Sandip Foundation's

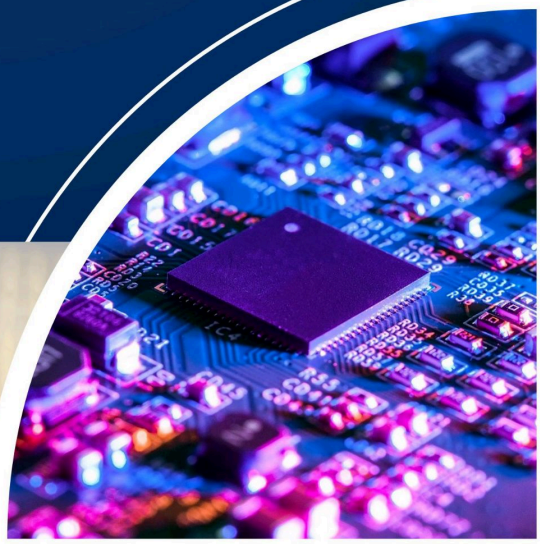
SANDIP INSTITUTE OF ENGINEERING AND MANAGEMENT

Department of Electronics And Telecommunication

E-SANCHAR

2021-22

Volume 2
Issue 1



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

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

SANDIP FOUNDATION

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

•About SIEM•

Sandip Institute of Engineering and Management (SIEM) is located in the scenic, eco-friendly and conductive-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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SIEM
B++ NAAC
SANDIP FOUNDATION

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

•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.

Editor-in-chief
Mr. Mosam K. Sangole

Editor
Mr.Karan Uagle
Miss.Gauri Mishra

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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 intellectualsby 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,

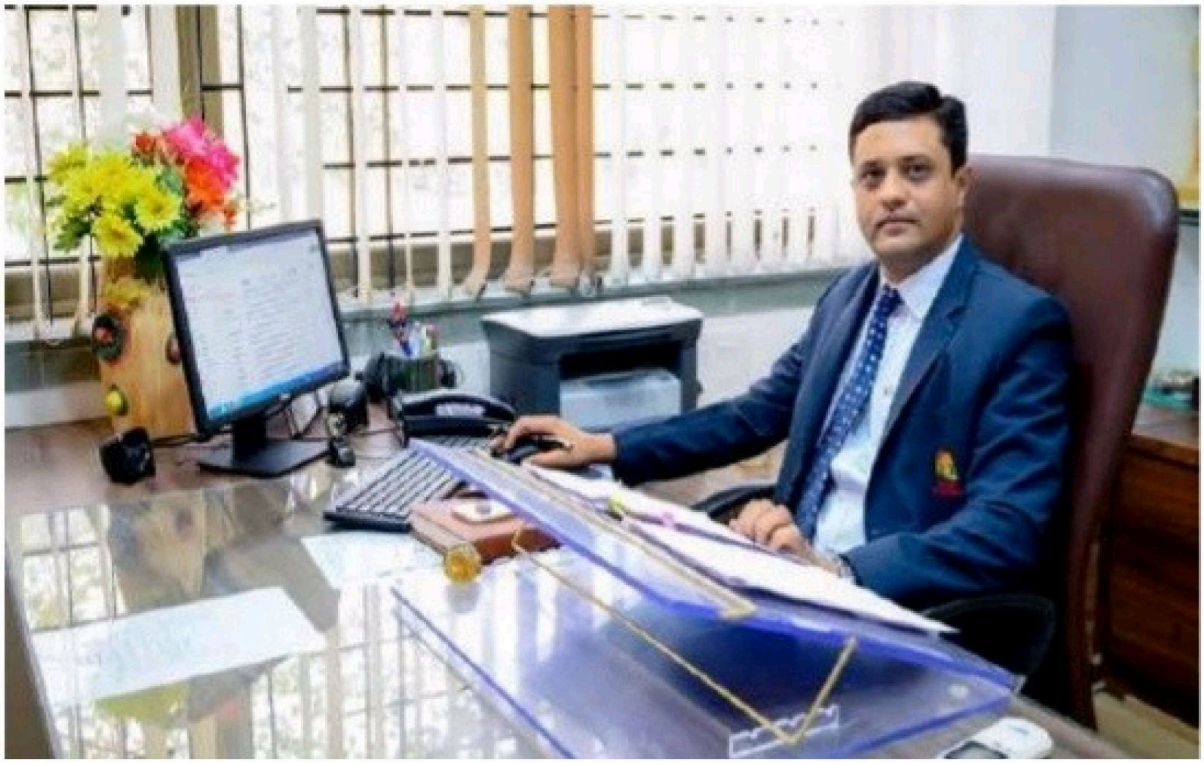
Maharashtra where the college building is spread across a 200 acre area. Keeping pace with the times, the campus is Wi-Fi enabled. To ensure the complete educational experience, laboratories with the latest tools and machinery are provided along with a comprehensive library with RFID technology, a computer 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,

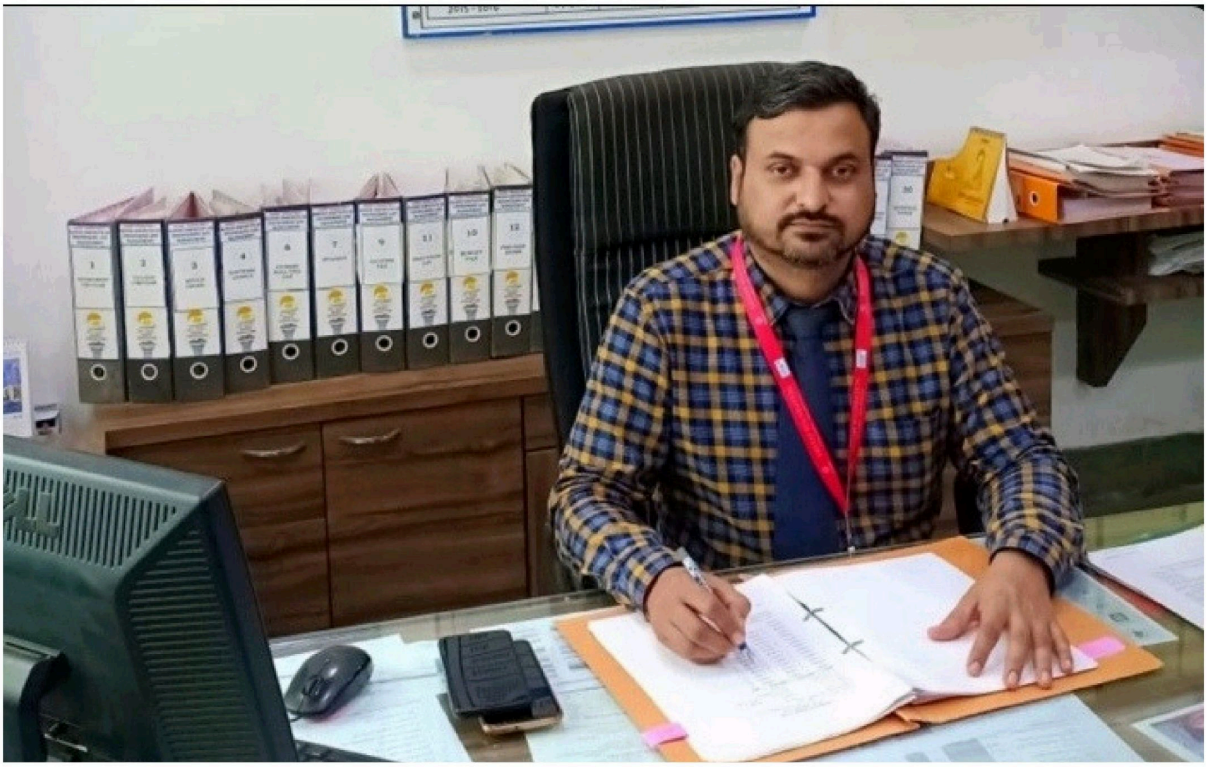
On behalf of the Management, Faculty and Staff of SIEM, it is an honor to welcome you to this prestigious institution. We at SIEM are strongly committed to provide quality technical education to our students. Now what does quality consist of? Is it mere state-of-the-art laboratories and a well-furnished 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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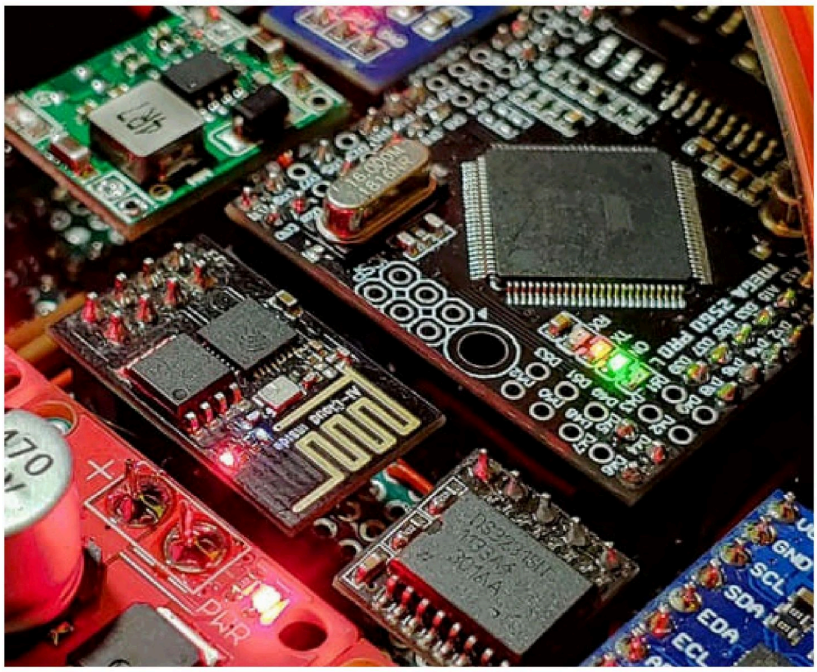
DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

Topic : **:Sustainable Electronics: The Shift to Eco-Friendly Devices**

~Karan Uagle (BE E & TC)



Sustainable electronics are becoming a crucial focus as the world seeks to reduce environmental impact. The shift to eco-friendly devices involves designing products with energy efficiency, recyclability, and reduced carbon footprints in mind. Many manufacturers are adopting renewable materials, such as recycled metals and biodegradable plastics, to minimize waste. Innovations like modular designs enable easy repairs and upgrades, extending product lifespans and reducing electronic waste. Energy-efficient components, powered by technologies like low-power processors and renewable energy sources, are becoming standard. Furthermore, companies are implementing take-back programs to recycle old devices responsibly. Consumers are also playing a pivotal role by demanding greener alternatives, pushing brands to adopt more transparent and sustainable practices. This collective effort is not only reducing environmental harm but also setting the stage for a more circular economy in the electronics industry.

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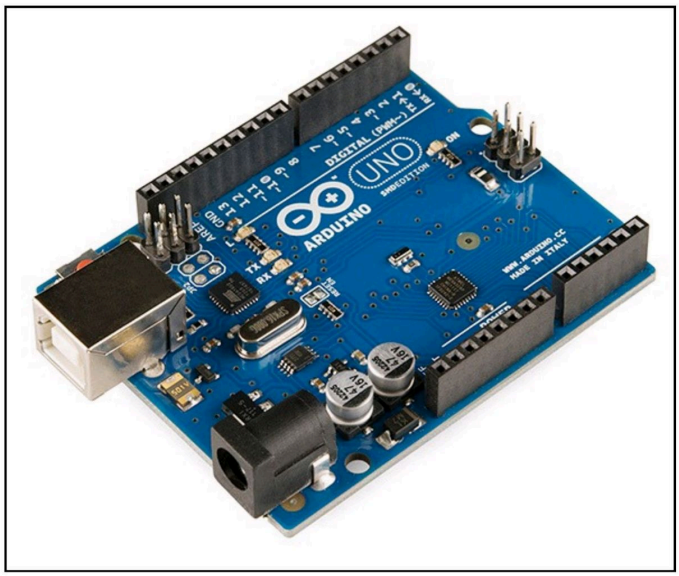
DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

Topic : Arduino

Mr. Ashok Biradar (BE E & TC)



Arduino is an open-source electronics platform that enables users to create interactive electronic projects. It consists of a microcontroller board, a software development environment, and a community-driven ecosystem. Arduino boards, such as the Arduino Uno, Nano, and Mega, are equipped with a microcontroller, memory, and input/output pins, allowing users to connect sensors, actuators, and other devices. The Arduino Integrated Development Environment (IDE) provides a user-friendly interface for writing, compiling, and uploading code to the board. Arduino's programming language is based on C/C++ and is easy to learn, making it accessible to beginners and experts alike. With Arduino, users can create a wide range of projects, from simple LED circuits to complex robots, home automation systems, and IoT devices. The Arduino community is vast and active, providing numerous resources, libraries, and tutorials to help users get started and share their projects.

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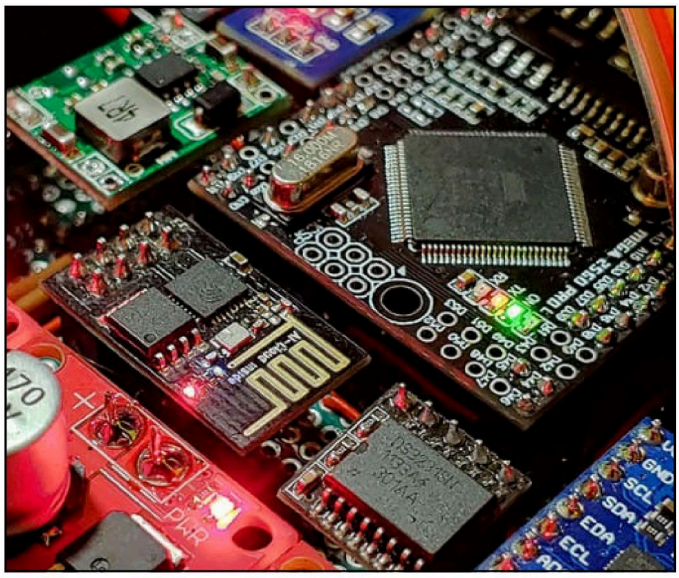
DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

Topic : **Emerging Trends in Electronic**

~Pratiksha Khairnar (BE E & TC)



The electronics industry is undergoing a significant transformation, driven by emerging trends that are revolutionizing the way devices are designed, manufactured, and used. One of the most significant trends is the increasing adoption of Artificial Intelligence (AI) in electronics, which is enabling devices to become smarter, more efficient, and more connected. Another trend is the growing demand for Internet of Things (IoT) devices, which is driving innovation in areas like sensor technology, 5G connectivity, and edge computing. Additionally, the development of new materials and manufacturing techniques, such as 3D printing and printed electronics, is enabling the creation of smaller, more complex, and more efficient devices. Furthermore, the trend towards miniaturization is driving innovation in areas like chip design, packaging, and interconnects, enabling the development of more powerful and efficient devices. The increasing focus on sustainability is also driving the adoption of more environmentally friendly manufacturing practices, such as reducing waste, energy consumption, and environmental impact. Other emerging trends in electronics include the development of immersive technologies like augmented and virtual reality, the growing adoption of autonomous vehicles and drones, and the increasing use of biometrics and other advanced security technologies

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Department of

ELECTRONICS AND TELECOMMUNICATION

NEWSLETTER

Year 2021-2022

Value Addition Program on "Embedded System"

Event Date: 12th July to 16th July 2021
Event Conduction Duration: 10.00 am – 5.00 pm
Event Venue: - SIEM E & TC
Participants: - B.E E & TC SIEM
Event Coordinator: Prof Pramod Aswale, Assistant Professor, E &TC SIEM
Number of Participants: - 27
Objectives & Outcome:
The main objective of this Value addition Program is to teach students about Embedded Processor such as Arduino, Rasberry Pi, MSP 430.
After attending this value addition Program students have learnt various Basics about Embedded Processor. They have also learnt practical hands on Arduino, Rasberry Pi,
MSP 430.

Value Addition Program on "Product Development"

Event Title: Value addition program on "Product Development".
Event Date: 7
th Feb 2022 to 11th Feb 2022
Event Conduction Duration: 10.00 am – 5.00 pm
Event Venue: - SIEM E & TC
Participants: - B.E E & TC SIEM
Event Coordinator: Prof Bharat Deore, Assistant Professor , E &TC SIEM
Number of Participants: - 27
Objectives & Outcome:
The main objective of this Value addition Program is to make students know about
various products . Step by step procedure to develop any product etc.
After attending this value addition Program students have learnt to develop the products.

Value Addition Program on “Aptitude, Personality Development & Interview Skills”

Event Title: Value addition program on “Aptitude, Personality Development & Interview Skills”.
Event Date: 04th October 2021 to 08th October 2021
Event Conduction Duration: 10.00 am – 5.00 pm
Event Venue: - SIEM E & TC
Participants: - T.E E & TC SIEM
Number of Participants: - 58
Objectives & Outcome:
By the end of the soft skills training program, the students were able to:
1) Develop effective communication skills (spoken and written).
2) Develop effective presentation skills.
3) Conduct effective business correspondence and prepare business reports which produce results.
4) Become self-confident individuals by mastering inter-personal skills, team management skills, and leadership skills

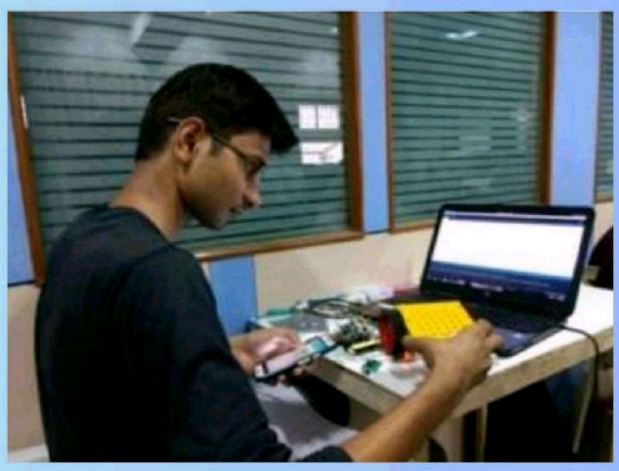
Value Addition Program on “C & C++ Programming”

Event Title: Value addition program on “C & C++ Programming”.
Event Date: 20th Sept 2021 to 24th Sept 2021
Event Conduction Duration: 10.00 am – 5.00 pm
Event Venue: - SIEM E & TC
Participants: - S.E E & TC SIEM
Event Coordinator: Prof Pramod Aswale, Assistant Professor , E &TC SIEM
Number of Participants: - 57
Objectives & Outcome:
The main objective of this Value addition Program is to teach students about C & C++ Programming.
After attending this value addition Program students have learnt Basics of C & C++.
They have also learnt programming on C & C++.

Value Addition Program on “Image Processing”

Event Title: Value addition program on “Image Processing”.
Event Date: 21st Feb 2022 to 25th Feb 2022
Event Conduction Duration: 10.00 am – 5.00 pm
Event Venue: - SIEM E & TC
Participants: - T.E E & TC SIEM
Event Coordinator: Prof Mosam Sangole, Assistant Professor , E &TC SIEM
Number of Participants: - 47
Objectives & Outcome:
The main objective of this Value addition Program is to teach students about Image Processing and its Tool Box.
After attending this value addition Program students have learnt various tool boxes on Image Processing

3 Days faculty workshop on “Embedded Systems & IoT Applications”



Event Date: 10-12 March 2022
Event Conduction Duration: 6 hrs daily
Event Venue: - SIEM, Nashik.
Participants – All faculty from E&TC & Electrical Department
Name of Faculty coordinator: Prof. Yogesh Risodkar E&TC department
Speaker: Dr. Y. R. Rao (Dean R&D Dept., SPIT Mumbai)
Objectives: The objective was to spread knowledge about embedded systems and Internet of Things, which are the current industrial demands and a need for today’s students. The workshop was conducted in Department of Electronics and Telecommunications Engineering during 10 March 2022 to 12 March 2022.
Outcome: Workshop included the use of Arduino for interfacing with various sensors, to create webpage and link the sensors with them i.e. IoT. Workshop also included use of Raspberry Pi Model B for various uses. At the end of workshop Competition was organized to encourage faculty bring out new applications the knowledge they had gained in the workshop.

3 Days faculty workshop on "Cloud Computing & hands on applications"

Event Date: 16-18 Dec 2021
Event Conduction Duration: 7 hrs daily
Event Venue: - SIEM, Nashik.
Participants – All faculty from E&TC & Computer Department
Name of Faculty coordinator: Prof. Yogesh Risodkar 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 16-18 Dec 2021 at E&TC Department , SIEM, Sandip Foundation, Nashik. The workshop was delivered by Mr. Shravan Jadhav on cloud computing & its applications. The main focus of the workshop was on 'Cloud Computing and its Applications'
The expert speaker started with the current trends in Cloud Computing by giving introduction about Security. He covered the challenges the IT industry would face, if cloud computing wouldn't have existed and the issues with Cloud Security.

IEEE Guidance Session

EventDate:2nd Sept. 2022
EventConductionDuration:2hrs(11.00 AM- 1.00 PM)
EventVenue:-Civil Seminar Hall, SIEM, Sandip Foundation, Nashik
Participants–SE, TE studentsofE&TC, Comp, Civil, ElectricalDepartment, SIEM
Nameof Resource Person:Dr. Kavita Sonawane, (Vice- Chair SAC- IEEE BS Mumbai)
Objectives: Objective of the event was to get awareness about IEEE membership & its benefits.
Outcome:

Students get detail knowledge about IEEE Bombay section & Student Activity Committee.
Students came to know about what is IEEE actually & its Vision & Mission.
Students understands how IEEE is helpful to showcase their project ideas globally. Also, how they can get proper guidance by searching technical expert to guide them on right way.
IEEE covers huge area related to E&TC, Electrical, Civil & Computer for research work.

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DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION

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