PRELUDE

IN-HOUSE NEWS LETTER
FROM THE DEPARTMENT OF
ELECRONICS & COMMUNICATION ENGINEERING

JIS COLLEGE OF ENGINEERING

(An Autonomous Institute)

BLOCK A, PHASE-III, PS-KALYANI, DIST-NADIA, PIN-741235

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CONTENTS

VOL .NO.26 July-Oct,2023

ABOUT THE COLLEGE

JIS College of Engineering is an autonomous institute affiliated to MAKAUT established in 2000 and is located at Kalyani, West Bengal. JIS College of Engineering is recognized by the UGC. JISCE is the 1st Private Autonomous Engineering Institution in West Bengal conferred 2nd cycle of Autonomous Status by UGC. Other feathers of glory of JIS College of Engineering are as follows:

- NIRF Ranked Pioneer Private Engineering Institution (Affiliated by MAKAUT) in West Bengal Accredited by NAAC with Grade-'A'.
- NBA Accredited Three UG Engineering Programs- Electrical Engineering, Electronics and Communication Engineering and Mechanical Engineering. This is for the First time in West Bengal among Private Engineering Colleges- Tier-1 Accreditation Process
- First Flipped Learning Institution in INDIA endorsed by AICTE, MHRD, The World Bank Group, UNESCO, NPIU and Microsoft
- Empanelled as Host Institution under MSME, Govt. of INDIA

VISION OF THE COLLEGE

Our Vision is to generate a stimulating academic environment for higher learning and to bring about a harmonious development of personality among the students by fostering leadership values and importing a high degree of professional skills.

MISSION OF THE COLLEGE

Our mission is to provide excellent educational infrastructure and academic ambiance conducive to higher learning by setting up centers of excellence and instilling a sense of ethics and value system among the students. We are committed to provide opportunities to the students to develop their full potential and professional growth and to spread the light of higher education.

ABOUT THE DEPARTMENT

The department of Electronics and Communication Engineering of JIS College of Engineering has started its journey in the year 2000 with the approval of All India Council of Technical Education as a graduate teaching department under University of Kalyani. In the year 2001, after the inception of the University of Technology in West Bengal the department came under it. With the After achieving four successful batches of students of the department, the department started its Postgraduate teaching in "Mobile Communication and Network Technology" in the year of 2005. In the year 2007 the graduate program of the department had been accredited by the National Board of Accreditation for the first time. The accreditation of the graduate programme of the department was renewed in the year 2012 and the Post graduate program had been accredited for the first time. Rapid development of electronics The department as a part of the college has created a new situation. Inclusion of these developments was found impossible if the teaching and research activities in this department were to be confined within the limited scope of West Bengal University of Technology. A large-scale expansion and re-organization became imperative. To meet this situation the college, in 2011, formulated a plan for the creation of an autonomous post-graduate department for Electronics and Communication Engineering and thereby applied. An expert committee conducted an on-site evaluation of the program and conferred autonomy of the college in the year 2012. Since the department of this college started its independent journey for undergraduate and postgraduate teaching and research under University of Technology.

Vision of the Department (DV):

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 of the Department (DM):

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.**

Message from HOD

HOD, ECE

Dear Students, Faculty, and Stakeholders,

It is with great pleasure and enthusiasm that I extend my warm greetings to all members of the Electronics & Communication Engineering Department at JIS College of Engineering in this academic year.
Our department is committed to fostering an environment that encourages academic excellence, innovation, and holistic development. As we embark on this academic journey, I would like to convey a few key messages:

1. **Commitment to Excellence:** Our commitment to academic excellence is unwavering. We strive to provide a curriculum that is not only robust in theoretical knowledge but also aligns with the dynamic industry requirements. We encourage each student to actively engage in their learning journey and make the most of the resources available to them.
2. **Embracing Technological Advancements:** The field of Electronics & Communication Engineering is dynamic and ever evolving. We are dedicated to staying at the forefront of technological advancements. Our curriculum is designed to incorporate the latest industry trends, ensuring that our students are well-prepared to tackle the challenges of the rapidly changing technological landscape.
3. **Research and Innovation:** We encourage a culture of research and innovation within our department. Our faculty members are actively involved in cutting-edge research, and we urge students to explore research opportunities, participate in projects, and contribute to advancements in the field. Innovation is the key to progress, and we are here to support and nurture your creative ideas.
4. **Industry Collaboration:** Recognizing the importance of bridging the gap between academia and industry, we actively seek collaborations with reputed organizations. Guest lectures, industry visits, internships, and workshops are integral parts of our program, providing students with practical insights and real-world exposure.
5. **Student-Centric Approach:** Our primary focus is on the overall development of each student. Apart from academic excellence, we emphasize the importance of soft skills, leadership qualities, and a strong ethical foundation. We provide a supportive and inclusive environment that encourages open communication and collaboration.
6. **Community Engagement:** We believe in giving back to society. Our department encourages students to participate in community service activities and projects that have a positive impact on the community. This instils a sense of social responsibility and empathy among our students.
7. **Continuous Learning:** Learning is a lifelong journey, and we encourage both students and faculty to engage in continuous learning. Whether through workshops, seminars, or online courses, staying updated with emerging technologies and industry trends is crucial for personal and professional growth.

I am confident that with the dedication of our faculty, the enthusiasm of our students, and the support of our stakeholders, the Electronics & Communication Engineering Department at JIS College of Engineering will continue to excel and contribute significantly to the field.
I look forward to a future of academic achievements, collaborative endeavours, and personal growth for each member of our department.
Best wishes for a successful academic year!
Warm regards,

Dr. Moumita Pal
Head of the Department Electronics & Communication Engineering
JIS College of Engineering

Memorandum of Understanding (MOU) with Industry:

On consideration of Industry Institute collaboration, ECE Dept. has been taking major role to collaborate with various industry and startups. Collaborative research, projects and publications are the indication of all these activities. Through the IIPC and AICTE IDEA LAB of JISCE this department accelerates collaborative activity at national and international level. Enlisted Memorandum of Understanding (MOU) and as the coordinator and members are belonging from ECE Dept.

Sl. No.	Industry with which MoU is signed	Academic Year of signing MoU	Academic year of Termination	List the actual activities under each MOU
1	Callity	2023-24	2026-27	Collaborative Research
2	Kamanja	2023-24	2026-27	Collaborative Research
3	Surf Security	2023-24	2028-29	Collaborative Research
4	B24Cyber	2023-24	Unless Terminated by both party	Collaborative Research

Title of event- One-Day Seminar on Recent Trends in Communication and VLSI Technology

Date: 20/07/2023

Venue of the event: B.C.Roy Auditorium

Brief Report: A one-day seminar on "Recent Trends in Communication and VLSI Technology" was organized at JIS College of Engineering (JISCE) and delivered by Dr. Prabir Saha from the National Institute of Technology, Meghalaya on 20/07/2023 at 3 pm. The seminar was organized by ECE, JISCE in association with IEI student chapter also. Dr. Indranath Sarkar, Professor, ECE, in Charge of IEI student chapter briefed about the association of JISCE with IEI beforehand. The seminar was attended by 45 students from the Electronics and Communication Engineering (ECE) department, offering them valuable insights into advancements in these rapidly evolving fields. Dr. Saha commenced the session by highlighting key developments in communication technology, including the rise of 5G networks, Internet of Things (IoT), and satellite communication systems. He explained the role of advanced signal processing techniques in modern communication systems and discussed the challenges posed by

increasing data demands. The second part of the seminar focused on VLSI (Very Large Scale Integration) technology, where Dr. Saha elaborated on the design and fabrication of integrated circuits (ICs). He emphasized the importance of VLSI in the development of efficient and compact electronic devices, discussing recent innovations in low-power design, FinFET technology, and future trends like quantum computing. The seminar was highly interactive, with students engaging in discussions and queries, enhancing their understanding of both subjects. Overall, the session provided a comprehensive overview of current trends, equipping students with knowledge crucial for their academic and professional growth.

Picture of the event:

One-Day Seminar on Recent Trends in Communication and VLSI Technology

Title of event- One-Day workshop on Digital Signal processor

Date: 27/07/2023

Venue of the event: VLSI LAB, ECE

Brief Report: A workshop on "Digital Signal Processor" was recently conducted at JIS College of Engineering (JISCE) for Electronics and Communication Engineering (ECE) students. The session was led by Mr. Pritam Banerjee, Associate Technical Manager at Trident Techlabs Pvt. Ltd. The workshop was organized to provide in-depth practical knowledge and insights into digital signal processing, a critical area in modern electronic and communication systems.The workshop began with an introduction by Mr. Banerjee on the basics of digital signal processing (DSP), explaining its significance in a variety of applications such as communication systems, audio and video processing, and control systems. He highlighted how DSP has revolutionized the ability to process real-time data with increased precision and efficiency. The session included a detailed discussion on the architecture of digital signal processors, particularly focusing on their ability to execute complex mathematical algorithms efficiently. The practical section of the workshop was particularly engaging, as Mr. Banerjee introduced the students to industry-

standard DSP hardware and software tools. He demonstrated the working of popular DSP kits and real-time processors, walking the participants through various examples of signal filtering, modulation, and fast Fourier transforms (FFT). Throughout the workshop, Mr. Banerjee underscored the industrial relevance of DSPs, particularly in the context of 5G, IoT (Internet of Things), and automation, where real-time signal processing plays a crucial role. The session was informative and offered a blend of theory, hands-on practice, and industry-related insights that students could apply to their academic projects and future careers. Total 30 Students attended the program and the whole workshop was organized by ISTE student chapter of JISCE in association with ECE, JISCE

Picture of the event:

One-Day workshop on Digital Signal processor

Title of event- One-Day workshop on Integrated Circuit Design with Tanner Tools

Date: 04/08/2023

Venue of the event: VLSI LAB, ECE

Brief Report: A one-day workshop on "Integrated Circuit Design with Tanner Tools" was conducted on 04/08/2023, organized by ECE, JISCE, with Mr. Pritam Banerjee, Associate Technical Manager at Trident Techlabs Pvt. Ltd., as the key speaker and instructor. The workshop was in association with ISTE student chapter of JISCE, Professor Indranath Sarkar and student member Spandan Bera briefed about the activity of ISTE at the Induction session of the workshop.T he workshop aimed to provide students, researchers, and professionals with hands-on experience in using Tanner Tools, a powerful software suite for designing and simulating integrated circuits (ICs). Mr. Banerjee initiated the session by giving an overview of the Integrated Circuit design process and the role of Electronic Design Automation (EDA) tools in modern-day circuit development. He stressed the increasing importance of IC design in various applications like microelectronics, telecommunications, and consumer electronics. Tanner Tools, known for its versatility and user-friendly interface, was introduced as a highly efficient tool in the realm of IC design, specifically for Analog/Mixed-Signal (AMS) circuits. The workshop was structured into multiple modules, starting with the basics of Tanner Tools, followed by schematic design, circuit simulation, and layout design. Mr. Banerjee demonstrated the flow of designing an IC from scratch, which included creating a circuit schematic, simulating its behavior, and performing layout design. A step-by-step approach was followed, ensuring that all participants were able to grasp the key concepts effectively. Additionally, Mr. Banerjee elaborated on post-layout simulations, explaining how to verify the design after layout implementation, an

essential step in ensuring circuit integrity before fabrication. Mr. Banerjee also discussed industry trends, providing insights into how Tanner Tools is being applied in real-world semiconductor projects. Participants were encouraged to explore various features of the software, fostering innovation and practical learning. Total 52 students attended the workshop.

Picture of the event:

Title of event- Teachers Day Celebration, 2K23

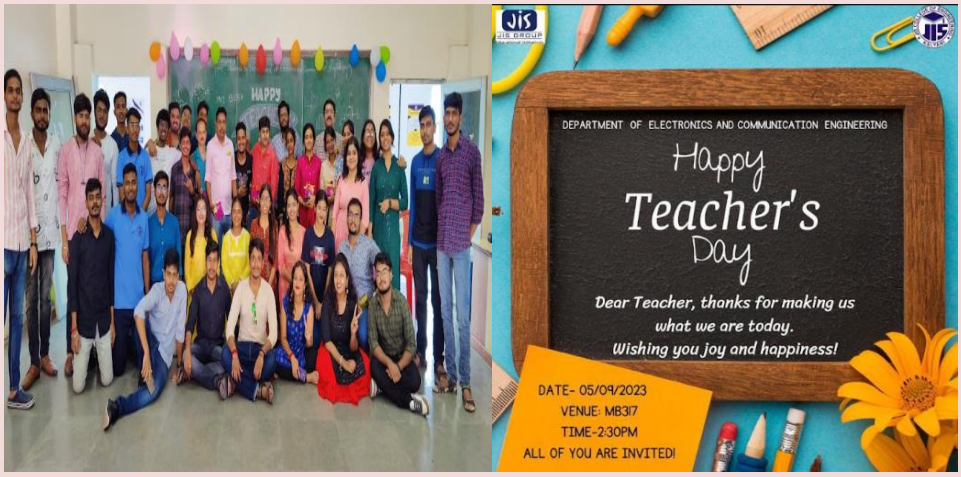
Date: 05/09/2023

Venue of the event: R317

Brief Report: On September 5, 2023, the Department of Electronics and Communication Engineering (ECE) at JIS College of Engineering (JISCE) celebrated Teachers' Day with enthusiasm and reverence. The event was organized to honor the contributions of teachers and commemorate the birth anniversary of Dr. Sarvepalli Radhakrishnan, a great scholar, philosopher, and India's second president, who believed that "teachers should be the best minds in the country." The celebration was held in the ECE R317, beautifully decorated with flowers, posters, and banners paying tribute to teachers. The event was attended by approximately 100 students from the ECE department, along with the faculty members. The program began with a welcome address by one of the senior students, who expressed gratitude to the teachers for their guidance and dedication in shaping the future of students. Following this, a cultural program was organized, where students performed various activities, including songs, dances, and a special skit that depicted the pivotal role of teachers in a student's life. The performances highlighted the respect and admiration that students hold for their educators, with many participants sharing personal anecdotes about their experiences with the faculty. The event also featured a speech by the Head of the ECE Department, who thanked the students for their efforts in organizing the event and appreciated the dedication shown by the faculty. He emphasized the importance of mutual respect and collaboration between students and teachers in the learning process. An interactive session followed, where students presented handmade cards and gifts to their teachers as tokens of appreciation. Several faculty members took the opportunity to share their experiences and memories of teaching and mentoring students. They also stressed the need for continuous learning and innovation, both for students and educators, in the ever-evolving field of electronics and communication engineering. The event concluded with a vote of thanks from one of the

organizers, expressing gratitude to the faculty for their continuous support and to the students for making the event a success. The celebration was a reminder of the crucial role teachers play in molding students into future engineers and leaders.

Picture of the event:



THANKS

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

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