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THE NEWS BULLETINE

Sakeshwar Gramin Vikas Seva Sanstha's

Adsul's Technical Campus , Ahmednagar

Department of Electronics &Telecommunication Engineering

Shri Aniruddha M. Adsul

Chairman

Dr. P.M .Patil

Principal

Dr.D.U.Adokar

Head of Department

Vision of Institute

To be a most preferred Rural Technical Campus in the region by creating competent multifaceted Engineers and Professionals ready to serve the industry and society at large.

Mission of Institute

To establish state-of-the-art facilities and create a conducive environment for transforming the rural minds into competent, skilled, professional, researchers, technically sound, innovative aptitude, and ethics through value-based education to develop the nation for global competitiveness.

Objectives of Institute

- To provide quality education with futuristic trends in engineering and technology
- To ensure continual improvement in quality management system
- To impart innovative teaching and learning

Vision of Department

To be a premier department in the field of Electronics and Telecommunication engineering with emphasis on hands-on activities.

Mission of Department

M1. Producing professional engineers to handle the state-of-the-art technologies in the field.

M2. Imparting research and innovative aptitude with high moral for overall development of students.

M3. Establish leadership skills, team spirit and high ethical values among the students.

M4. Encourage students to become entrepreneur.

Silent feature of Department

- **Supportive learning for placement:** Placement learning is immersive and iterative. Support in the form of formative tasks and activities are crucial for student success, whilst being mindful of the need to ensure parity of student workload between modules of the same credit weighting. Placement assistance can offer students professional guidance and support to help them build successful careers. Students who might feel overburdened by the job search process might greatly benefit from placement assistance services.
- **Value added courses:** Value Added courses are career and market oriented, skill-enhancing courses that empower the students beyond their domain of study. The certificate programmers enable them to enrich their capability and enhance their employability. Value added courses are conducted for one week during the semester breaks by department faculty and external trainers.
- **Career oriented Add-On Courses:** Job-oriented courses are training and academic courses that prepare professionals for a particular career field or role. A traditional academic course may provide an overview of a certain topic or area, but a job-oriented course focuses on the knowledge and skills required for a particular job.
- **Teacher as Mentor:** The role of the Mentor Teacher is a complex blend of modeling, coaching, instructing, collaborating, and encouraging as candidates build competency in program standards. Mentor Teachers are expected to support candidates in developing the skills and knowledge to meet these standards.
- **Report writing and Paper Presentation:** A report is a specific form of writing, written concisely and clearly and typically organized around identifying and examining issues, events, or findings from a research investigation. Reports often involve investigating and analyzing a problem and coming up with a solution.
- **Professional Development for Industrial Engagement:** There are three types of employee engagement: **cognitive**, **emotional**, and **physical**. When employees are cognitively engaged, they're committed to their job, when they're physically engaged, they're invested in their work, and when they're emotionally engaged, they have an emotional connection to their work.
- **Personality Development and Soft Skill Training:** Personality Development teaches us how to communicate and display ourselves as having caring skills. It also emphasizes personal management, grooming, health, and nutrition, as well as soft skills. This course educates students on the numerous aspects of self-development. Soft skills comprise pleasant and appealing personality traits as self-confidence, positive attitude, emotional intelligence, social grace, flexibility, friendliness and effective communication skills. INTENDED AUDIENCE: Students, Teachers, Professionals, Trainers, Leaders, and Employers.

Program Educational Objectives (PEOs)

PEO1: To prepare globally competent graduates having strong fundamentals and domain knowledge to provide effective solutions for engineering problems.

PEO2: To prepare the graduates to work as committed professionals with strong professional ethics and values, sense of responsibilities, understanding of legal, safety, health, societal, cultural and environmental issues.

PEO3: To prepare committed and motivated graduates with research attitude, lifelong learning, investigative approach, and multidisciplinary thinking.

PEO4: To prepare the graduates with strong managerial and communication skills to work effectively as individual as well as in teams.

Program Outcomes (POs)

PO-1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering Programs.

PO-2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO-3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO-4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO-5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO-6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO-7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO-9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO-10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO-11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one’s own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO-12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO1: Professional Skills: Graduate will be able to conduct experiments, analyse, adopt & apply the knowledge of Electronics & Communication System & manage different projects in the multidisciplinary areas.

PSO2: Problem-Solving Skills: Utilize modern computational tools, software tools & hardware required with the proper understanding of all basic technical skills, soft skills in industry

PSO3: Successful Career: The ability to employ modern computer languages, environments, and platforms in creating innovative career paths. creating innovative career paths

Events:

Group Discussion

Group discussion was organized for BE (E&TC) students by department on 18th January 2023. Topic for discussion was "Artificial Intelligence". Main motive to hold this group discussion is students should familiarize with the topic and Improve their speaking and reasoning skills and be articulate and logical. Speak with confidence to Project their voice and express their ideas clearly.

Parents Meet

Parents meet was organized on 25th February 2023.Under ETESA activity department has organized Mini project competition on 5th Sept SE to TE students has voluntarily participated in competition.

Women's Day

International Women's day was celebrated in the department on 8th March 2023. But do you know why we have a special day dedicated to honor and celebrating women? It was in the early 20th century.

Women's Day celebrations highlight the achievements of women, offering inspiration and empowerment for female students. It encourages them to pursue their goals and break societal stereotypes. For male students, it can help to recognize the importance of gender equality and respect.

Women's Day events can include seminars, workshops, or discussions on the history of women's rights, current challenges, and solutions. This gives students the opportunity to learn more about gender issues, feminism, and social justice.

Celebrating Women's Day can inspire action toward positive social change. It encourages students to participate in advocacy, support women's rights, and challenge inequality both inside and outside the college.

Expert Lecture

Expert lecture was organized for students on 18th April 2023. The expert faculty Dr. D U Adokar HoD –E&TC has delivered the lecture on Digital Circuits and Logic design.

Expert lectures often involve real-life examples and case studies that show how logic gates and digital circuits are implemented in industry. Students will gain insights into how theoretical knowledge is applied in practical scenarios, helping them connect classroom learning with real-world applications, such as designing processors, building memory devices, or developing communication systems.

Digital circuit design and logic gate analysis often involve complex problem-solving, including tasks like simplifying Boolean expressions, designing flip-flops, and implementing circuits. Expert lectures can help students hone their critical thinking and problem-solving skills by explaining different approaches to tackling challenges in digital circuit design.

Learning from an industry expert or academic professional who has worked on groundbreaking projects can inspire students to innovate. They may be encouraged to explore new ideas, experiment with their own designs, or even pursue research in this field, contributing to the future of technology.

Placement & Internship Talk

Expert from Azure Infotech Pvt. Ltd. Has delivered placement and internship talk to TE and BE students on 10th Oct 2023.Internships allow students to connect with professionals in their field. This creates valuable networking opportunities, which can later help in securing full-time employment, mentorship, and professional guidance. Placements also serve as a networking platform, where students meet recruiters, managers, and industry experts, expanding their professional network.

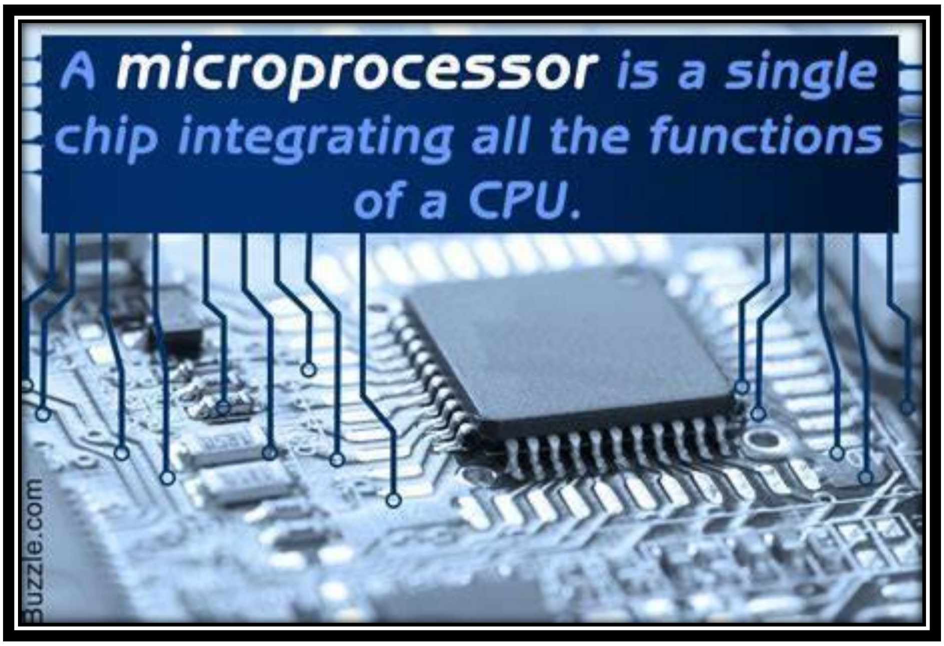
Arranging placement and internship opportunities in college is critical for students' academic and career growth. These opportunities help students bridge the gap between theoretical knowledge and practical application, enhance their employability, and provide real-world experience that is essential for professional success. For colleges, having a strong placement record boosts their reputation and makes them more attractive to future students.

Fairwell Program

The Department of E&TC organized the farewell program 4th May 2023. The program began at 11 am and was graced by the presence Dr.D.U.Adokar head of the department,& Guest of the Honour, the Principal of Adsul's Technical campus. The teachers of the department were present to bid farewell to the 8th semester students who were about to complete their college education. The program began with a welcome speech by Devkar Vikee & Shardhha Chavan .This was followed by a series of speeches by the teachers, who shared their experiences and memories of their time with the students. The program then proceeded by cultural program, which included dance performances and songs. The Guest of Honour, the Principal Dr. P.M.Patil, then took the stage to address the audience. He praised the students for their hard work and dedication and urged them to continue their pursuit of knowledge and excellence in their chosen fields. The program concluded with the distribution of gifts to the 8th semester students, who were then invited to share their thoughts and memories of their time at Adsul's Technical campus. Many of the students expressed their gratitude to the teachers and the college for providing them with a nurturing and supportive environment to grow and learn.

Articles

Microprocessor



A **microprocessor** is a computer processor for which the data processing logic and control is included on a single integrated circuit (IC), or a small number of ICs. The microprocessor contains the arithmetic, logic, and control circuitry required to perform the functions of a computer's central processing unit (CPU). The IC is capable of interpreting and executing program instructions and performing arithmetic operations.[1] The microprocessor is a multipurpose, clock-driven, register-based, digital integrated circuit that accepts binary data as input, processes it according to instructions stored in its memory, and provides results (also in binary form) as output. Microprocessors contain both combinational logic and sequential digital logic, and operate on numbers and symbols represented in the binary number system.

The integration of a whole CPU onto a single or a few integrated circuits using Very-Large-Scale Integration (VLSI) greatly reduced the cost of processing power. Integrated circuit processors are produced in large numbers by highly automated metal–oxide–semiconductor (MOS) fabrication processes, resulting in a relatively low unit price. Single-chip processors increase reliability because there are fewer electrical connections that can fail. As microprocessor designs improve, the cost of manufacturing a chip (with smaller components built on a semiconductor chip the same size) generally stays the same according to Rock's law.

KachanShinde

SE E&TC

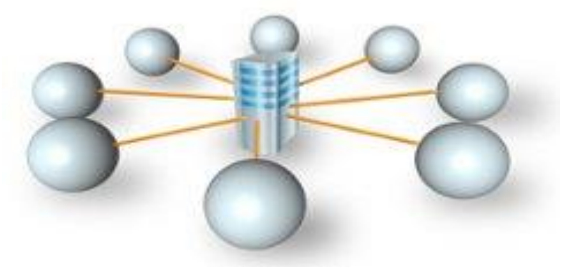
Mobile Communication

Mobile Communication is the use of technology that allows us to communicate with others in different locations without the use of any physical connection (wires or cables). Mobile communication makes our life easier, and it saves time and effort. A mobile phone (also called mobile cellular network, cell phone or hand phone) is an example of mobile communication (wireless communication). It is an electric device used for full duplex two way radio telecommunication over a cellular network of base stations known as cell site.

High capacity load balancing: Each wired or wireless infrastructure must incorporate high capacity load balancing. High capacity load balancing means, when one access point is overloaded, the system will actively shift users from one access point to another depending on the capacity which is available.

Scalability: The growth in popularity of new wireless devices continuously increasing day by day. The wireless networks have the ability to start small if necessary, but expand in terms of coverage and capacity as needed - without having to overhaul or build an entirely new network.

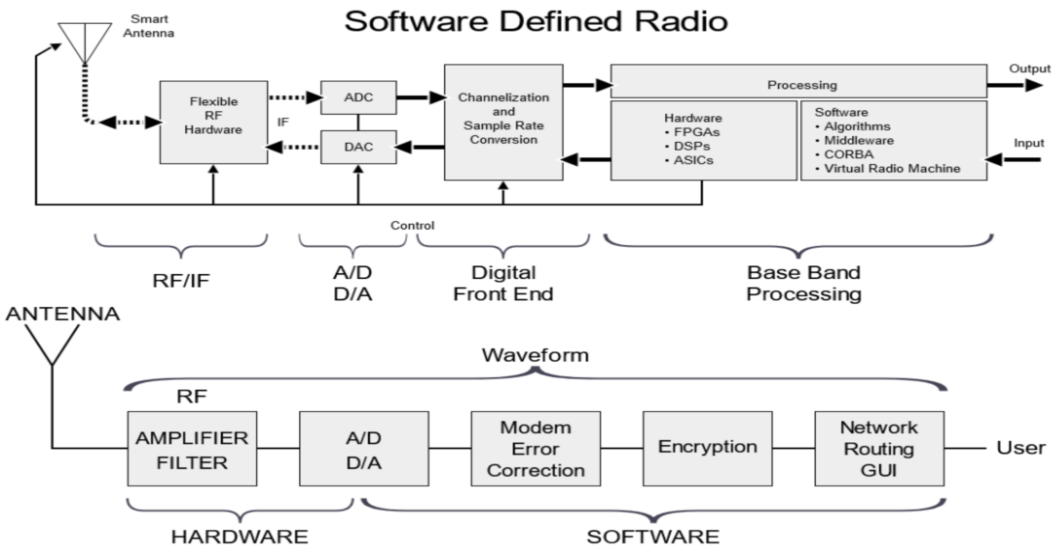
Network management system: Now a day, wireless networks are much more complex and may consist of hundreds or even thousands of access points, firewalls, switches, managed power and various other components. The wireless networks have a smarter way of managing the entire network from a centralized point.



Kishori Ghule
TE E&tc

Software Defined Radio

Software-Defined Radio (SDR) is a technology that allows for the implementation of radio communication systems using software-based techniques. In traditional radio systems, hardware components are designed to perform specific functions, such as modulation, demodulation, and filtering. In contrast, SDR replaces many of these hardware components with software, allowing for greater flexibility and configurability. Software platform of an SDR system handles various functions, including filtering, modulation, demodulation, channel coding, and decoding. These functions are implemented using software algorithms running on a general-purpose processor or a specialized digital signal processor (DSP). The flexibility of SDR allows for the implementation of different communication protocols and standards through software updates, without requiring hardware modifications.



One of the key advantages of SDR is its ability to adapt to changing communication requirements. It enables the support of multiple frequency bands, modulation schemes, and protocols, making it suitable for a wide range of applications. SDR systems can be reconfigured and upgraded through software, allowing for future enhancements and compatibility with new standards.

SDR technology finds applications in various domains, including wireless communication systems, military and defense, public safety, satellite communication, and amateur radio. It offers benefits such as improved spectrum efficiency, reduced hardware complexity, simplified system integration, and enhanced flexibility in radio communication.

Ravindra Sonar
BE E&tc

Picture Gallery