PRELUDE

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FORM THE DESK OF THE EDITORIAL BOARD!

We are honored to be the editors of the Electronics and Commun ication Engineering (ECE) Departmental Newsletter at the JIS College of Engineering, Kalyani, Nadia, west Bengal. We are excited to announce the 3rd issue,vol 25 of 2023.This issue highlights the achievements, activities and more in which all members have actively participated. Each member played a vital role in publishing this newsletter. Thank you to everyone who helped make the newsletter presentation possible. We thank the Management of the JIS College of Engineering, particularly Prof. (Dr.) P. Sarkar, Principal, for their ongoing support and encouragement.

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DEPARTMENTAL VISION AND MISSION

VISION

To excel in electronics & communication engineering in order to meet the challenges of modern industrial society through quality technical education, research, innovation and teamwork.

MISSION

DM1

To educate students from the foundation to the state-of-art knowledge in the development of electronic devices and communication systems with design optimizations.

DM2

To nourish the mind of growing engineers through qualitative evaluations, internal assessments, corporate trainings, efficient technical communication skills and creative project assignments.

DM3

To motivate the engineers of the future through competition in communication skill, seminar presentation, project, and group discussion.

DM4

To encourage the intended engineers in kind, humble and moral behavior with ignition in mind to contribute for the welfare of society.

Program Educational Objectives (PEOs)

PEO1

Graduates will have a strong foundation in engineering, science, and technology that will enable them to succeed as engineers and innovators in their respective fields.

PEO2

Graduates will comprehend, analyze, develop, & design unique products to address real-world challenges.

PEO3

Graduates will pursue their education beyond the undergraduate level, conduct diverse research, and advance their professional competencies.

PEO4

Graduates will recognize, formulate, and use professional skills and ethics to address industrial, societal, and environmental concerns.

PEO5

Graduates will communicate efficiently and maintain ethical guidelines as a member or leader in a group and as an entrepreneur.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

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

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.

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 forthe public health and safety, and the cultural, societal, and environmental considerations.

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 theinformation to provide valid conclusions.

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.

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.

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.

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

9. Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multi-disciplinary settings.

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.

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 multi-disciplinary environments.

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)

1. PSO1: Technical Knowledge and Analysis: Ability to Identify, Formulate & Solve problems of Analog & Digital Circuits, Communication, Networking, Signal & Systems, Computer Programming, Embedded Systems and Semiconductor Technology by applying the knowledge of Basic Sciences, Engineering Mathematics and Engineering fundamentals.

2. PSO2: Design & Implementation: Ability to design the systems of Electronics & Communication Engineering using advanced hardware and software tools with analytical skills to achieve societal needs keeping environmental awareness intact.

3. PSO3: Creation of Professional Engineers: Ability to analyze and transfer knowledge of various areas, like Communication Systems, Signal Processing, SoC (System on a Chip), VLSI and Nanotechnology to achieve a successful career as Engineering Professional, Researcher, Academician and Entrepreneur who can who can direct to implement the real-world applications along with ethical responsibility.

Article Publications as Faculty Achievements

1 Paromita Das, Somsubhra Gupta, Biswarup Neogi, "Music therapy for hearing impaired: Measuring impact of vibration on deaf and dumb using digital signal processing and machine intelligence", AIP Conference Proceedings, 2023, https://doi.org/10.1063/5.0171157

2 Anirban Patra, Arijit Saha, Kallol Bhattacharya, "Compression of high-resolution space video using phase grating", Journal Of The Indian Society Of Remote Sensing, 51, 2057-2066, 2023, https://doi.org/10.1007/s12524-023-01748-3

3 Avik Ghosh Dastidar, Moumita Pal, RC Tiwari, Reshmi Maity, NP Maity, "An efficient electrostatic actuation model for MEMS-based ultrasonic transducers with fringing effect", Microsystem Technologies, 29, 583-597, April, 2023, https://doi.org/10.1007/s00542-023-05412-1

INDUSTRIAL VISIT OF STUDENTS OF ECE DEPARTMENT

ORGANIZED BY DEPARTMENT OF ECE

Photographs during visit

The Department of Electronics and Communication Engineering has conducted an industrial visit for ECE students on 25th April, 2023 to L & T. The students have visited and a strong interaction between Industry personnel is done. Not only interaction, but also students are able to feel the industry work environment. This found very helpful to both industry and institute.

Students were helped to get the information related to work culture and practical laboratory in the industry. Few Faculty participants from the ECE department also visited there and acquired concepts to get ready students according to industry requirements.

WORKSHOPS *AT THE DEPARTMENT OF ECE*

The Electronics and Communication Engineering Department of JIS College of Engineering successfully conducted a Five-Day Workshop on the Enhancement of R&D Skills and Patent Filing Techniques from 27-03-2023 to 31-03-2023. The program was coordinated by Mr. Anirban Patra (Faculty, Dept. of ECE) and Dr. Ashim Kumar Biswas (Faculty, Dept. of ECE), who served as joint conveners.

Esteemed speakers including Dr. Sabyasachi Sen (Dean R&D), Dr. Biswarup Neogi (HoD, Dept. of ECE), Dr. Indranath Sarkar (Prof, Dept. of ECE), Dr. Moumita Pal (Asso. Prof, Dept. of ECE), and Dr. Madhura Chakraborty (Asst. Prof, Dept. of ECE) shared their valuable insights on the significance of research in student life, research paper writing procedures, and patent filing techniques. The workshop attracted more than 100 students and faculty members from different departments who participated actively.

Photographs during workshop

THANKS

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