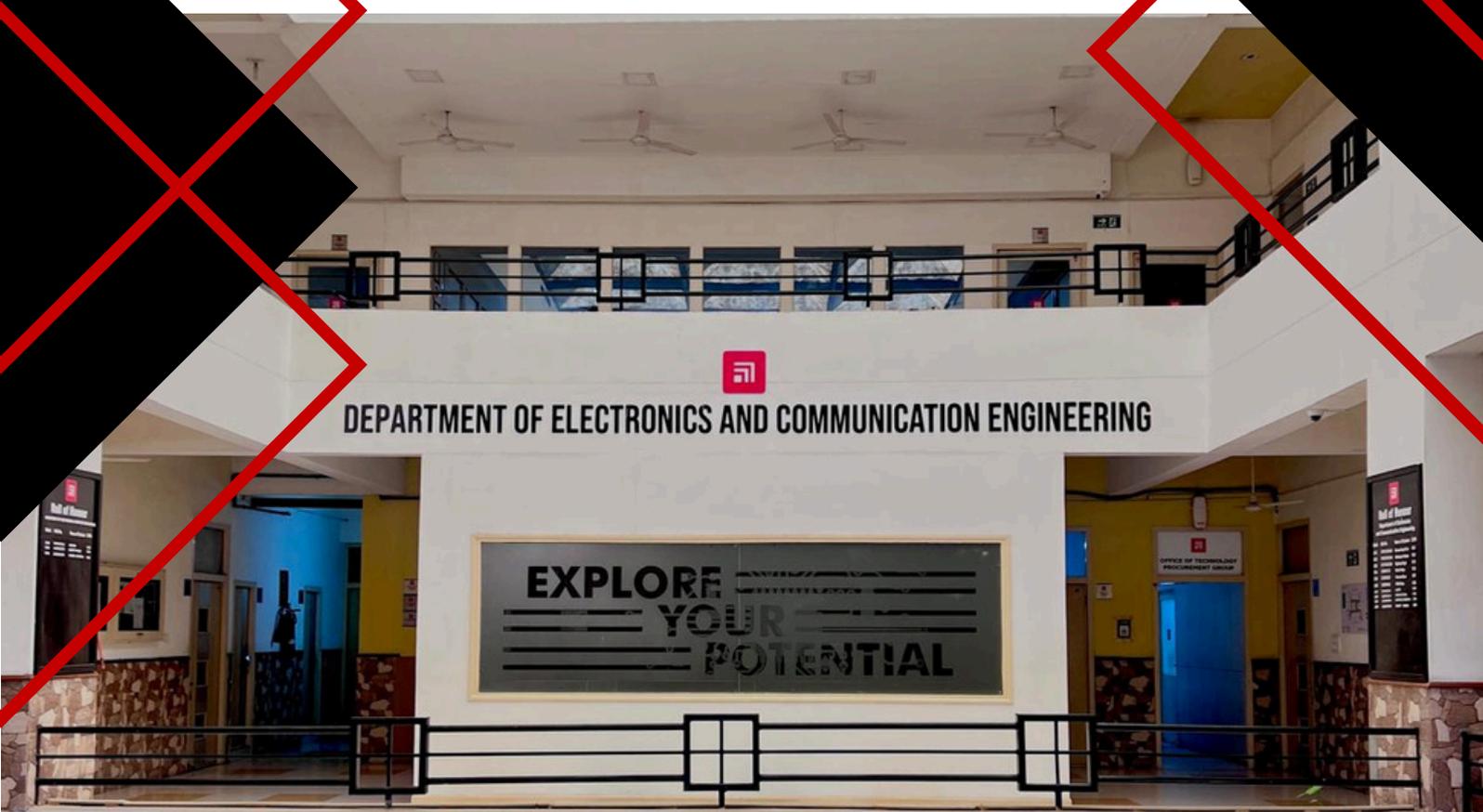


ELECTRO- **BULLETIN**

VOL 12 . ISSUE 1
JAN-MAR ,2025
DEPARTMENT OF ECE




DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

EXPLORE
YOUR
POTENTIAL

 **Engineer Your Dreams**



ABOUT ECE DEPARTMENT

The Electronics & Communication Engineering (ECE) department at Chitkara University offers a future-ready curriculum aligned with emerging industry trends. It provides specialized tracks in IoT, VLSI, and Embedded Systems with a focus on technologies like Industry 4.0, Machine Learning, and Deep Learning. The program emphasizes hands-on, experiential learning through cutting-edge labs and high-tech facilities. Strategic partnerships with leading companies such as NXP, Texas Instruments, and Micron ensure students gain industry-relevant training. The department aims to produce professionals capable of building robust electronics and communication systems to solve real-world engineering challenges.

VISION

To be recognized as a centre of excellence in Electronics and Communication Engineering education and research, fostering innovation and advancing sustainable technological progress to address societal needs.

MISSION

M1: To provide globally competitive education in Electronics and Communication Engineering, fostering creativity, critical thinking, and lifelong learning.

M2: To cultivate a culture of innovation and research through strategic collaboration with industry and academia, leveraging emerging technologies.

M3: To instill ethical values, professional integrity, and leadership skills that empower graduates to serve and uplift society.

M4: To prepare students to solve complex engineering challenges and contribute to sustainable technological advancement.

PROGRAM EDUCATIONAL OBJECTIVES

PEO I: The graduating students would be able to make choice to go for a professional career in core technical domain or to pursue higher studies in the field of Electronics and Communication Engineering and other related areas and succeed in their academic and research careers.

PEO II: The graduating students would be able to solve socially relevant engineering problems by designing/developing the products with the help of acquired multidisciplinary knowledge.

PEO III: The graduating students would exhibit a good command over interpersonal communication skills, leadership and teamwork, and possess ethical values in their chosen professional careers.

PEO IV: The graduating students will be equipped to serve society starting at the national level, gradually expanding their impact to the international stage through the application of technical skills, professional competence, and exposure gained during their engineering education.

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FROM DEAN'S DESK

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EVENTS (JAN - MARCH' 25)

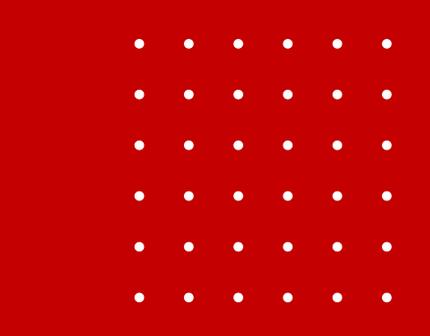
3

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DR. SHIVANI MALHOTRA

(Dean and Professor)

**Department of Electronics and
Communication Engineering,
Chitkara University ,Punjab**

shivani.malhotra@chitkara.edu.in



FROM THE DEAN'S DESK

A glimpse of activities held in our department during January - March , 2025 has been presented in the current edition, showcasing the talent and creativity of our young minds and the thoughtfulness and positivity of their youthful days. We ensure to remain optimistic and hopeful, empowering aspirations and hopes of our students as they pursue their academic journey.

Furthermore, this edition serves as a testament to the vibrant and dynamic community that thrives within our department, where collaboration and support are paramount. The collective efforts of our students, faculty, and staff contribute to an environment that nurtures excellence and fosters a lifelong love for learning. Together, we continue to shape a brighter future, empowering our students to become the leaders and change-makers of tomorrow.

WORKSHOP ON EMBEDDED INTELLIGENCE: THE CORE OF CPS



The Department of Electronics and Communication Engineering, in collaboration with the AWaDH Lab at IIT Ropar, conducted a two-day workshop titled “Embedded Intelligence: The Core of Cyber-Physical Systems (CPS).” Led by Mr. Deshraj Dhiman, the sessions emphasized the importance of embedded intelligence and its applications, focusing on Bluetooth Low Energy (BLE) technology and IoT development using nRF kits. On the first day, theoretical aspects like BLE architecture and real-world applications were explored. The second day focused on hands-on activities, enabling participants to develop IoT applications. The students develop a strong foundation in embedded intelligence and its real-world applications. They gained practical exposure to BLE technology and understand its role in modern IoT systems.



CREAD MANIA 2025: UNLEASH CREATIVITY IN AD-MAKING



The Department of Electronics and Communication Engineering, in collaboration with the Ebuzz Club, organized **"CreAd Mania 2025: Unleash Creativity in Ad-Making,"** a vibrant event celebrating creativity and teamwork. Divided into two segments, it challenged students to craft advertisements using assigned themes and objects, evaluated on creativity, relevance, and presentation. The second segment featured fun games like "Guess the Song Using Props" and "Identify the Brand from Its Tagline," adding excitement and fostering camaraderie. The event encouraged innovative approaches to advertising while highlighting its importance in modern communication. Beyond competition, it served as a platform for creativity, collaboration, and lasting memories.



CHITKARA UNIVERSITY

E-BUZZ

CreAd Mania 2025: Unleash Creativity in Ad-Making

21st January, 2025
1:30 PM to 4:00 PM
B009, Basement, Edison Block

Faculty Co-ordinator
Dr. Garima Chopra
Assistant Professor
DECE, CUIET, Chitkara University, Punjab

Organised by
Department of Electronics and Communication Engineering CUIET, Chitkara University, Punjab

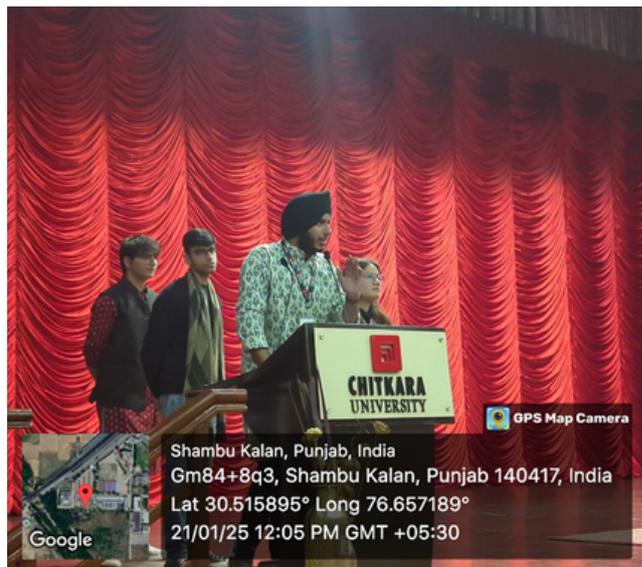
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Lat 30.516467° Long 76.659804°
21/01/25 02:33 PM GMT +05:30

RIWAYAT, THE MUCH-ANTICIPATED ORIENTATION SESSION



The Department of Electronics and Communication Engineering successfully organized the orientation program "**Riwayat**" for Debating Society (DEBSOC) on 21st January 2025. The event provided an engaging platform to introduce students to the society's mission of enhancing critical thinking, communication, and leadership skills through debating activities.



A total of 100 participants attended the offline event, which highlighted DEBSOC's achievements including intercollegiate debate victories and public speaking accolades. The orientation also unveiled the registration process for the 2025 cohort, generating enthusiastic response from potential new members.



The event was skillfully coordinated by Dr. Rubina Dutta, Assistant Professor at CUIET, Chitkara University. Distinguished society members including Garima Kapil, Paarth Prasher, Divkeerat Singh, Harsh Vardhan Sikka, and Alisha Vashisht served as speakers, sharing their valuable experiences and insights into the transformative power of debating.

WORKSHOP: STRATEGIC WORKSHOP ON CURRICULUM DESIGN AND ACADEMIC FRAMEWORKS

The Teaching Learning Centre (TLC) of Department of Electronics and Communication Engineering at Chitkara University held a **two-day Strategic Workshop on Curriculum Design and Academic Frameworks**, uniting 21 faculty members from diverse departments. This initiative emphasized NEP-aligned, student-centric curricula to enhance academic excellence. Sessions included insights on course handouts, CO-PO Mapping, and curriculum committees such as DAAC and BOS. The program concluded with discussions on the MEME framework, offering flexibility for undergraduate programs. Facilitators encouraged collaboration, innovation, and stakeholder feedback analysis to improve curricula and address the dynamic needs of higher education. The workshop reinforced Chitkara University's dedication to faculty development and innovative education strategies.

CHITKARA UNIVERSITY

Strategic Workshop on
Curriculum Design and Academic Frameworks

23rd – 24th Jan, 2025 | 10:00 AM to 12:00 Noon
Venue: Eureka Lab, Edison Block

Speakers

Dr. Shivani Malhotra Dean DECE	Dr. Sandeep Singla Assistant Director Academic Affairs
Dr. Ankit Bansal Associate Director Academic Affairs	Dr. Harsimran Jit Kaur Professor DECE
Dr. Deepti Prit Kaur Associate Professor DECE	

Target Audience: Faculty members, curriculum developers, academic administrators, and policymakers

Conveners:
Dr. Rubina Dutta
Academic Head, Software Engineering
CUIET, Chitkara University, Punjab
Dr. Isha Gupta
Academic Head, DECE
CUIET, Chitkara University, Punjab

Organised by
Teaching Learning Centre
Department of ECE CUIET, Chitkara University, Punjab

Scan to Register



RECENT DEVELOPMENTS IN SECURE COMMUNICATION FOR RIS-ASSISTED ISAC SYSTEMS

The Department of Electronics and Communication Engineering organized a seminar on “**Recent Developments in Secure Communication for RIS-Assisted ISAC Systems**” on January 24, 2025. The session was conducted by Dr. **Vaibhav Kumar**, Postdoctoral Associate at New York University, Abu Dhabi, and focused on addressing security challenges in next-generation wireless communication networks.

Dr. Kumar provided an in-depth overview of the latest advancements in Reconfigurable Intelligent Surface (RIS)-enabled Integrated Sensing and Communication (ISAC) systems. He addressed key vulnerabilities such as eavesdropping, jamming, and spoofing attacks, and presented advanced countermeasures including secure beamforming, artificial noise injection, and quantum-secure communication techniques like Quantum Key Distribution (QKD). The seminar also highlighted practical applications of RIS-assisted ISAC systems in smart cities, autonomous vehicles, and industrial automation. Dr. Kumar encouraged participants to explore ongoing research in adaptive encryption and AI-driven security frameworks, inspiring them to contribute to future innovations in the field.

The poster features the logos of Chitkara University and E-BUZZ. The title is prominently displayed in a dark blue box. Below the title, a photo of Dr. Vaibhav Kumar is shown next to his name and title. The faculty co-ordinator, convener, and co-convener are listed with their respective titles and affiliations. The date and time of the seminar are provided, along with a QR code for registration. The organizing department is also mentioned at the bottom.

CHITKARA UNIVERSITY | **E-BUZZ**

Recent Developments in Secure Communication for RIS-Assisted ISAC Systems

Resource Person
Dr. Vaibhav Kumar
Postdoctoral Associate
New York University Abu Dhabi

FACULTY CO-ORDINATOR:
Dr. Garima Chopra
Assistant Professor, DECE
CUIET, Chitkara University, Punjab

Convener:
Dr. Shivani Mathotra
Dean, DECE, CUIET
Chitkara University, Punjab

Co-Convener:
Dr. Isha Gupta
Assistant Professor, DECE
CUIET, Chitkara University, Punjab

📅 24th January 2025
🕒 2:00 P.M. Onwards
📺 Online Mode

Organised By:
Department of Electronics and Communication Engineering
CUIET, Chitkara University, Punjab

The screenshot shows a Google Meet interface. The main content is a presentation slide titled "The (Planned!) Transition Timeline". The slide displays a complex timeline with various stages and milestones, including "5G", "6G", and "7G". The meeting is hosted by Vaibhav Kumar, who is also visible in a small video window on the right. Other participants, Sachin and Akhileshwar Th..., are also visible in smaller video windows. The bottom of the screen shows the standard Google Meet controls.

THE POWER OF INNOVATION: DRIVING CHANGE IN A COMPETITIVE WORLD

The Department of Electronics and Communication Engineering, in collaboration with IETE and IE(I) societies, hosted an expert talk on January 31, 2025 titled **"The Power of Innovation: Driving Change in a Competitive World,"** led by **Dr. Rakesh Goyal**. The session emphasized innovation's significance in solving challenges and sustaining success. Students explored how companies like Apple and Tesla redefined industries through disruptive technologies like AI, automation, and renewable energy. Innovation's transformative impact in healthcare, education, and sustainability was highlighted, showcasing advancements like AI-driven diagnostics and green technologies. The talk inspired students to embrace creativity and collaboration for meaningful progress.



PRACTICAL APPROACHES TO ELECTROMAGNETICS AND ANTENNA DESIGNING

CHITKARA UNIVERSITY

PRACTICAL APPROACHES TO ELECTROMAGNETICS AND ANTENNA DESIGNING

Date: 3rd February 2025
Time: 10:00 AM onwards
Venue: B009 (Basement) Edison Block, Chitkara University, Punjab

RESOURCE PERSON
Dr. Manish Sharma
Director Research, Assistant Director & Vice President- IIC
Chitkara University Research and Innovation Network (CURIN)
Contact: manish.sharma@chitkara.edu.in

CONVENER
Dr. Shivani Malhotra
Dean, DECE, CUIET
Chitkara University, Punjab

CO-CONVENER
Dr. Amit Kumar
Assistant Professor, DECE, CUIET
Chitkara University, Punjab

FACULTY COORDINATOR
Ms. Parminder Kaur
Incharge IE(I), Student Chapter
DECE, CUIET
Chitkara University, Punjab

Organised By
Department of Electronics and Communication Engineering
CUIET, Chitkara University, Punjab

The Department of Electronics & Communication Engineering, in collaboration with the IE(I) Student Chapter, organized an insightful seminar on **Practical Approaches of Electromagnetics and Antenna Designing**. The event, led by Dr. Manish Sharma, provided a hands-on exploration of electromagnetics, antenna design principles, and modern simulation tools like HFSS. With 50 engaged participants, the seminar covered wave propagation, microstrip antenna design, and optimization techniques for 5G, IoT, and satellite applications. Attendees gained practical exposure to fabrication, and performance evaluation using advanced tools like Vector Network Analyzers (VNAs). Participants gained the knowledge required to design, simulate, fabricate, and test antennas for various cutting-edge applications. The hands-on experience prepared them to contribute effectively to advancements in wireless communication and antenna engineering.



BOOSTING YOUR CAREER: MASTERING QUANTITATIVE APTITUDE

The Department of Electronics & Communication Engineering organized a career counselling session on “**Boosting your career: Mastering Quantitative Aptitude**” on February 5, 2025. The session provided a comprehensive and engaging overview of quantitative aptitude, starting with a quick but solid recap of essential mathematical fundamentals such as arithmetic, algebra, percentages, ratios, averages, and data interpretation. The expert speaker, Mr. Raj, an experienced quantitative aptitude trainer, emphasized the importance of building a strong foundation in these core areas as a stepping stone for mastering more advanced concepts. Mr. Raj expertly demystified the subject, addressing common anxieties and misconceptions that often make students hesitant about quantitative topics. He explained how quant skills are not just for math-heavy careers, but are critical in fields like finance, technology, business analytics, management consulting, marketing, data science, and even roles in the public sector, media, and entrepreneurship. His use of real-world examples and stories of professionals who successfully leveraged quant skills in diverse roles made the session relatable and inspiring.



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Lat 30.516407° Long 76.659889°
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CHITKARA UNIVERSITY  **Professional Development Centre** 

Expert Session on Boosting Your Career: Mastering Quantitative Aptitude

Resource Person
Raj Singh
Aptitude Trainer
Chitkara University Professional
Development Centre
Chitkara University, Punjab

Date: 5th February, 2025
Time: 9:30 AM Onwards
Venue: LH-2, Edison Block
Mode: Offline

Organised by
Department of Electronics and
Communication Engineering
CUIET, Chitkara University, Punjab

Faculty Coordinator
Dr. Preeti Sharma
Associate Professor, DECE
CUIET, Chitkara University, Punjab

Dr. Rubina Dutta
Academic Head, Software Engineering
CUIET, Chitkara University, Punjab

Convenor
Dr. Shivani Malhotra
Dean (DECE)
CUIET, Chitkara University, Punjab

Dr. Isha Gupta
Academic Head (DECE)
CUIET, Chitkara University, Punjab



BRIDGING THE GAP: FROM CLASSROOM LEARNING TO RESEARCH EXCELLENCE



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The Department of Electronics and Communication Engineering (ECE), in collaboration with the Centre for Global Education, successfully organized an insightful Expert Talk on "**Bridging the Gap: From Classroom Learning to Research Excellence**" for students of the Software Engineering Batch 2023 and Batch 2024. This session aimed to provide students with a comprehensive understanding of the transition from academic learning to research-driven careers, helping them navigate the challenges and opportunities in higher education and research. The session was graced by distinguished speakers Dr. Shantanu Pal and Dr. Aaron Spence from Deakin University, Australia, who shared their expertise on streamlining the transfer process for students aspiring to pursue higher studies abroad. Their talk sensitized students to the critical steps involved in research-oriented career paths, emphasizing the importance of strategic decision-making, early preparation, and leveraging academic resources. The session proved to be highly engaging and thought-provoking, equipping students with the motivation and practical knowledge needed to explore research avenues confidently.

CHITKARA UNIVERSITY

DEAKIN UNIVERSITY
CRICOS Provider Code: 00113

Expert Talk on
**BRIDGING THE GAP:
FROM CLASSROOM
LEARNING TO RESEARCH
EXCELLENCE**

Dr. Aaron | **Dr. Shantanu Pal**

Faculty of Science Engineering and Built Environment/School of Information Technology, Deakin University, Australia

Date : 18th February, 2025
Time : 2:00 PM - 3:30 PM
Venue : Carnegie Hall, Rockefeller, Ground Floor

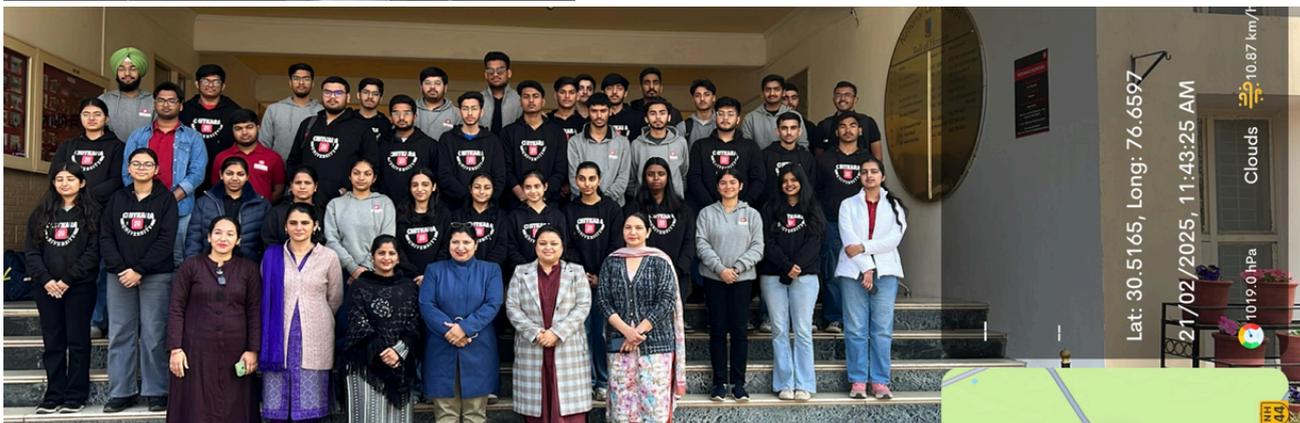
Organized by:
Centre for Global Education, CUIET, Chitkara University, Punjab



Patiala, Punjab, India
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Patiala, Punjab 140417, India
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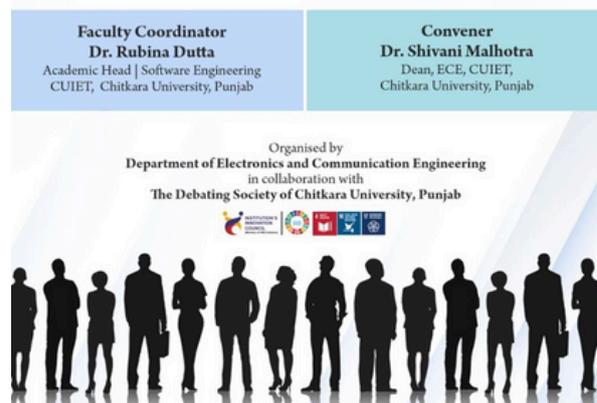
MATLAB TOOLS FOR SOLVING COMPLEX MATHEMATICAL PROBLEMS

The Department of Electronics and Communication Engineering, Chitkara University, Punjab, in collaboration with the IETE society, organized a one-day workshop titled "**MATLAB Tools for Solving Complex Mathematical Problems**" on **21st February 2025**. The event aimed to familiarize participants with MATLAB's extensive capabilities for tackling intricate mathematical challenges, providing both theoretical insights and practical exposure. The workshop was conducted by Dr. Meenu Garg, Associate Professor, who brought her vast expertise in MATLAB applications and computational methodologies to the session. She guided the attendees through various advanced MATLAB tools and functionalities, enabling them to leverage the software for symbolic computations, numerical analysis, optimization techniques, and signal processing applications. The primary objective was to equip researchers, academicians, and students with the necessary skills to simplify and accelerate mathematical problem-solving using MATLAB's built-in functions. The event concluded with an interactive Q&A session, enabling attendees to address specific queries related to their academic and professional work.



DEBATE AND BEYOND FAREWELL TO THE COHORT OF 2024-25

The Department of Electronics and Communication Engineering, in collaboration with The Debating Society of Chitkara, successfully hosted the “**Debate and Beyond: Farewell to the Cohort of 2024-25**” event on 6th February 2025. This heartfelt farewell ceremony was organized to bid a warm goodbye to the outgoing cohort of 2024 while also welcoming the new members, fostering a sense of continuity and camaraderie within the society. It was a celebration of the spirit of intellectual discourse and critical thinking that the society has come to represent. The evening was filled with nostalgia, gratitude, and joy as the members gathered to reflect on their enriching journey within the debating society. It was not merely a farewell, but a celebration of achievements, friendships, and the enduring passion for debating that binds the society together.



IDEA IMMERSION- IDEATHON

To honor Science Day, the Department of Electronics and Communication Engineering organized a **2-day Ideathon** on February 27-28, 2025, aimed at fostering creativity, problem-solving, and interdisciplinary collaboration among students. Dr. Adarsh Aggarwal conducted a special session guiding participants on effectively pitching ideas, covering aspects like presentation structuring and persuasive delivery. Student teams worked intensively on innovative solutions aligned with the given themes, which were evaluated by a panel of judges on creativity, feasibility, and impact. The top teams were awarded for their outstanding contributions. Dr. Shivani Malhotra, Dean of ECE and Software Engineering, applauded the students' ingenuity, and faculty members Dr. Isha Gupta and Dr. Rubina Dutta encouraged more such engagements. The event concluded with Dr. Amit Kumar and Dr. Gaurav Sharma emphasizing future opportunities for participants to bring their ideas to life. Overall, the Ideathon celebrated innovation, teamwork, and the transformative potential of science and technology.

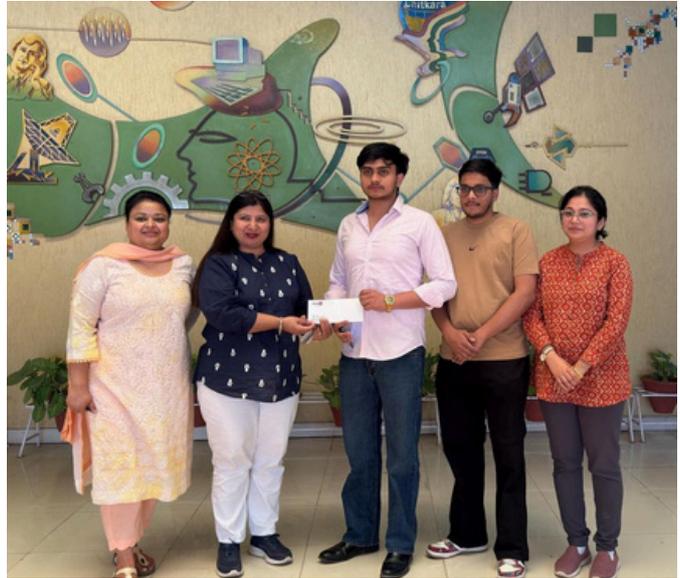


BATTLE BYTES ARENA: TEST YOUR GAMING SKILLS

The **Ebuzz Club**, in collaboration with the Department of Electronics & Communication, successfully organized the exhilarating esports tournament, "**Battle Bytes Arena: Test Your Gaming Skills**," on 26th–27th March 2025. The event provided a dynamic platform for students to showcase their strategic thinking, teamwork, and competitive spirit through intense Battlegrounds Mobile India (BGMI) matches. A total of 30 teams participated, demonstrating exceptional gaming skills, quick decision-making, and tactical coordination across multiple high-energy rounds. The tournament highlighted the growing prominence of esports as a blend of entertainment, discipline, and technical proficiency. The event was skillfully coordinated by the Ebuzz Club core team, with support from faculty organizers. Expert judges oversaw the matches, evaluating teams based on strategy execution, in-game adaptability, and sportsmanship.



BATTLE BYTES ARENA: TEST YOUR GAMING SKILLS



THE ARDUINO ODYSSEY: JOURNEY FROM PROJECT TO PRODUCT

The Electronique Design Centre of the Department of Electronics and Communication Engineering at Chitkara University, Punjab, marked a historic milestone by celebrating the 20th anniversary of Arduino with a dynamic and engaging event titled "**The Arduino Odyssey: Journey from Project to Product.**" This event was a grand tribute to Arduino's remarkable evolution—from its humble beginnings as an accessible prototyping tool to its current status as a cornerstone of global electronics innovation. The celebration brought together a diverse audience, including students, faculty, industry professionals, and tech enthusiasts, all united by a shared passion for open-source hardware and creative problem-solving.



THE RUDIMENTS OF ARTIFICIAL INTELLIGENCE, CHATGPT, DEEPSEEK, GROK AND METAVERSE'

Faculty members and students from the Department of Electronics and Communication Engineering recently attended a prestigious three-day Masterclass titled **"The Rudiments of Artificial Intelligence, ChatGPT, DeepSeek, Grok and Metaverse,"** held on 21st, 22nd, and 24th March 2025. The Masterclass was conducted by **Dr. Ashok K Chitkara, Hon'ble Chancellor, Chitkara University, Punjab.** His visionary insights and deep understanding of emerging technologies made the sessions highly engaging and informative.

The program offered a comprehensive overview of Artificial Intelligence and its associated technologies, including practical applications of tools like ChatGPT, DeepSeek, Grok, and the Metaverse. Real-life examples, interactive discussions, and illustrative videos helped participants connect with the content meaningfully. Students from B.E. First and Second Year, Software Engineering First Year, along with faculty members, actively participated in the sessions, gaining valuable exposure to the transformative role of AI in today's world.



THE RUDIMENTS OF ARTIFICIAL INTELLIGENCE, CHATGPT, DEEPSEEK, GROK AND METAVERSE'



STRENGTHENING ACADEMIC PARTNERSHIPS

The Centre for Global Education hosted a Research Collaboration meeting, strengthening Academic partnerships between Deakin University and Chitkara University.

The representatives, including **Prof. Roopak Sinha, Prof. Daniel Lai, Ms. Irfa Javed, and Mr. Abhinandan Soharu from Deakin University**, collaborated with **Dr. Shivani Malhotra and her team from Chitkara University** to explore joint research initiatives, academic partnerships, and global engagement opportunities. Discussions focused on potential research collaborations in emerging technologies, AI-driven education models, and interdisciplinary projects bridging software engineering and global education.

The meeting laid the foundation for structured research collaborations, with both institutions committed to fostering innovation and impactful academic partnerships.



STUDENT ACHIEVEMENTS

We are immensely proud of our team of third-year undergraduate students of Electronics and Communication Engineering, who represented Chitkara University in **Analog and Digital Hackathon under the C2S Programme and bagged consolation prize**. This prestigious event was organised by ChipIN Center, CDAC, Bangalore, in partnership with AMD, Synopsys Inc., and CoreEL Technologies.

Out of 2,210 teams comprising 10,040 students from across India, our team, Chitkara: Amped Up—consisting of **Aditya Anchal, Marushikha Suri, Pancham Mittal, and Naman Garg**—advanced to 100-Hour Grand Finale held from March 16 to 20, 2025, in Bangalore. Their exceptional performance in achieving all milestones of schematic design and layouts is a testament to their dedication and hard work.



STUDENT ACHIEVEMENTS



Lakha Singh, student of batch 2023 secured 2nd position in IoT based project activity for the event Sustainable Eco Harvest - Agro Expo for Greener Future



Atharv Sharma was appreciating for providing support in organizing a visit of Lars Reger, EVP and CTO

STUDENT ACHIEVEMENTS



Arpan Rawat, student of Batch 2023 bagged 2nd place in Football competition at IIT Ropar



Shivansh Yadav, student of Batch 2023 won 1st position Chitkara Football Knockout tournament for men

STUDENT ACHIEVEMENTS



Arpan Rawat, student of Batch 2023 won the 2nd edition Chitkara Football tournament for men And won the player of the tournament.



Shivansh Yadav, student of batch 2023 Won the Dextein football tournament organised by Mechstein club in Zero ground

STUDENT ACHIEVEMENTS



Arpan Rawat, student of batch 2023 Won the Dextein football tournament organised by Mechstein club in Zero ground from 5th February to 7th February



Arpan Rawat, student of Batch 2023 bagged 2nd place in Football competition at IIT Ropar

FACULTY ACHIEVEMENTS

Matta, L., Sharma, B., & Sharma, M. (2025). Experimental analysis of four-port MIMO multi-band bandwidths antenna within two wide-bands (6.88–21.23 GHz & 27.95–44.66 GHz) with high isolation for future wearable applications. *Wireless Networks*, 1-29.

Mirza, T., Dutta, R., Tuli, N., & Mantri, A. (2025). Leveraging augmented reality in education involving new pedagogies with emerging societal relevance. *Discover Sustainability*, 6(1), 1-15.

Garg, N., Kaur, A., & Dutta, R. (2024, November). Immersive Learning: Evaluating the Effectiveness of AI Chatbots and AR in Education. In 2024 3rd Edition of IEEE Delhi Section Flagship Conference (DELCON) (pp. 1-7). IEEE.

Garg, N., Kaur, A., & Dutta, R. (2024, November). A Comparative Case Study on Augmented Reality and AI Chatbots. In 2024 3rd Edition of IEEE Delhi Section Flagship Conference (DELCON) (pp. 1-5). IEEE.

Chopra, G., & Ahmed, S. (2025). Advancement in Resource Allocation for Future Generation of Communications. *Current and Future Cellular Systems: Technologies, Applications, and Challenges*, 153-164.

Judice, A., Malhotra, S., & Sharma, M. (2025). Micromachined octa-port high self isolation asymmetric tapered feed MIMO antenna with flexible capabilities and SAR analysis integrating 5G-sub 6 GHz, microwave, and millimeter-wave applications. *Wireless Networks*, 1-30.

Chopra, G., & Ahmed, S. (2025). Massive IoT for Industry Urbanization: Challenges, Emerging Trends and Use Case Scenario. *5G Enabled Technology for Smart City and Urbanization System*, 84-96.

Kaur, P., Malhotra, S., & Sharma, M. (2025). Inverted marquee shaped compact and conformal four-port configured mm-wave MIMO antenna for 5G applications at 28/38 GHz frequencies (n261 and n260). *Wireless Networks*, 1-27

Kumar, R. R., & Sharma, K. (2025). Ultra-low power linearized FVF based BD double diffusor double differential pair transistor. *Integration*, 101, 102345.

FACULTY ACHIEVEMENTS

S.NO	TITLE	INVENTOR	PATENT STATUS
1	HEALTH CARE SYSTEM AND SEVICE FOR CERVICAL MASSAGE	HARSIMRNJIT KAUR, SHIVANI MALHOTRA, RUBINA DUTTA	GRANTED
2	SYSTEM AND METHOD FOR EMBEDDING DIGITAL INFORMATION USING KURTOSIS TO SECURE AN IMAGE	PREETI SHARMA, KULBIR SINGH, NEERU JINDAL	GRANTED
3	COMPACT BLUETOOTH AND X-BAND MULTIBAND ANTENNA	SHIVANI MALHOTRA	GRANTED
4	GLITCH DETECTOR CIRCUIT AGAINST FAULT INJECTION ATTACKS	SHAMINDER KAUR	PUBLISHED

FACULTY ACHIEVEMENTS

Syntara Tech Pvt. Ltd. (a technology company startup by **Dr. Gaurav Sharma**)

Syntara is a tech-driven company dedicated to transforming the technology landscape with cutting-edge, scalable solutions. Led by a passionate team specializing in hardware, machine learning, drones, robotics, and IoT, it addresses the growing demand for advanced technology across industries. By integrating state-of-the-art innovations, it ensures seamless functionality and exceptional user experiences. Its' commitment to excellence, adaptability, and customer-centricity sets it apart, driving measurable impact and operational efficiency. With a vision to lead tech transformation, Syntara empowers businesses and individuals with future-ready solutions, fostering sustainable growth and unlocking new possibilities in the ever-evolving digital world.

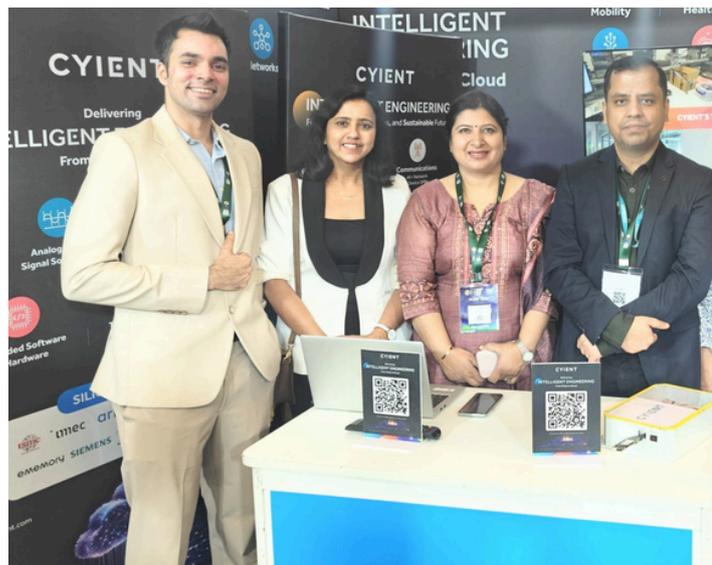
Syntara Tech Pvt. Ltd. secured funding of Rs. 2 lakhs under SPRINT edition by iHub-AWaDH, IIT Ropar, funded by NM-ICPS Mission by DST

Syntara Tech Pvt. Ltd. received grant of Rs. 8 lakhs from MIETY (Ministry of Electronics and Information Technology) under GENESIS EiR program.

FACULTY ACHIEVEMENTS

A team from the Department of Electronics and Communication Engineering, comprising **Dr. Shivani Malhotra, Dr. Lipika Gupta, Dr. Isha Gupta, Dr. Amit Kumar and Dr. Vikas Malhotra**, had the privilege of attending the prestigious **VLSID 2025 Conference**, held at The Leela Palace, Bangalore. Organized by the VLSI Society of India, the event brought together leading minds from academia, industry, and research to explore the latest advancements in the semiconductor domain.

Over three dynamic days, participants engaged in thought-provoking keynotes, technical sessions, tutorials, and exhibitions. The conference offered a valuable platform to interact with experts from top organizations such as NXP Semiconductors, AMD, Qualcomm, Synopsys, Microchip, Cyient, Ansys, HCLTech, and many others.



FACULTY ACHIEVEMENTS



Elite
NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
RASPINDER KAUR
for successfully completing the course
Designing Learner-Centric MOOCs
with a consolidated score of **68** %

Online Assignments	18.38/25	Proctored Exam	50/75
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Total number of candidates certified in this course: 119

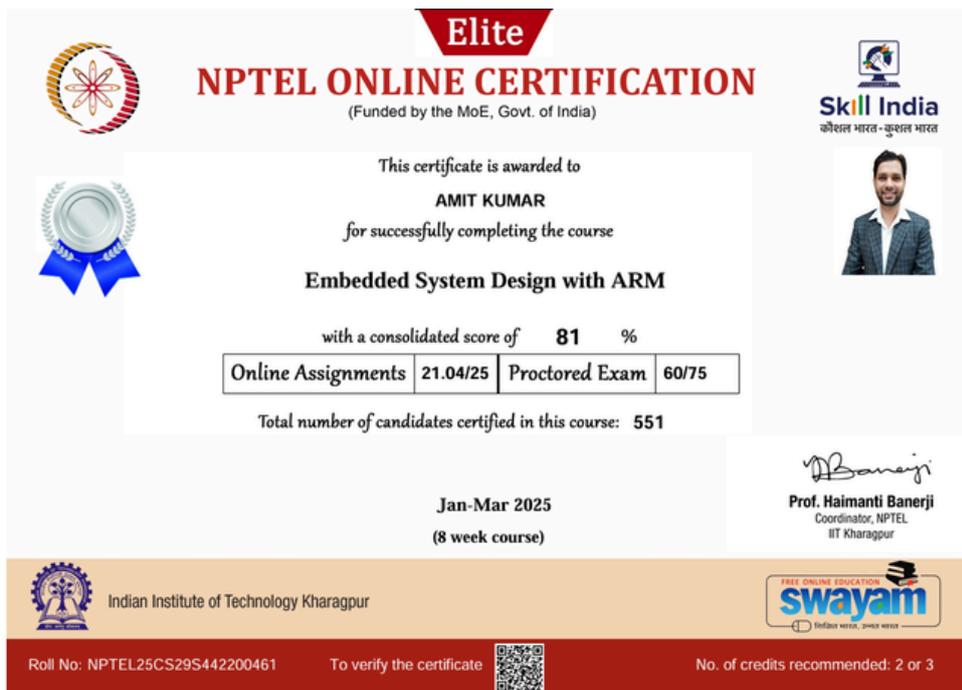
Jan-Mar 2025
(8 week course)

Prof. Sridhar Iyer
Head CDEEP & NPTEL Coordinator
IIT Bombay

Indian Institute of Technology Bombay

Roll No: NPTEL25GE08S342200028 To verify the certificate  No. of credits recommended: 2 or 3

Dr. Rashpinder Kaur successfully completed NPTEL online certification on Designing Learner-Centric MOOCs



Elite
NPTEL ONLINE CERTIFICATION
(Funded by the MoE, Govt. of India)

This certificate is awarded to
AMIT KUMAR
for successfully completing the course
Embedded System Design with ARM
with a consolidated score of **81** %

Online Assignments	21.04/25	Proctored Exam	60/75
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Total number of candidates certified in this course: 551

Jan-Mar 2025
(8 week course)

Prof. Haimanti Banerji
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

Roll No: NPTEL25CS29S442200461 To verify the certificate  No. of credits recommended: 2 or 3

Dr. Amit Kumar successfully completed NPTEL online certification on Embedded System Design with ARM

FACULTY ACHIEVEMENTS



A team mentored by **Dr. Gaurav Sharma** was awarded overall winner among 800+ teams across country in 6th Technovation Hackathon held at Sharda University, Greater Noida

FACULTY ACHIEVEMENTS



A team mentored by **Dr. Gaurav Sharma** won Smart India Hackathon-2024



Dr. Meenu Garg was appreciated as resource person in workshop on MATLAB tools for solving complex mathematical problems

OUR TEAM

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

 **Engineer Your Dreams**

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