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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

Poster Competition:

A poster making competition was organized for all Computer engineering students at Adsul's Technical Campus Drawing Hall on 14th Feb 2022. The aim behind conducting this competition was to check the creative and artistic skills of the students. The chief guests of the event were Dr. P.M. Patil (Director, Principal of Adsul's Technical Campus).

Objectives

1. Spark lively discussions and collaborative learning
2. Promote independent exploration and research
3. Develop a deeper understanding of digital technologyand computer science concept
4. Connect classroom learning to real-world applications
5. Fall in love with the power of technology and itspotential to shape the future
6. Gain confidence and critical thinking skills

The suggested themes of the competition were:

1. Artificial Intelligence & Robotics
2. Coding fundamentals
3. Cyber security and digital ethics
4. Algorithms and data structures

The total time allotted for the activity was 2 hour and 30 minutes. The judges of the competition were Dr. Adokar D. U. (Head of Electronics & Telecommunication Department). The decision regarding the winners was made on the basis of following criteria:

- Relevance to the theme
- Accuracy and clarity of the message
- Neatness
- Overall presentation

The winners were awarded with the certificates from Chief Guest Dr. P. M. Patil, H.O.D E&TC Department Dr. Adokar D. U. was an interesting session for the students as they participated in the competition with great enthusiasm.

PAIN
is only TemporaryBut
Victory is FOREVER

Industrial Tour

An industrial visit to *Luance Electronics*, located in Aurangabad, was organized by the department on 20th March 2022 for the students of Second Year (SE) and Third Year (TE). The purpose of this visit was to give the students practical exposure to industrial operations, electronics manufacturing, and real-world applications of theoretical concepts learned in their courses.

The visit provided an opportunity for the students to explore modern manufacturing processes, automation systems, quality control techniques, and the overall functioning of an electronics manufacturing facility.

Guest Lecture

A guest lecture was organized for students on 28th Jan 2022, aimed at enhancing their understanding of personality development. The session was conducted by Mr. Battawala Abbas, the HR Manager at Amol Enterprises, Ahmednagar, who is an expert in human resources and personal growth.

The topic of the lecture was *Personality Development*, which is a crucial aspect of both personal and professional life. Mr. Abbas began by emphasizing the importance of a positive personality in the workplace and in daily interactions. He explained that personality development is not just about appearance or charisma but also involves building self-confidence, communication skills, emotional intelligence, and adaptability. Throughout the lecture, Mr. Abbas engaged with the students by asking thought-provoking questions and encouraging them to share their experiences. He conducted interactive activities to help students understand key concepts and reflect on their own strengths and areas for improvement.

The session concluded with a Q&A session, where students had the opportunity to clarify doubts and gain further insights into personality development. Mr. Abbas's practical advice and real-life examples left a lasting impression on the students, motivating them to focus on their personal growth and development.

Articals

Bluetooth

Bluetooth is a low-power wireless technology used for exchange of data within a short range. Bluetooth build a Personal Area Network (PAN) for exchange of data between mobile devices. This technology was invented by Ericsson in 1994. Bluetooth is based on radio technology known as frequency-hopping spread spectrum. In this technology, the data is transmitted in the form of packets. It is a very good topic for an M.Tech thesis. Thesis help in this topic can be taken from an expert in this field. Along with this it is also a very good choice for major project in ECE. There are two processes of Bluetooth technology:

- **Basic Rate/Enhanced Data Rate (BR/ED)**–It uses point-to-point topology to enable continuous wireless communication between two devices. The common example for this is wireless speakers.
- **Low Energy (LE)** – It uses multiple network topologies for communication which include point-to-point, mesh and broadcast. Point-to-point is for one to one device communication. Broadcast is for one to many device communications. Mesh is for many to many device communications.

  Many consumers are using this technology worldwide for streaming audio, data exchange and broadcasting information. Bluetooth technology uses a variety of protocols. The Bluetooth protocol stack is divided into two parts: Controller Stack and the host stack. The controller stack is implemented in low-cost silicon devices that contain Bluetooth radio and a microprocessor. The host stack is implemented on the top of the operating system or as an installable package on the operating system.

Throat Prajakata

TE E&tc

VLSI (Very Large Scale Integration)

VLSI is a process to create Integrated Circuits(IC) by combining together thousands of transistors on a single chip. Microprocessor is an example of VLSI. Before the development of VLSI, the Integrated Circuits had limited functionality and performance. VLSI gives the ability to add CPU, RAM, ROM and other such functions on a single chip. Due to this, the electronics industry has recorded a commendable growth**.**

Design of VLSI

VLSI mainly consists of front-end design and back-end design. Front-end design is the digital design while back-end design is the CMOS(Complementary metal-oxide semiconductor) library design. The steps followed while designing a VLSI are:

Problem Specification – In this step, various parameters are studied like size, cost, performance and functionality.

Architecture – In this step, specifications like floating point unit, ALU, RISC/CISC and cache size are studied.

Functional Design – The functional unit along with the input and output are defined in this step using a block diagram.

Gore Swapnil
BE E&TC