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 1st issue,vol 23 of 2022.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.

Achievements Like Article publications

1 Anirban Patra, Mainuck Das, Anirban Ghosal, Aniruddha Ghosh, Indranil Kushary, Samiran Roy, Debasish Chakraborty, "Remote sensing image encryption and error detection using hamming code", Journal of Physics: Conference Series, 2286(1), July, 2022, DOI 10.1088/1742-6596/2286/1/012018

2 Sk Suman, Dip Kumar Kundu, Utsab Ray, Soumik Basu, Biswarup Neogi, Indranath Sarkar, "Contrived Motorization of Vehicle through Advanced Android Administration", Journal of Physics: Conference Series, 2286(1), Pp. 012003, July, 2022, DOI 10.1088/1742-6596/2286/1/012003

INDUSTRIAL VISIT OF STUDENTS OF ECE DEPARTMENT

ORGANIZED BY DEPARTMENT OF ECE

Manufactured by Calcutta Fastener. Students were given knowledge on the process manufacturing of Nuts and bolts through different types of machines. After this, students went to "Mactech" where they came to know about different machines needed for Tea processing. Third factory they visited today is "Penguin paper board". Penguin paper board is a manufacturer and supplier of corrugated boxes and offset printed duplex cartons. Here students were introduced with several types of machineries.

After this students were guided to "Dia chemicals". DIYA CHEMICALS is dedicated towards providing innovative Solutions in the chemicals market, primarily in Leather Chemicals. Here students came to know about a wide range of Products which include Basifying Agents Chemicals, Cationic Fat liquor Chemicals, Liming Auxiliaries Chemicals, Wet End Auxiliaries and Fat Liquors Chemicals. Finally students visited "Eastern Rubber". Eastern Rubber manufactures Tyres and Tubes of Bicycles. Here students experienced about the different materials used to manufacture bicycles' tyre. They came to know about synthetic rubber, carbon black, natural rubber, etc. The students gathered a lot of practical knowledge.

INDUSTRIAL VISIT TO WEBEL IT PARK, KALYANI FOR THE 1ST YEAR STUDENTS

Department of Electronics and Communication Engineering is conducted an industrial visit for new comer 1st year ECE students. The students have visited an IT Park named Webel IT Park, Kalyani, West Bengal. A healthy interaction between Industry personnel and students is done. Not only interaction, but also students are able to feel the industry work environment. Some of faculty members are there with the students. This interaction program/ industry visit is essential for the students to know industry environment and also to synchronize the course and curricular according to the current requirements in industry. This can be helpful to both industry and institute. Students can be benefited to crack a good job. The visit is held on 14th October, 2022. A good interaction between the students and industry personnel is established. In the visit to the Industry, student could get the information related to work culture and practical laboratory in the industry. Faculty participants from the ECE department got ideas how to prepare students according to industry requirements and student participants acquired knowledge related to practical works in the industry. These can help them in different aspects like learning course related topics and something beyond the course which can be utilized to make future bright.

Few Photograph during the visit

TRAINING PROGRAM FOR ECE STUDENTS

The Department of ECE of JIS College of Engineering has successfully organized Two sessions of OFF-LINE TRAINING PROGRAM for the students of the department. Training on "Microchip AVR ATMEGA-16 Microcontroller Programming" and "Blue Prism Robot Process Automation" are held by the departmental expert faculty members Dr. Arindam Baneerjee and Prof. (Mrs.) Ranjana Ray respectively.

The first event is held from 18th July'2022 to 1st August' 2022 and the second event is held from 17th July' 2022 to 30th July'2022. 30th August 2022.

In these programs, healthy talks on the said topics are delivered. Students have gathered a lot of knowledge on the topics. An interactive discussion with students and teachers regarding the topics has been done. It was an insightful session for everyone.

CELEBRATING TEACHERS DAY BY ECE DEPARTMENT

The teachers and students gathered in the auditorium in order to celebrate the Teachers' Day on 5the September’ 2022. The auditorium was beautifully decorated with flowers, banners, and festoons. A warm welcome at the entrance with flowers, gifts, and cards was a pleasant surprise for all the teachers.

THANKS

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