



Sandip Foundation's
SANDIP INSTITUTE OF ENGINEERING AND MANAGEMENT
Department of Electronics And Telecommunication



E-SANCHAR

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"Electronics and Telecommunication The Spark that Ignites the Future."



Sandip Foundation's SANDIP INSTITUTE OF ENGINEERING AND MANAGEMENT

Approved by AICTE, New Delhi & Govt. of Maharashtra.
Affiliated to Savitribai Phule Pune University, Pune



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DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

•About SIEM•



Sandip Institute of Engineering and Management (SIEM) is located in the scenic, eco-friendly and conducive-to-study campus at an elevation off the Trimbak Road (Mahiravani, Nasik) leading to one of the twelve renowned pilgrimages of jyotirlingas known as Trimbakeshwar (abode of Lord Shiva) at the foot hills of Brahmagiri mountain ranges. SIEM is approved by All India Council for Technical Education, New Delhi Government of India and affiliated to Savitribai Phule University of Pune. SIEM is committed to imparting quality education in an atmosphere that will ensure that its students are confident, self motivated and industry-ready. Towards this goal, we are giving importance to qualified and experienced faculty for effective teaching-learning process, equipping our laboratories with best-in-class machines and instrument and developing overall personality of our students (with emphasis on strengthening the fundamentals of subjects, ability to work as a team and good communication skill). There is a well formulated regime with a blend of Theoretical learning and practical experience. This enables the faculty to guide the students to learn tomorrow, today.



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•About Department•

Electronics & Telecommunication (E&TC) Engineering

The Electronics & Telecommunication (E&TC) Engineering Department at SIEM, affiliated with Savitribai Phule Pune University, Pune, sustains and strengthens its teaching and learning program by adopting a comprehensive student-centric approach. This approach is designed to add significant value to the learner in an integrated manner through conceptual and interactive teaching, active lab sessions, seminars, projects, and independent study. The department features state-of-the-art laboratories equipped with the latest technology and tools, allowing students to gain hands-on experience in various aspects of electronics and telecommunication engineering. Additionally, a strong emphasis is placed on research and development (R&D), encouraging students to explore new ideas, innovations, and technological advancements. Through various projects and research initiatives, students are nurtured to become future leaders in the field. The department also collaborates with leading companies and organizations in the electronics and telecommunication sectors to provide students with opportunities for internships, industrial visits, value added programs and guest lectures from industry experts. These interactions help students gain valuable insights into the industry and stay updated with the latest developments. Recognizing the importance of continuous growth and development, the department encourages its faculty members to attend workshops, seminars, conferences, and training programs for the continual upgrading of their knowledge and skills. The experienced faculty members are dedicated to nurturing the future technocrats of the nation, ensuring that students receive a well-rounded education that prepares them for the dynamic field of electronics and telecommunication engineering.

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• Vision of the Institute •

We at SIEM aspire to be a globally recognized institute that delivers a world class education to outstanding intellectuals by nurturing and grooming their interests, creative abilities and thrusts to acquire a life-long learning so as to imbibe values of their commitment towards society.

• Mission of the Institute •

We at SIEM shall strive continuously,

- To inculcate and imbibe knowledge of cutting-edge technologies and its implementation for solving real life problems in a conducive environment.
- To collaborate with national and international institutes/industries/ universities of repute for sustainable growth through team work.
- To motivate and retain highly skilled and knowledgeable individuals, whose creativity and interest in teaching upholds to achieve desired goals.
- To provide a dedicated platform to cater the needs of individuals and Inspire them for their intellectual growth and character building.

To enable the students to achieve excellence in the chosen fields and to share the responsibilities of citizenship and service in a disciplined manner

• Vision of the Department •

To excel in the field of Electronics and Telecommunication Engineering so as to create competent professionals focusing on the needs of industry and society with professional ethics.

• Mission of the Department •

M1.: To empower competent graduates for applying knowledge and skill sets to face global challenges and societal needs by achieving excellence in innovation.



M2.: To provide a platform for budding graduates to apply and solve real life problems using cutting edge technologies through their creative abilities aimed at fulfilling the needs of society and industry.

M3: To cultivate ethical values in graduates for their Internationalization.

Hon'ble Chairman's Message



Sandip Foundation was established in 2005 with a vision of creating an education system from which the leaders of tomorrow emerge. Since our inception we have been aware of our strengths, motives and goals which we have set out to achieve. When we embarked on this journey, all we had was a dream and the tools of foresight and strategy. We combined these forces to pave a path of growth towards excellence and merit. Today it is our endeavor to be the most competitive institution in the country with emphasis on efficiency in everyday operations, reliability for students and thrust on discovery and development of new technologies. We are an organization that combines the latest developments in the field of education with our scientific and operational skills to create an environment which nurtures and encourages the aspirations of students. It is our aim that the combination of these factors along with the state of the art infrastructure and a dedicated teaching staff will provide an impetus to the Indian educational system as a whole. Our first campus is set up at Nashik,





Maharashtra where the college building is spread across a 200 acre area. Keeping pace with the times, the campus is Wi-Fi enabled. To ensure the complete educational experience, laboratories with the latest tools and machinery are provided along with a comprehensive library with RFID technology, a computer centre with complete internet connectivity a wholesome cafeteria, all set up in a green environment to give our students the most healthy and pleasant experience as they embark and pursue their professional goals.

What does an International quality Education system consist of? That is the question we asked ourselves when we set out to build this Foundation. India as a country has no problem with unemployment but there are institutions which churn out a large number of unemployable students. Should we consider ourselves an exception to this? The search for the answer has resulted in the faculty and staff to come up with innovative methods in teaching to construct new knowledge in the classroom. Our motto is to always give our students the best of what is happening in and around so that they are always at the cutting edge of academics the world over

The cultural aspect has always been a strong-point of our College as it has an acknowledged role in molding the personality, teaching soft-skills, developing leadership and management abilities and strengthening the EQ. Extra-curricular activities, participation in sports and other cultural activities has now become universal contributing to all-round formation which is much needed in the world today. Finally we look to create an Alumnus for inspiration and support so that our students have wonderful role models to emulate. Our faculty and students remain focused on a quality of education that is not just a college degree but a way of life.

**Dr. Sandipkumar Jha,
Hon'ble Chairman,
Sandip Foundation**





Principal Message



Dear Students,

On behalf of the Management, Faculty and Staff of SIEM, it is an honor to welcome you to this prestigious institution. We at SIEM are strongly committed to provide quality technical education to our students. Now what does quality consist of? Is it mere state-of-the-art laboratories and a well-furnished classroom? Or does it also involve the proactive participation of teachers and students alike? These are some of the questions we asked ourselves before embarking on this journey. In the ensuing years, our Faculty took up this task seriously, of trying to understand what international quality means and of taking the effort to make this a reality. Of course, we laid emphasis on educational infrastructure with laboratories, libraries and other resources for teaching. Nevertheless, the core of our efforts centered on applying innovative methods to our teaching-learning and evaluation, in spite of the large numbers we deal with. If our students do not pick up the skills of analysis and critical thinking, all the memorization and reproduction they may achieve in this Institution will be in vain in the global culture and



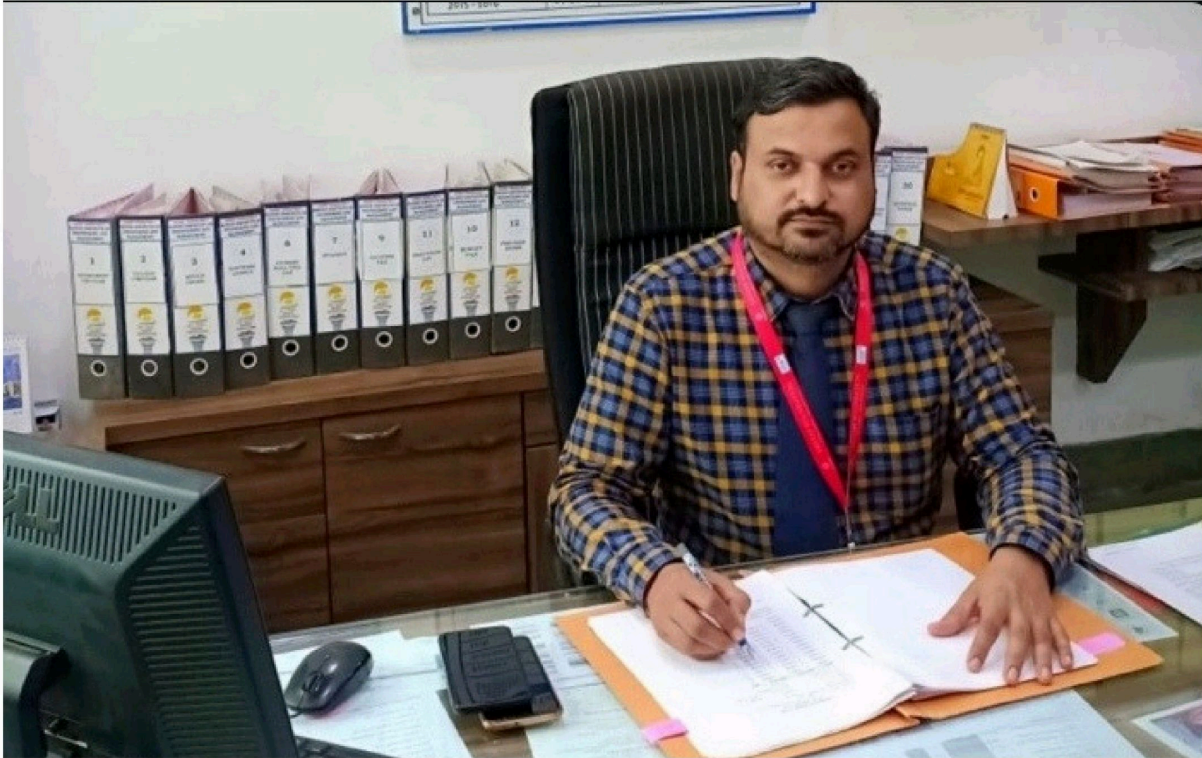
economy. It is our belief that every student has an unending storehouse of talent and when nurtured properly, we can help bring out the best in that individual.

The approach of the Institution is holistic. It has called for learning methods that are more demanding on both the professor and the student. It has led to a renewed emphasis on research for faculty and on initiating a taste for research among students. The monitoring of this process by the Heads of the Departments and by the Academic Administrators, in order to encourage good practices and to evaluate their effectiveness, gives hope of a renewal of academic culture on campus. I want to congratulate you and wish you the best on this journey. It is our assurance that at SIEM you will emerge as tomorrow's leader, today

Dr. D. P. Patil,
Principal,
Sandip Institute of Engineering and Management



HOD Message



Electronics aims at making the life of human beings comfortable. Communication connects people and brings them together. The vast application of electronics and the rapid advancements in the field of communications makes the study of this branch a covered option. The department's teaching areas include network, microprocessor, communications, signal and image processing, pattern recognition, electronic circuits, system and control, electronics, VLSI, CAD, parallel and distributed processing and wireless communication. Keeping in line with fast changing technological developments, the department has well designed, laboratories with modern equipment like Spectrum Analyzer, Logic Analyzer, DSO and advanced software like Proteus, Cadence, to incorporate all advancements in existing and emerging technologies with state-of-the-art laboratories complement the high standards set by the competitive syllabus and nurture the inclination of the students towards research and development.

(Prof. Yogesh R. Risodkar)
Head (E&TC)



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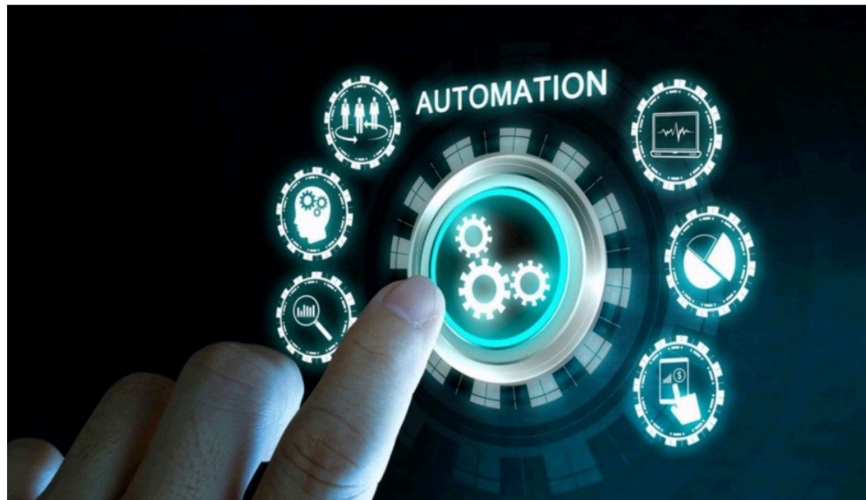
DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

TABLE CONTENT

	Page no.
1. Need Of automation	10
—∞—	
2. Artificial Intelligence	11
—∞—	
3. Events	12
—∞—	
4. workshop's	13
—∞—	
5. Industrial Visit	14

Topic : Need of Automation

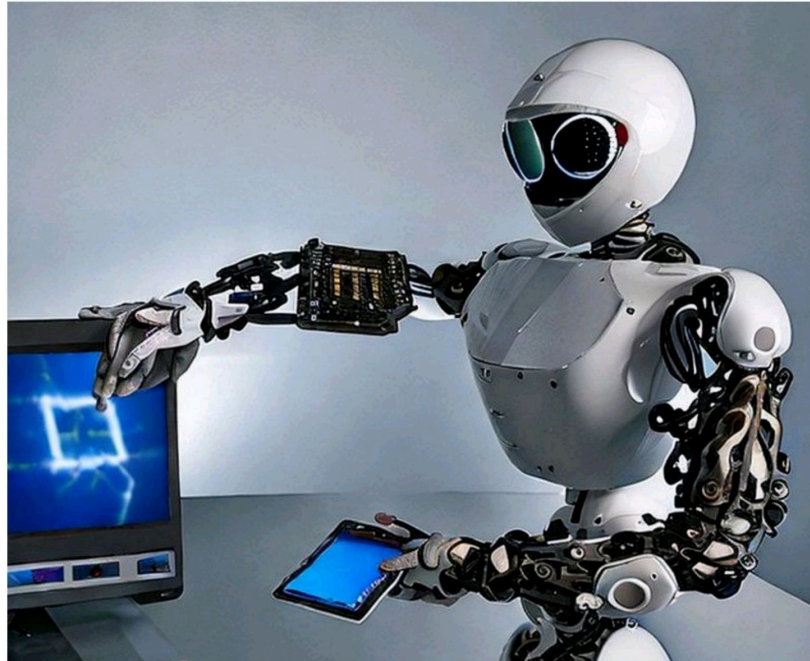
~Pooja Khairnar (BE E & TC)



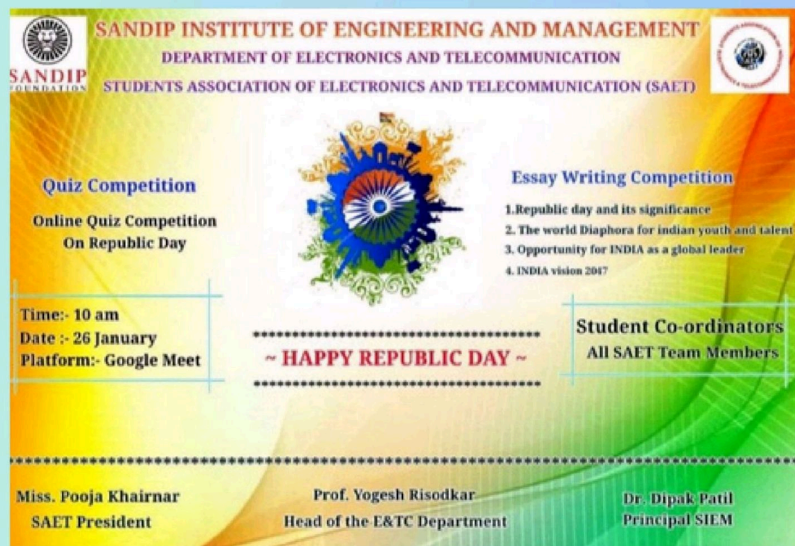
Automation has become an essential component of modern industries, driving efficiency, accuracy, and scalability in operations. As businesses face increasing competition and the need for cost optimization, automation offers a solution by minimizing manual errors, reducing operational costs, and accelerating processes. The rise of technologies such as robotics, artificial intelligence, machine learning, and the Internet of Things (IoT) has enabled automation to extend beyond manufacturing into sectors like healthcare, logistics, finance, and customer service. Automation not only enhances productivity but also allows organizations to focus on strategic and creative tasks by delegating repetitive activities to machines. In an era of rapid technological advancements and growing demands for precision and speed, adopting automation is no longer a choice but a necessity for achieving sustainable growth, innovation, and competitive advantage.

Topic : Artificial intelligence

Rushikesh Dhavale (BE E & TC)



Artificial Intelligence (AI) has revolutionized industries by enabling machines to mimic human intelligence, transform data into actionable insights, and automate complex tasks. As one of the most disruptive technologies of our time, AI has applications across diverse sectors, including healthcare, finance, manufacturing, and entertainment. Machine learning and deep learning algorithms enable systems to learn and improve from data, driving advancements in predictive analytics, natural language processing, and computer vision. In healthcare, AI aids in early disease detection and personalized treatment; in business, it enhances customer experiences and streamlines operations. As AI evolves, its role in autonomous systems, such as self-driving cars and robotics, is becoming increasingly prominent. Despite ethical concerns like bias and job displacement, the transformative potential of AI is undeniable, with ongoing research and responsible practices ensuring that its benefits are accessible and equitable for all.



Event Title: Essay Writing & Quiz Competition on Occasion of Republic Day

Event Date: 26th Jan 2023

Event Conduction Duration: Online (12.30 pm to 2.30 pm)

Event Venue: - Online

Participants –SE, TE & BE students of E & TC Department, SIEM

Name of Resource Person: All Faculty of E&TC department

Objectives: Conduct Essay writing & Quiz Competition on the occasion of Republic Day

Outcome:

Students get to try to think on different subject.

Students learn important research skills.

Students learn writing is better than reading to keep things remembered.

It looks great to add such kind of competition in CV.



Event Title: Three days Training Program on LabVIEW Software (level 1).

Event Date: 27th January 2023 to 29th January 2023

Event Conduction Duration : 15 hrs

Event Venue:- Online Mode

Participants : 18

Name of Resource Person:

Prof. P. S. Aswale, Assistant Professor, E & TC, SIEM, Nashik

Objectives:

Introduce the foundations of virtual instrumentation and graphical programming with LabVIEW. Design, implement, and distribute stand-alone applications using LabVIEW

Create user interfaces with charts, graphs, and buttons

Become familiar with LabVIEW to build basic applications



Event Title: Teacher's Day Celebration

Event Date: 5th Sept 2022

Event Conduction Duration: 3.00 pm – 5.00 pm

Event Venue: - TE E&TC Classroom, SIEM, Sandip Foundation, Nashik

Participants – SE, TE & BE students of E & TC Department, SIEM

Name of Resource Person: All faculty of E&TC Department

Objectives: Objective of the event was to show gratitude towards teachers.

Outcome:

Celebrate the role played by teachers in community upliftment.

Recognize the central role teachers play in nurturing and guiding infants, children, youth and adults through the lifelong learning process.

The purpose of World Teachers' Day is to acknowledge, evaluate and enhance the instructors of the world.

Take a minute to thank everyone who's contributed to your education thus far, and check out this exclusive opportunity to continue your lifelong learning



Event Title: SE Industrial Visit to Elite Technologies.

Event Date: 14th Dec 2022

Event Conduction Duration: 3 hrs (2.00 PM - 5.00 PM)

Event Venue: - Elite Technologies, MIDC Ambad, Nashik

Participants – SE E&TC SIEM

Objectives: Objective of the visit was to get awareness about core Electronics Industrial work & future opportunities in core area.

Outcome:

Students get knowledge about different department such as smt dept., Components pick & place machine, oven dept., safety dept., solder dept. etc.

Students understands how PCB gets print in smt dept.

Students saw how components pick & place machine places the components at their right place & performs without error work with help of programming.



Event Title: Expert session on 'Neoteric Aspects of Cloud computing and Applications.

Event Date: 22nd August 2022

Event Conduction Duration: 1 hrs

Event Venue: - TE-E&TC Classroom.

Participants – SE, TE & BE students from E & TC Department

Name of Faculty coordinator: Prof. Yogesh Risodkar and all faculty from E&TC department

Speaker: Mr. Er. Shravan Jadhav (Cloud Security Engineer at Tech Mahindra)

Objectives:

An Expert Session was organized by E&TC department on 22nd August 2022 at E&TC Department , SIEM, Sandip Foundation, Nashik. The Expert talk was delivered by Mr. Shravan Jadhav Cloud security Engineer. The main focus of the Session was on 'Cloud Computing and its Applications'



Event Title: Industrial Visit to Shivananda Electronics for SE.

Event Date: 16th Sept 2022

Event Conduction Duration: 5 hrs (11.00 AM - 4.00 PM)

Event Venue: - Shivananda Electronics, Deolali Camp, Nashik

Participants – SE E&TC SIEM

Objectives: Objective of the visit was to get awareness about core Electronics Industrial work & future opportunities in core area.

Outcome: Students get detail knowledge about electronics test, measuring instruments & security system. Students came to know that 100% metal detector was developed for the first time in India by Shivananda Electronics.



Event Title: Engineer's Day Celebration

Event Date: 15th Sept 2022

Event Conduction Duration: 3.00 pm – 5.00 pm

Event Venue: - TE E&TC Classroom, SIEM, Sandip Foundation, Nashik

Participants –SE, TE & BE students of E & TC Department, SIEM

Name of Resource Person: All Faculty of E&TC department

Objectives: National Engineer's Day is observed every year on September 15 on the birth anniversary of the legendary engineer Mokshagundam Visvesvaraya. The day is observed every year to pay tribute to Visvesvaraya and also to commemorate the contributions of the engineers to the nation.

Outcome:

Students get knowledge about Sir Mokshagundam Visvesvaraya

Sir Mokshagundam Visvesvaraya took up several complex engineering projects and became one of the most well-regarded engineers in India.

Engineers Day reminds us of the importance of designs and structures that make our world smooth and functional.



Event Title: SE Presentation on Data Structures

Event Date: 28th Nov to 3rd Dec 2022

Event Conduction Duration: 2 hrs in Student Activity Slot

Event Venue: - SE E&TC Classroom, SIEM, Sandip Foundation, Nashik

Participants – SE students of E&TC SIEM

Name of Resource Person: All SE E&TC Students

Objectives: Objective of the event was to get awareness about how to give presentation.

Outcome: Students get detail knowledge about how to give presentation in front of audience.

This activity help students to develop their presentation skills, soft skills & communication skills



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