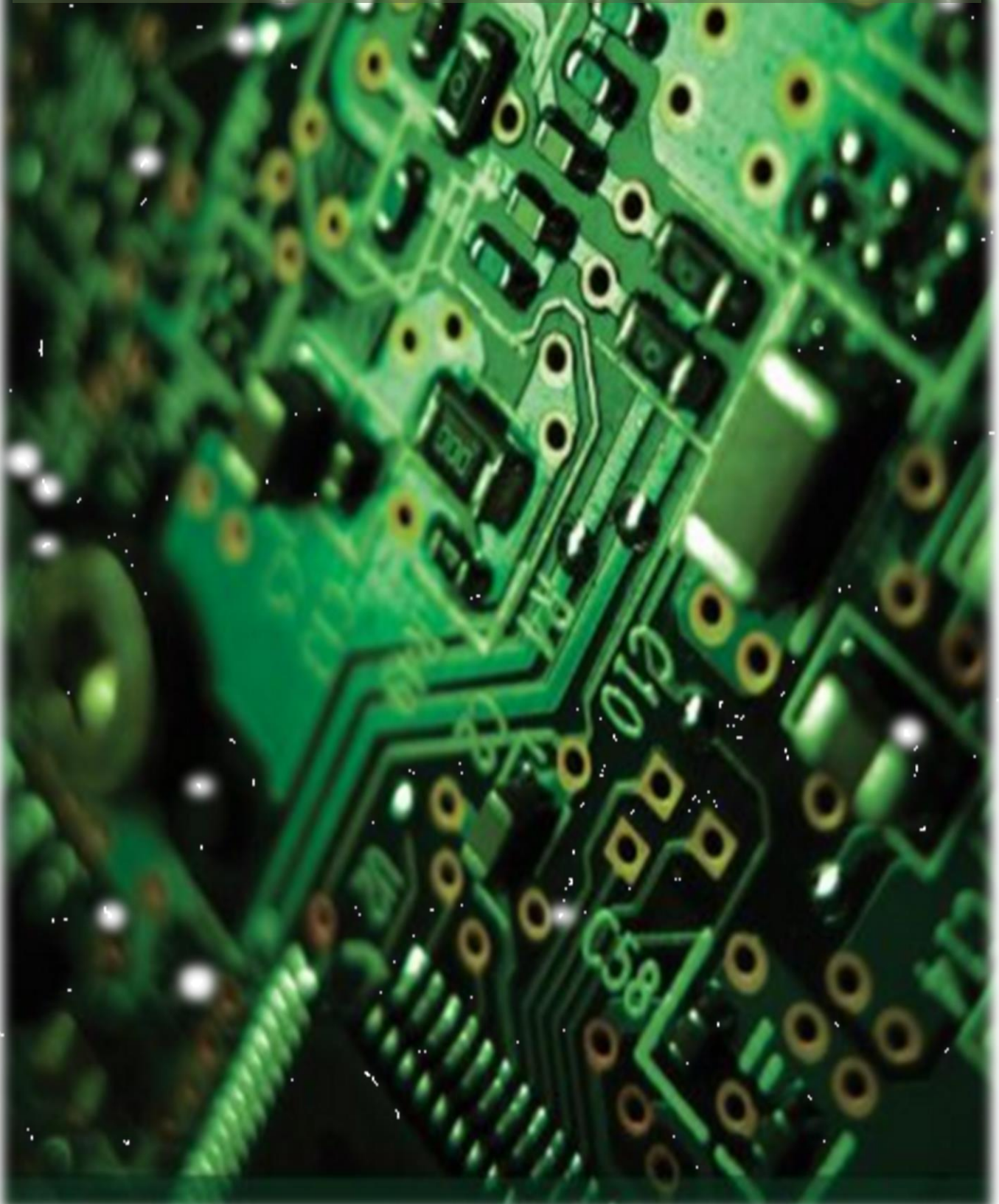
Content

ABOUT THE DEPARTMENT

Electronics and Telecommunication is a diverse field of engineering connecting to electronics, civil, structural, and electrical engineering. This branch has wide scope in the Public sector, Private sector as well as in Government sector which makes telecom engineers responsible for providing the method for customers to have telephone and high-speed data services.

It is a versatile branch, meaning that the students holding the degree in the Electronics and Telecommunication can build up their carrier in any field such as Computer Engineering, Information Technology and Telecommunication etc. Our motto is to build up students who will be equally competent in all these fields. Keeping this in mind, our laboratories are well-equipped with advanced computer, (to implement concept of virtual lab) to give the students full exposure to computer, Internet Technology, and the advancements in this field.

The Department is running IETE student forum (ISF), which is right forum for the students to give   exposure to their facets and help them for their overall personality and Technical development.

Everything you've ever wanted is on the other side of fear.

–George Addair

VISION

To emerge as a "Centre for Excellence" offering Technical Education by developing the total personality of the individual, imparting high level of discipline, making professionally competent and ethically strong, who in turn shall contribute to the advancement of society in particular and the nation at large.

MISSION

1. To achieve academic excellence by creating the right academic ambience, that will enable students to pursue higher studies and career in research.

2. To provide an effective teaching-learning environment designed to develop internationally competent professionals with a sense of responsibility and social sensitivity.

3. To promote Industry- Institution Interaction.

Programme Educational Objectives (PEOs)

The Bachelor of Engineering in Electronics and Telecommunication program has following educational objectives. These objectives are the long term career goals that we set for our students. Our program prepares students to achieve these objectives.

1. Identify, analyze and formulate problems to offer appropriate design solutions that are technically superior, economically feasible, environmentally compatible and socially acceptable.
2. To create the necessary academic ambience that nurtures the student ability to cope up with situations that emerges in the professional context with confidence through lifelong learning.
3. To inculcate professional and ethical attitude, teamwork skills, good leadership qualities and commitment to social responsibilities.

PROGRAMME LEARNING OUTCOMES

The outcomes of the program objectives are:

1. **Engineering Knowledge**: The ability to apply knowledge of mathematics, engineering and science to solve complex engineering problems.

2. **Problem Analys**is: The ability to identify, formulate and analyze engineering problems.

3. **Design/development of Solutions**: The ability to design electronics circuits, conducts experiments, analyze and interpret data.

4. **Modern Tool usage**: An ability to design analog and digital systems and components.

5. **The Engineer and Society**: Ability to be aware of social, health, safety, cultural, legal issues and responsibilities relevant to professional engineering practice.

6. **Environment and Sustainability**: The broad education necessary to understand the impact of engineering solutions in environmental and societal context.

7. **Ethics**: Apply ethics to carryout engineering practices more professionally.

8. **Individual and Team Work**: The ability to function in multi-disciplinary teams by involving in technical activities.

9. **Communication**: The ability to comprehend, present and document effectively.

10. **Project Management and Finance**: Ability to apply engineering and management principles.

11. **Life-long Learning**: The ability to engage in lifelong learning with advances in technology.

PROGRAM SPECIFIC OUTCOME

PSO1: Professional & Problem-Solving Skills:

An ability to understand and analyze the basic concepts in Electronics & Communication Engineering and to apply them to various areas, like Electronics, Communications, Signal processing, VLSI, Embedded systems, microwaves etc.

PSO2: Successful Career and Entrepreneurship:

An understanding of social-awareness and ethical Responsibility to have a successful career and to endure passion for real-world applications using optimum Resources as an Entrepreneur.

Nothing is impossible, the word itself says, "I'm possible!"

–Audrey Hepburn

PRINCIPAL'S MESSAGE

It is a matter of pleasure to speak with all of you through this newsletter. We all can take pride from the fact that each one of us has contributed to the present day glory and growth of our college. The Newsletter will serve as an interface between the Institute and outside world. It provides information about the academic activities organized in the Institute - Information about co -curricular activities held during recent past is also shared.

I am happy to note that various initiatives are taken by the faculty to disseminate knowledge by organizing conferences, training programs and workshops. Expert lectures are also organized by various departments time to time to keep abreast with the latest developments in the field of science and technology.

VIVA INSTITUTE OF TECHNOLOGY established in the year 2009, nurtures a unique system of education for creating dynamic leaders in the corporate sector, entrepreneurs, academicians, researchers and professionals who contribute to the development of society and nation at large. It has an aesthetically designed and elegantly built campus furnished with state of art equipment and facilities. Here, education is not only focusing on 4 years B.E. degree course but also creating for the students a platform to realize their dreams, hone their cognition, sharpen their competence and carve out a wholesome personality.

Wishing you all the best for the fruitful learning journey at VIVA and for a bright future.

WORDS FROM HOD

The motto of our department is *'Nothing can we achieve without genuine effort'.*

The department of Electronics and Telecommunication Engineering is one of the pioneering departments of this institution. We offer our students good educational experience that combines intellectual rigor and cross-disciplinary breadth in an organized, student centred environment

Department of Electronics and Telecommunications Engineering aims at training students in the areas of Electronics like Solid state circuits, VLSI, Electronic Controls and Communications Engineering including , Multiple access technology, optical fiber, wireless communication, signal and image processing, mobile communication and Microwave Engineering. One specialty with the department is that students learn published material from journals and generate publications of International quality. We provide opportunity to students to explore their interests in microprocessor and microcontroller based applications, image & video processing, VLSI, Wireless Networking, Embedded systems, Robotics, data compression, signal processing, analog and digital communication.

It is indeed my great pleasure that our department is publishing newsletter etching every aspect of activities and events held in academic session 2015-2016. The newsletter aims to bring into view about various proceeding, functions and happenings in the department.

I congratulate the team who has taken initiative for producing this newsletter

"Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skillful execution; it represents the wise choice of many alternatives." — *William A. Foster*

KNOW YOUR TEACHERS

Name of Faculty	Responsibilities/Achievements/Experience
Prof. Archana Ingle	Assistant Professor and Head of Electronics & Telecommunication Engineering Department Qualification – M.E. EXTC with 14 years of teaching experience
	Responsibilities
	In-charge of Electronics & Telecommunication Engineering Department & college Academic In charge
	Member of Local Management Committee
	Co-convener of National Conference on Role of Engineers in Nation Building
	In charge of college Cultural Program
	Achievements
	Paper Published in (IJEECS) International Journal of Electrical, Electronics and Computer Systems
	Paper published in International Journal of Emerging Technology and Advanced Engineering
	Two papers published in National Conference on Role of Engineers in Nation Building, VIVA Institute of Technology
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

Believe you can and you are Halfway there – Theodore Roosevelt

KNOW YOUR TEACHERS

Name of Faculty	Responsibilities/Achievements/Experience
Prof. Karishma Raut	Assistant Professor- Qualification – M.E. EXTC, PGDCA, ADCA with 14 years of teaching experience
	Responsibilities
	Faculty Co-coordinator for Student Projects
	Department coordinator for university Examination
	Coordinator of NCRENB & Treasurer of Women Development cell
	Achievements

	Paper published/presented in
	   1) International journal of scientific engineering research
	   2) Global Journal of Researches in Engineering
	   3) Proceedings of IJCA, ICWET
	   4) National Conference on Role of Engineers in Nation Building

	Successfully Completed M.E. (Electronics & Telecommunication) with distinction
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

Accomplishment will prove to be a journey, not a Destination

– Dwight. D. Eisenhower

Name of Faculty	Responsibilities/Achievements/Experience
	Assistant Professor Qualification – M.E. EXTC with 7 years of teaching experience
	Responsibilities
	Coordinator for Oral / Practical Examination
	Coordinator for workshop/seminar/conference
	Coordinator for project Exhibition - NCRENB
	Achievements
Prof. Madhura Tilak	Successfully Completed M.E. (Electronics & Telecommunication) with distinction
	Paper published/presented in 1) International Journal of Innovative Technology and Exploring Engineering (IJITEE) 2) National Conference on Role of Engineers in Nation Building 3) International Conference On Emerging Trends In Technology And It's Application
	Won E-yantra Teachers competition on Robotics
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.
	Assistant Professor Qualification – M.E. EXTC with 5 years of teaching experience
	Responsibilities
	Department Representative for Training and Placement Cell
	Faculty coordinator for exam revaluation
	Achievements
Prof. Pratik Parsewar	Paper published/presented in 1) International Journal of Engineering Research & Technology (IJERT) 2) International conference held at S.B. Patil college of Engg, indapur, Pune.
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

Name of Faculty	Responsibilities/Achievements/Experience
Prof. Nikita Thalia	Assistant Professor Qualification – M.E. EXTC with 6 years of teaching experience
	Responsibilities
	Departmental Newsletter Faculty Coordinator.
	Departmental Minutes of meeting faculty Coordinator.
	Coordinator for Oral / Practical Examination
	Coordinator for department timetable
	Achievements
	Successfully Completed M.E. (Electronics & Telecommunication) with 8.86 CGPI
	Paper published/Presented in 1) International Conference on Advances in Computing and Information Technology, Elsevier publication 2) Two papers presented in National Conference on Role of Engineers in Nation Building, VIVA Institute of Technology 3) International Journal of Computer Application- two papers
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.
Prof. Kushal Suvarna	Assistant Professor Qualification – B.E. EXTC with 5 years of teaching experience
	Responsibilities
	Faculty coordinator for Industrial Visit
	Coordinator for Departmental Library
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

Name of Faculty	Responsibilities/Achievements
Prof. Meena Vallakati	Assistant Professor Qualification – M.E. EXTC with 7 years of teaching experience
	Responsibilities
	Department Coordinator for Industrial Visit.
	Department coordinator for National Conference.
	Coordinator for activities under VIVA - IETE
	Faculty coordinator for Exam Revaluation
	Achievements

	Paper published/ Presented in
	  1) ICWET International Conference & Workshop on Emerging Trends in Technology.
	  2) IJCSI International Journal of Computer Science
	  3) International Journal of Global Technology Initiatives(IJGTI)
	  4) Three papers - National Conference on Role of Engineers in Nation Building (NCRENB)

	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.
Prof. Shoeb Shaikh	Assistant Professor Qualification – M.E. EXTC with 4 years of teaching experience
	Responsibilities
	Faculty coordinator for exam moderation
	Lab in-charge of control system & instrumentation Laboratory
	Achievements
	Paper presented in National Conference on Role of Engineers in Nation Building (NCRENB)
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

Name of Faculty	Responsibilities/Achievements
Prof. Kaustuba Desai	Assistant Professor Qualification – B.E. EXTC with 3 years of teaching experience
	Responsibilities
	Departmental course file coordinator
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.
Prof. Chitra Takle	Assistant Professor Qualification – M.E. EXTC with 3 years of teaching experience
	Responsibilities
	Faculty coordinator for Student guest lectures
	Faculty coordinator for Seminar/workshop
	coordinator for Student Aptitude test
	Department coordinator for group discussion
	Achievements
	Paper published/presented in 1) Global journal of researches in Engineering 2) International journal of engineering Research & technology 3) National Conference on Role of Engineers in Nation Building (NCRENB)
	Successfully Completed M.E. (Electronics & Telecommunication) with distinction
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

KNOW YOUR TEACHERS

Name of Faculty	Responsibilities/Achievements
Prof. Ashwini Kothavale	Assistant Professor Qualification – B.E. EXTC with 6 years of teaching experience
	Responsibilities
	Faculty Coordinator for Circular/Notice
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.
Prof. Mohini Ghotekar	Assistant Professor Qualification – M.E. EXTC with 3 years of teaching experience
	Responsibilities
	Department Coordinator for Student Aptitude test
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

We are what we repeatedly do. Excellence, therefore, is not an act but a habit. -

- Aristotle

KNOW YOUR TEACHERS

Name of Faculty	Responsibilities/Achievements
Prof. Ameya Purandare	Assistant Professor Qualification –B.E. EXTC with 2 years of teaching experience
	Responsibilities
	Result Analysis Coordinator
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.
Prof. Nutan Malekar	Assistant Professor Qualification – M.E. EXTC with 6 years of teaching experience
	Responsibilities
	Department Representative for Training and Placement Cell
	Faculty coordinator for Exam Moderation
	Achievements
	Paper published in 　　1) International Journal of Scientific and Engineering Research 　　2) International Journal of Advancements in Research and Technology
	Successfully Completed M.E. (Electronics & telecommunication) With First class
	Workshop/seminar/STTP attended
	Workshop on Hardware and Networking Course, by Clarus wave academy- VIVA-TECH, 9th and 10th September 2015.
	ISTE Approved Faculty development STTP on "Recent trends in Image and Speech Processing" VIVA-TECH, 28th and 29th June 2015.

The expert in anything was once a beginner.

– Helen Hayes

LAB DETAILS

NETWORK AND COMMUNICATION LAB

Communication engineering laboratory focuses on training the students in both analog and digital transmission/reception of signal. The students here start in the analog area by constructing the circuits of amplitude modulation, frequency modulation and phase modulation. In the area of pulse techniques, faculty help them in PAM and PWM experiments. In addition to all the above, the lab consists of the fiber optic trainer, analog signal sampling kit, TDM trainer and microwave testbench

ELECTRONICS CIRCUIT LAB

Electronics lab is spacial and well equipped with the latest signal generators, oscilloscopes, digital trainer kits and measuring instruments. Students of various branches design and test their analog/digital/mixed signals, digital circuits as part of their curriculum.

Students are grouped into small teams and guided to do their mini projects by using the facility mentioned below.

- Cathode Ray Oscilloscope
- Function Generator
- Dual Power Supplies
- DMM with RS232
- Wide Range of Analog Meters
- LCR Meters
- Various Types of Active and Passive Devices

MICROPROCESSOR& MICROCONTROLLER LAB

Microprocessor lab helps the students enhance their knowledge about various processors such as 8085, 8086, microcontollers, Pentium processors and also the interfacing of these processors with other equipments. Students from other branch of engineering and sciences also come to this lab and develop their skills in the field of microprocessor and its applications. The features and facilities available in this lab will help the students do their projects and enhance their knowledge about the latest trends and technologies.

ANTENNA & MICROWAVE LAB

In Microwave Lab the students are exposed to the microwave active devices like klystron, gunn diode and passive devices isolator, circulator, slide screw tunner, magic tee, directional coupler, horn antenna, attenuator, terminations. The students perform all the experiments as prescribed by the university.

- Klystron Bench
- Gunn Bench
- Various Passive Components

OPTICAL COMMUNICATION & PROJECT LAB

The optical communication laboratory is setup to complement the topics studied in the optical communication theory course. The lab is equipped with fiber optic trainer kits and modules to enable the study of components of an optical communication system.

SIGNAL PROCESSING&VLSI LAB

The Digital Signal Processing and VLSI applications are becoming more prevalent in everyday use. The field of DSP/VLSI was developed due to the flexibility offered by the use of digital computers in implementing signal processing algorithms and systems. There is a constant need for designing systems with lower power, higher speed and lower area.

SIMULATION LAB

Linear Integrated Circuits & Simulation lab is very important for designing the characteristics of OP-AMP, 555 Timer IC and to simulate the applications of OP-AMP. It is also used for designing the Electronic circuits-1. Students of various branches design and test their circuits as part of their curriculum. Guidance is provided to the students by a team of expert faculty and lab technicians. The labs are kept open after the college hours to enable the students to engage themselves in designing /testing the circuits in their leisure hours. Students are grouped into small teams and guided to do their mini projects by using the facility mentioned below.

- Cathode Ray Oscilloscope
- Function Generator
- Dual Power Supplies
- Digital Multimeter

HARDWARE WORKSHOP LAB

In this electronic world we can't imagine an electronic device without PCB. This lab has been included in curriculum [II Year ECE] for benefit of the students to provide industry oriented training in PCB design, Fabrication, Assembling & Testing.

Printed Circuit Board laboratory focuses on training the students both in Design and Fabrication of PCB. The students enhance their knowledge in various routing techniques, design rules and schematic design. Also the students are trained to create new library for various components. In this lab students are fabricating the given circuit, assembled it and testing has to be done. The features and facilities available in this lab will help the students to do their projects and enhance their knowledge about the latest trends and technologies in PCBs.

List of Equipments:

- Art Work Film Maker
- Curing Machine (Oven)
- Dip Coating Machine
- U.V Exposure Unit
- Etch Etching Machine
- Drilling Machine
- Shearing Machine
- Dye Developer
- Chemicals for PCB Processing

There is no substitute for hard work. – Thomas Edison

WORKSHOP

IETE Approved Two Day Workshop

On

"HARDWARE AND NETWORKING COURSE"

09th & 10th September, 2015

Electronics & Telecommunication Engineering Department of VIVA Institute of Technology organized a two day workshop on **"HARDWARE AND NETWORKING COURSE"** under the banner of IETE on **9th & 10th September, 2015**The program started by greeting the speakers of **Clarus Wave Academy.**

The workshop was based basically on networking course which was conducted by Clarus WAve Academy with **Kevin periera** and **Gautam chaudhari** as the Speakers and a team of volunteers who guided the participants. The workshop Organized by Electronics and Telecommunication Department under IETE was Worth fruitful for all the Students of VIVA Institute of Technology.

In order to succeed, your desire for success should be greater than your fear of failure.   – Bill Cosby

The event was a success with very positive feedback from the participants. The speech by The Principal Dr. Arun Kumar was an inspiring one that covered the broad

Future scopes of the NETWORKING field. The Principal being an encouraging one who said that for such events where in student development is involved, he will always be supportive. The Faculty Co-ordinator of IETE Prof. Meena Vallakati and the IETE Committee Student Forum of VIVA headed by Ms.Rujuta Kamble as Chairman and Mr. Aayush Bhide as Vice Chairman along with the other committee members managed the event very perfectly with no loops.

Secrets of Excellence

"Only those who will risk going too far can possibly find out how far one can go."   *—T.S. Eliot*

Clarus Wave Academy team introduced themselves to the participants and enlightened them about the fantastic and intriguing field of Networking and narrated their various achievements and their future plans.
The Day ended with valedictory function and vote of Thanks.

SHORT TERM TRAINING PROGRAM

ISTE Approved One Week Short Term Training Program on
"Recent Trends in Image, Video and Speech Processing"

Digital image, video and speech processing emerging in thousands of applications like astronomical, bio-medical, consumer, industrial, and artistic which continues to enable the multimedia technology revolution we are experiencing today. This STTP throws light on the promising research areas such as Imaging, video processing and speech processing, booming trends and its diverse applications.

The objective of the STTP is to provide conceptual knowledge and research opportunities in the areas of Image, Video and Speech processing. The STTP aims at equipping teachers with skills and knowledge in order to create a better society by guiding, training and motivating the students to take up research projects.

Topics Covered in STTP on "Recent Trends in Image, Video and Speech Processing"

- Fundamentals of Image Processing
- Biometric and Biomedical Image processing
- Image fusion
- Fundamentals of Video Processing
- Image protection using cryptography
- Recent industry applications in image and video processing
- Speech signal processing
-

At the end of STTP participants are able to

- ✓ Apply quantitative models of image and video processing for various engineering applications
- ✓ Develop innovative design for practical applications in various fields
- ✓ Enhance the basic knowledge of Speech Processing and Analyze application of speech processing in various areas

The University of Mumbai introduced revised curriculum which includes, Image and Video Processing as compulsory subject for the final year students in SEM VII as well as Speech Processing as an elective subject in SEM VIII. As new algorithms, developments are introducing in multimedia industry day by day, it was felt necessary that the teaching faculty also become competent in the said technology. With keeping this as an intension the ISTE approved STTP was conducted from 25th Apr to 29th APR, 2016 in VIVA Institute of Technology, Electronica and Telecommunication Engineering Department.

The inauguration was attended by Principal Dr. Arun Kumar sir, H.O. D. of EXTC department Mrs. Archana Ingle and Dr, Amey Naik, Professor of K.J. Somaiya college of Engineering, Vidyavihar along with the faculties of the college and participants.

Participants were the teaching faculty of Engg. College. Total of 15 faculty members participated in the One week Short Term Training Program conducted.

CORE COMMITTEE OF STTP

GUEST LECTURES

Topic: Internet Skill Development & Ethical Hacking

By: ShivamPatolia (@ ShKruHACK Edu-center)

Date: 28/01/2016

Branch: TE EXTC

Number of students: 58

Lecture details: To gain the knowledge of Ethical Hacking & Internet skill and to evaluate the security of a network or system's infrastructure. Where students be able to scan, test, hack, and secure their own systems.

The internet is the world's largest interconnected environment. It is the most recent communication tool of the world where a user can transcend borders and have access to the encyclopedia, newspapers, bulletin boards, video arcade, hyper mails, broadcast stations, the movies, mail order, music entertainment, etc, all at one stop in a global village. The internet has opened the door of shared information that could not have been possible in the past.

An ethical hacker is a computer and networking expert who systematically attempts to penetrate a computer system or network on behalf of its owners for the purpose of finding security vulnerabilities that a malicious hacker could potentially exploit.

The purpose of ethical hacking is to evaluate the security of a network or system's infrastructure. It entails finding and attempting to exploit any vulnerability to determine whether unauthorized access or other malicious activities are possible. Vulnerabilities tend to be found in poor or improper system configuration, known and unknown hardware or software flaws, and operational weaknesses in process or technical countermeasures.

GUEST LECTURES

Topic: Telecommunication Network Management

By: **BhalchandraGokhale** (from St. Francis Institute of technology, Borivali (W.))

Date: 28/01/2016

Branch: BE EXTC

Number of students: 41

Lecture details: The telecommunications management network (TMN) provides a framework for achieving interconnectivity and communication across heterogeneous operating systems and telecommunications networks. TMN was developed by the International Telecommunications Union (ITU) as an infrastructure to support management and deployment of dynamic telecommunications services.

The telecommunications industry is seeing rapid and ongoing change. With emerging technologies, deregulation, and increased consumer demand, companies are presented with a wide range of opportunities and challenges. As companies unify their networks and systems, they must merge new technologies and legacy systems. This is no small task, as a company's networks may encompass analog and digital systems, multiple vendor equipment, different types of subnetworks, and varied management protocols.

Failure will never overtake me if my definition to succeed is strong enough".

- A.P.J Abdul Kalam

GUEST LECTURES

Topic: Role of EXTC Engineers in Today's world

By: Mr. Yatin Kandalgaonkar (NETWORK EXECUTIVE @ TATA COMMUNICATIONS LTD (VSNL)–MUMBAI)

Date: 14/01/2016

Branch: TE & SE EXTC

Number of students: 139

Lecture details: With the evolution of the computer age, Electronics & Communication has crept into every sphere of human life, thus increasing its scope manifold. Electronics is now a part of our everyday life, from your pocket FM radio to televisions, computers, mobile phones and even the high-end satellites that are helping you read this article now. This was an overview on Electronics & Communication (EC), but after going through this you all will have quite an in-depth knowledge of what an Electronics & Communication Engineering(ECE) does and the way it treads the path in the near future.

Having a further look at the career prospects, there is bound to be huge demand for competent engineers in electronic industry to cope this demand in technology. The engineers would be involved in sustaining cutting edge technology to stay ahead in competition. An electronic engineer can find a job in Consumer electronics manufacturing organisation, Telecommunication & IT industries, Health care equipment manufacturing, Mobile communication, Internet technologies, Power Electronics, and other industries like steel, petroleum and chemical industry, directing control and testing production process.

"Courage is the most important of all the virtues because without courage, you can't practice any other virtue consistently." - *Maya Angelou*

GUEST LECTURES

Topic: Low Noise Amplifier

By: Prof. PrathibhaSudhakaran from Xavier institute of technology

Date: 25/03/2015

Branch: TE EXTC

Number of students: 52

Lecture details: In a wireless design, two components are the critical interfaces between the antenna and the electronic circuits, the low-noise amplifier (LNA) and the power amplifier (PA). However, that is where their commonality ends.

A Low-noise amplifier (LNA) is an electronic amplifier that amplifies a very low-power signal without significantly degrading its signal-to-noise ratio. An amplifier increases the power of both the signal and the noise present at its input. LNAs are used in applications such as ISM radios, cellular telephones, GPS receivers, cordless phones, wireless LANs (WiFi), automotive remote keyless system, and satellite communications

"The things you do for yourself are gone when you are gone, but the things you do for others remain as your legacy."   *- kalu ndukwe*

Topic: VLSI, python & Linux

By: Mr. Amit Goradia from Automata system, Kiyosh Electronics electroprematics

Date: 18/03/2016

Branch: BE EXTC

Number of students: 49

LECTURE DETAILS: Very-large-scale integration (VLSI) is the process of creating an integrated circuit (IC) by combining thousands of transistors into a single chip. VLSI began in the 1970s when complex semiconductor and communication technologies were being developed. The microprocessor is a VLSI device. Before the introduction of VLSI technology most ICs had a limited set of functions they could perform. An electronic circuit might consist of a CPU, ROM, RAM and other glue logic. VLSI lets IC designers add all of these into one chip.

Python is a widely **used** high-level, general-purpose, interpreted, dynamic programming language. Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than possible in languages such as C++ or Java.

Python excels at integration tasks. Many applications use Python as an embedded scripting language; while it's not as light as Lua, it's much more versatile and has all sorts of ready-made tools so it makes a great tool for gluing things together

"Imagination is the highest form of research." - Albert Einstein

Topic: Digital communication & Networking

By: Mr Devang Goradia from Digital signage solutions & Mr. Shakeel Abbas from Aspade systems pvt.ltd

Date: 18/03/2016

Branch: TE EXTC

Number of students: 53

Lecture Details: As the backbone of the digital age, digital communications allows information to be communicated over copper wire, fiber-optic cable, and the air. The first wireless digital communications systems used spark-gap transmitters that used wide spectrum impulses to send single bits. In comparison, today's modern communication systems make efficient use of spectrum to transmit large amounts of data between multiple users. They connect cell phones to the cellular network, computers to the Internet, and provide you with simple conveniences like unlocking your car doors without a key. As the number of transmitters rise, engineers will be challenged to make the most of scarce spectrum and deal with interference while meeting the increasing demand for higher data rates and reducing power consumption

Networking is the practice of linking multiple computing devices together in order to share resources. These resources can be printers, CDs, files, or even electronic communications such as e-mails and instant messages. These networks can be created using several different methods, such as cables, telephone lines, satellites, radio waves, and infrared beams. Without the ability to network, businesses, government agencies, and schools would be unable to operate as efficiently as they do today.

"Your conscience is the measure of the honesty of your selfishness. Listen to it carefully." - Richard Bach,

INDUSTRIAL VISIT

❖ Yashna Circuits Pvt Ltd-
Date: 31/06/16& 22/06/2016

Yashna Circuit is the PCB manufacturer based in (Mumbai) India. Supplying in electronics such as BEL,Wipro, Tata Power, BPL Telecom, Electronumatic Hydraulic Ltd. Yashna Circuit fully meets the international quality standards & having membership with IPCA (INDIA). PCB quality standard is approved by C-DOT, CTCA, Indian Telecom & Major Public sector Companies.

❖Train Management System(WR)

Divisional Railway Manager Office,
1st Floor T.M.S.,
Mumbai Central
20th February, 2016

Objective of Visit:

Gain Knowledge about the various Signalling and Interlocking ASPECTS EMPLOYED BY Indian Railways.

About TMS:

- **Earlier System of Suburban Train Operations:**

Sburban operation is divided into 2 controlled sections viz. Churchgate-Andheri (16 stations) and Andheri-Virar(12 stations). Controllers in the earier system of working, used to collect information on telephone about the actual departure of each trains from the important nominated stations only, as it was not practical to collect tiings from all 8 stations, keeping in view that every 45 seconds a train is passing a station.

- **At a glance statistical details of suburban section are given below-**

1)	No. of Stations	28
2)	No. of Section Controls	Two
	Churchgate - Andheri	16 Stations
	Andheri – Virar	12 Stations
3)	i) Total No. of Suburban Trains(24 Hrs)	1007
	ii) Mail/Express & misc. movements	154
	Total	1161
4)	No. of EMU rakes in operation (during peak hours)	**64**
5)	Theoretical headway	3 Minutes 12 secs.
	Trains spaced as per time table	3 Minutes
6)	No. of signaling control towers	20
	No. of signals	500

Each rake has a unique rake unit number assigned to it. This is entered at the TMS input unit of the driving cab of the rake, and is broadcast from an antenna mounted on the driving cab. This allows the position of every rake to be known to the TMS system. Every EMU is also assigned a unique train number when it is in service. This number (usually one or two alphanumeric characters, e.g., 'AR') is assigned (and entered manually into the TMS system) when the rake leaves the carshed, and also noted at the end of the day when the rake is stabled. Each EMU also gets a 1 to 4 digit trip number (e.g., '173') for each trip it makes while it is in service during the day. The trip number directly corresponds to each run of the EMU in the timetable. As the train passes various signals and other locations with TMS transponders, the rake unit number is picked up from

the transmitting antenna on the driving cab; this is correlated with the train number and then the trip number by the TMS computers and the appropriate status updates are made for the train's position and movement at the TMS units used by station staff or section / traction controllers, and also for updating the PA systems at various passenger stations.

TMS input unit in driving cab

TMS display unit for Chief Loco Inspector, Churchgate.

"Reminds us that greatness lies even in the smallest of moments, in the humblest of hearts, and we shall, each of us, be called to greatness. Whether we shall rise to meet it or let it slip away is the challenge put before us all."
- Libba Bray,

TMS display unit showing status of running trains.

Total Number of Students Visited: 40

Total Number of Faculty Visited: 02

NCRENB 2016 & PROJECT EXHIBITION

Conference Dates: 03rd & 04th March 2016
Conference Venue: VIVA Institute of Technology, Shirgaon, Virar(E), Mumbai- 401305, Maharashtra.

The role of an engineer is far reaching and beyond the vistas of human thinking and imagination. The emerging technologies of communications and computing have brought about a revolution in everyday life during the 21th century. The familiar mobile phones, CD players and fax machines are being joined by digital broadcast radio and televisions which offer more channels and much clearer sound and pictures. The application of Science and Technology (S&T) is the main agent of industrial economic and social development. Universities, Public and research institutes, industry and government have to become more closely involved and aware of the importance of co-operation with S&T to promote sustainable economic, social and industrial development.

NATIONAL CONFERENCE ON ROLE OF ENGINEERS IN NATION BUILDING 2016 (NCRENBF 2016)

The main objective of the National Conference is to advance knowledge in building sciences in general and in aspects of building and construction in particular; to solve long-range problems of the building sector through methodological research and development; to provide support in solving short-term needs in areas where its expertise is crucial; and to disseminate knowledge and transfer technology.
Topics of Interest in NCRENB 2016 are as follows:
1 Electronics and Telecommunication Engineering
2 Electrical Engineering
3 Computer Engineering
4 Mechanical Engineering
5 Civil Engineering
6 Humanities & Applied Science

Project Presentation (2016)

University curriculum and the practices in industry find a wide gap today. To bridge this gap, the project presentation practices can be made an integral part of engineering curriculum. To achieve this initiative through NCRENB 2016 was taken by VIVA-TECH. The current initiative will provide a platform for the students, researchers and faculty acquainted with the current trends and practices in presenting 'Project Presentation' is proposed in NCRENB 2016. The project covered wide variety of topics from various domains like Information Technology, Communication Engineering, Mechanical Engineering domains etc.

NCRENB 2016 was organized in co-operation with following International & National Bodies:
1. International Journal of Computer Application (IJCA), USA
2. Indian Institution of Industrial Engineering (IIIE), Mumbai

Proceeding CD released on Inaugural Function

NCRENB-2016 Core Committee Members

PROJECT EXHIBITION

PROJECT EXHIBITION

PRIZE DISTRIBUTION TO PROJECT EXHIBITION WINNERS

CERTIFICATE DISTRIBUTION FOR PAPER PRESENTATION

STUDENT ACTIVITIES

Co-curricular Activities:

Sr. No.	Name of Student	class	Event
1.	RinkitaPatil	B.E.(EXTC)	28th in B.E.(EXTC) Mumbai University Exam in May 2015
2	Pramod Shukla, Rohan Tupe , Hitesh Singh, Aditya Wargaonkar	B.E.(ETRX)	"Coin Based Mobile Charging using Solar Panel," published in International Journal of Engineering Research & Technology (IJERT)
3	Agaskar Ankit Joshi Shreyas AnnaldasLalitkumar AjgaonkarPrachi	B.E.(EXTC)	✓ "Arduino based Industrial Conveyor Belt" IJCA Proceedings on National Conference on Role of Engineers in Nation Building ✓ Won consolation prize in project exhibition at Universal college of engineering
4	Satish Prabhu, Jay Kumar Bhuchhada, AmankumarDabhi, Pratik Shetty	B.E.(EXTC)	✓ "Real Time Skeleton Tracking based Human Recognition System using Kinect and Arduino" IJCA Proceedings on National Conference on Role of Engineers in Nation Building ✓ Won third prize in project exhibition at Viva Institute of technology ✓ Won consolation prize in project exhibition at Universal college of engineering
5	SAYALI R. MORE, RUCHIRA J. RAUT, RASIKA K. TANDEL, SNEHAL D. YENDHE	B.E.(EXTC)	"Intelligent Railway Crossing Gate Control with High Speed Anti-Collision Alerting System" IJCA Proceedings on National Conference on Role of Engineers in Nation Building
6	Swapnil Yelve Amit Gomane	B.E.(EXTC)	Consolation prize in 2nd National level technical paper presentation 2015 at Universal college of engineering,Next to Kaman River,BhivandiRoad,Vasai **Paper Entitled**:Remote file searching and retrieving using SMS
7	Rujuta Kambli	B.E.(EXTC)	Consolation Prize in 2nd National level technical paper presentation 2015 at Universal college of engineering,Next to Kaman River,BhivandiRoad,Vasai **Paper Entitled:**Secure healthcare for patients using cloud computing

Internship

Sr. No.	Name of Student	class	Company
1.	RujutaKambli	B.E.(EXTC)	Mahanagar Telephone Nigam Limited complited certified course in Converged Communications from 22.06.2015 to 27.06.2015
2.	RujutaKambli Ravi Yadav VikasBeri ShivaniTambe	B.E.(EXTC)	Industrial training from 27.06.2015 to 4.07.2015 at EMU Workshop,Mahalakshmi,Mumbai.Western Railway.
3.	RonakBamrotia PrathameshMandavkar UrveshKatode AshutoshNingot PratikshaKini ShubhangiMagdum SudhirChandivade	B.E.(EXTC)	Industrial/vocational training program of one week w.e.f. 22.06.2015 at Satellite Earth Station, Yeur, Thane
4.	RujutaKambli	B.E.(EXTC)	Certified course on Virtualization & cloud computing from 18.06.2015 to 30.06.2015 at Robotica& Computer Applications bInstitute of USA
5.	Ravi Yadav	B.E.(EXTC)	Certified course on Virtualization & clod computing from 20.06.2015 to 02.07.2015 at Robotica& Computer Applications bInstitute of USA
6.	Prasad Virkar	B.E.(EXTC)	Vocational training at Doordarshan Kendra Mumbai, from 6.07.2015 to 11.07.2015
7.	Akash More Jai Kudu Sayali Lad	B.E.(EXTC)	Practical training in Air India (Electronics Overhaul Division of Engineering Dept.) from 16.06.2015 to 15.07.2015
8.	KaustubhChuri	B.E.(EXTC)	Dekstop Support Engineer at LupinLab.Ltd., SantacruzEast,Mumbai from 12.06.2015 to 11.07.2015

Extracurricular Activities:

Sr. No.	Name of Student	class	Event
1.	Hrushikesh MahendraTandel	B.E. (EXTC)	Participated in Kabaddi Mens in National level Inter-Engineering Sports Meet SUMMIT 15 at MIT,PUNe During 10th to 14th September 2015
			Participated inVolleballMens in National level Inter-Engineering Sports Meet SUMMIT 15 at MIT,PUNe During 10th to 14th September 2015

Technical Event

Sr. No.	Name of Student	class	Event
1.	ChinmaySankhe YashPatil Anukul Save ChunoutiVartak	T.E. (EXTC)	"Robo-Soccer challenge" in IITBOMBAY on 13th march 2016. second prize in the National Round Engineering Excellence Championship 2016
2	Ravi Yadav Tehas Shetye Rujuta Kambli Suraj Nikam	BE(EXTC)	Consolation prize in the "2nd National level Technical Paper Presentation" 2015,Universal College of Engineering,Vasai Paper title: Secure Healthcare For Patients Using Cloud Computing
3	Ravi Yadav Tehas Shetye Rujuta Kambli Suraj Nikam	BE(EXTC)	Consolation prize in the "2nd National level Project exhibition cum Poster Presesntation" 2016,Universal College of Engineering , Vasai Project title: Secure Healthcare For Patients Using Cloud Computing
4	Gomane Amit More Akash Varankar Vaibhav Swapnil Yelve	BE(EXTC)	Consolation prize in the "2nd National level Technical Paper Presentation" 2015,Universal College of Engineering,Vasai Paper Title: GSM based Remote file searching and retrieving
5	Shetke sushant Shingala rushabh Shukla anand Sudra mayur	BE (EXTC)	Consolation prize in the "1stNational level Technical Paper Presentation" 2015,Atharva College of engineering, Malad Paper Title: RF/Microwave filter using Matlab

congratulations

Top Ranker

BE EXTC (Sem VII)

1) BOWLEKAR PUSHPARAJ   8.52
2) SINGH PRACHI   8.41
3) CHANDIWADE SUDHIR   8.33

TE EXTC (Sem V)

1) Singh Akshay Sanjay   9.63
2) Abhayankar Swapnil Sanjay   9.26
3) Tanna Hazel Ketan   9.26

SE EXTC (Sem III)

1) Shejwal Abhishek Suryakant   9.76
2) Vartak Saloni Prashant   9.20
3) Jawale Sayali Mahendrakumar   8.40

congratulations

JAI KUDU & SHIVANI TAMBE

- *Got selected in L & T InfoTech*

NINGOT ASHUTOSH

- *Got selected in STELMEC LTD*

RACHNA RAWAT

- *Got selected in FISERVE, PUNE*

RAHUL RAWAT

- *Got selected in FISERVE, PUNE*

congratulations

Best Student of the Year

KAMBLI RUJUTA SUCHIT

- EXCELLENTACADEMIC PERFORMANCE
- PRESENTED INDIA AT USA FROM SEA   CADET CORPS, FOR ISCA
- GOLD MEDALIST IN NATIONAL LEVEL ENTERPRISE SAILING CHAMPIOSHIP
- WON PRIZES FOR TECHNICAL PRESENTATION
- ACTIVE PARTICIPATION IN COLLEGE EVENTS
- GOLD MEDAL AT SHOOTING-PRABHODHANKAR THACKEREY SHOOTING CHAMPIONSHIP-DISTRICT LEVEL
- IETE CHAIRMAN
- STUDENT COUNCIL MEMBER

"Our biggest regrets are not for the things we have done but for the things we haven't done" -
Chad Michael Murray

ALUMINA CORNER: STUDENT SPEAKS

Life at Viva Institute of Technology is the most treasured part of my life. It has not only helped me in developing the perfect instinct but also has helped in making myself more presentable. I was never a diamond with brilliance, but yes these 4 years gave me some brilliant cuts. I thank all those cuts for helping me in building a stronger and a much positive attitude towards life. I thank all teaching, non-teaching faculty and my classmates for making this 4 year journey wonderful. All the atrocity and randomness during college festivals, gave me sudden adrenalin like effect. I was never so talented, but as I look back and see, I think, I have a lot to mention in my cards and it is enough to say that I was presented with plenty of opportunities and their usage was entirely in my control.

- Jai Kudu

"FUN and EXCITING" are the words to describe my life in VIVA College.

I still remember my first day of college, when I first stepped into the college campus there was a lot of crowd, so many unknown faces. I never thought some of those will become my best friends in future. The first year of college was undoubtedly the longest year, everything was new, new subjects, new friends…First time writing an engineering exam. I still remember my fresher's party, what a lively event, all of us enjoying, partying and celebrating .I made some really good friends in the second and third year. All EXTC people were together from second year onwards and the 3 years that we all spent together had a huge impact on my life. The fourth year came to an end in just a flash, during this year I realized my friends are not just friends they are FAMILY. I like to thank all my teachers, for guiding and inspiring us and being there for us whenever we needed them, they made this 4 year journey simply amazing. I also like to thank the non-teaching-staff for always being there for us. I also like to thank all the juniors for giving us an awesome farewell; it was the best day of our life. I will always cherish all these memories right from the fresher's party to our farewell, the sports events, traditional days, college IV and many more. Finally a massive thank you to all my friends, for tolerating me, helping me and always being there for me.

- Aman Madaan