Vision of ECE Department

To produce skilled, socially –sensitized and globally competitive professional engineering graduates in the area of Electronics and Communication Engineering.

Mission of ECE Department

1. To provide quality and contemporary education through innovative teaching-learning process and effective resource utilization.
2. To develop responsive and socially sensitive engineer through research oriented practices.
3. To promote industrial collaboration for providing practical exposure leading to industry ready engineering graduates.
4. To open new vistas of learning for students through international collaborations.
5. To provide conducive environment through pre placement training and professional development activities for providing ample opportunities of placements, higher studies and entrepreneurship.

INDUSTRIAL VISIT TO PUNCOM, MOHALI ON 11.5.2022

The department of Electronics and Communication Engineering organized an industrial visit to **PUNCOM** on **11.05.2022** for the students of **ECE 6th W** along with the two faculty member of ECE department Mr. Kuldeep Sharma & Ms. Bhupinder Kaur. There they have shown various projects on Power Line Carrier Communication, Line Matching Unit and Multiplexer Channel used in Indian Railways.
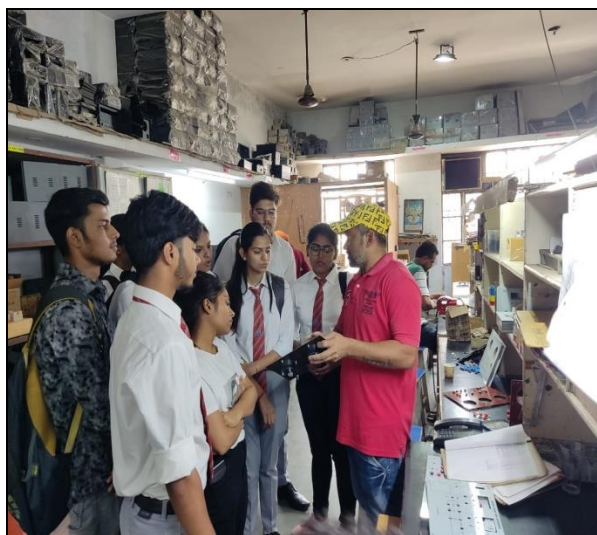
Students learned about the various undergoing projects in which the company uses the various electronic components & communication channel. Students learned how the industry works on the different communication channel and different project during the limited period of time.

INDUSTRIAL VISIT TO MARS EDPAL PVT (LTD) ON 4.5.2022

The department of Electronics and Communication Engineering organized an industrial visit to Mars Edpal Pvt limited ,Saha , Ambala on 4th May 2022 for the students of 4th sem along with the two faculty member of ECE department. The company manufactures and tests the oscillator kits, CRO, Microprocessor kits and other electronic devices .The students of ECE were divided into 4 groups, each of 10 students were taken to various units like drilling unit, winding unit, manufacturing unit and testing unit. The oscillator kits are first drilled, and the circuit connections were done and then tested .The process of twisting the wire to form a transformer is called winding, which is done through winding machine. Also, the PCBs are first sent for masking, and then soldered by soldering machine. The soldering machine solders the area which is not masked.

INDUSTRIAL VISIT TO WONDER AUTOMATION PVT (LTD) ON 9.5.2022

The department of Electronics and Communication Engineering organized an industrial visit to **Wonder Automation Pvt. Ltd.",** on **9 May 2022** for the students of 6th Semester along with the two faculty members of ECE department Mrs. Rachna Manchanda and Ms. Gagandeep kaur. They have shown various projects on : PLC, AC Drives, DC Drives, HMI and SCADA

HIGHLIGHTS OF THE VISIT:

- Visited stepper, compact and high performance servo, AC variable speed, high current output DC and panel mounted drives.
- Exposure to Industry oriented courses.
- Multi-Disciplinary programs
- On-site practical exposure

VISIT TO MORNI HILLS- ENVIRONMENTAL STUDIES FIELD TRIP ON 05 MAY 2022

To undertake the Environmental Studies Field Work which is a part of the subject EVS (EVS-101-18) course outcome "The students will gain practical knowledge by visiting wildlife areas, environmental institutes and various personalities who have done practical work on various environmental Issues", A visit to Morni Hills was organized by Department of ECE , CEC , Landran on 5th May 2022. 85 students were taken for the field work along with 4 faculty members. The purpose of the visit was to study the forest ecosystem and biodiversity. Students visited Morni Fort and Nature Park there.
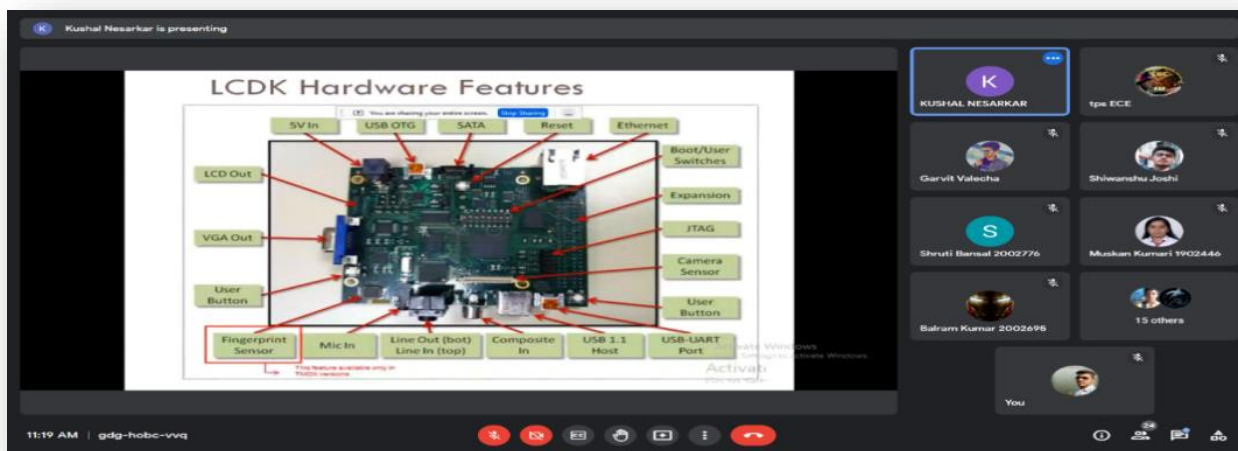

INDUSTRIAL VISIT TO CDAC MOHALI ON 19.5.2022

The department of Electronics and Communication Engineering organized an industrial visit to C-DAC Mohali on 19 May,2022 for the students of 4th sem along with the two faculty member of ECE department, Ms Priyanka Sood and Dr Tarun. Students visited the Bio medical Lab and Cyber Security Lab and learnt different aspects of corporate world, technical and non technical. Students highly motivated to gain practical exposure of equipments and tools during this industrial visit.

HIGHLIGHTS OF THE VISIT:

- Electronics Product Design & Technology (EPDT),
- Very Large Scale Integration (VLSI) Design
- Embedded Systems (ES) and Information Technology (IT).
- Hydroponic farming
- Artificial intelligence key points
- Mac operating system

TWO DAYS WORKSHOP ON T1 DSP PROCESSOR AND APPLICATION: 28.4.2022-29.4.2022

To acknowledge the students with the practical application related to **TI DSP Processor and Applications,** TPS (Techcomm Professional Society), Department of Electronics and Communication Engineering organized two days' workshop with Mr. Kushal Vishnu Nesarkar (Embedded System Engineer, Ed Gate Technologies). About 50 students of ECE department attended the workshop. It helps the students to learn more about following technologies:TMS320C6748 DSK , Signal Processing ,LTI system implementation ,Digital Filter Design ,Configuring C6748 board and Real time implementation of Audio/Echo Delay lines.

FDP ON ARTIFICIAL INTELLIGENCE AND CYBER SECURITY- HANDS-ON TRAINING: 6.6.22-10.6.22

5- days Faculty Development Program on "Artificial Intelligence and Cyber Security- Hands-on Training" was organized by Department of CSE, IT and ECE of CEC Landran from 6th June to 10th June 2022. The inaugural ceremony was organized on 6th June 2022 and was attended by Dr. Mala Kalra, NITTTR Chandigarh, Campus Director, Dr. P. N. Hrisheekesha, Director Principal, Dr. Rajdeep Singh, Heads of the Department- Dr. Vinay Bhatia, Dr. Sukhpreet Kaur, Dr. Sushil Kamboj along with 50 participants. This Faculty Development Program provided a common platform to the persons from academia and industry to share their experiences and learning in Artificial Intelligence and Cyber Security. A series of sessions that included expert talks by eminent speakers and hands-on training sessions on python, R, weka were part of this FDP. The major course contents of FDP were related to Machine Learning Techniques - and Applications, Metaheuristic based Multi Objective Optimization, Software/web tools for detection of forgery in cyber space, Data Analytics for Cybersecurity, Machine Learning using IoT. Hands on session on Introduction to Python libraries for data acquisition and handling, Deep Learning Model, Machine Learning algorithms with R/Weka provided participants practical aspects of Artificial Intelligence

PRIZE IN WOMEN IDEATHON PUNJAB22

The event **Women Ideathon Punjab22**, sponsored by Startup Punjab focused on empowering Women Entrepreneurs. It was a pleasure to have Sh. Sibin C. IAS, Secretary – cum- Director Industries and Commerce cum SSNO, Punjab join in (virtually) as the Chief Guest. Sh. Deepindar Dhillon, Joint Director, Startup Punjab also graced the occasion.

1st prize - Dr. Manisha Medi Clinic, Shalby Hospital, Mohali - "Women Wellness Clinic"
2nd prize - Diya and Gursimran, CCT Landran - "Vegan Meat",
3rd prize - Rishika Gupta & Dr Sonica, CCT Landran - "Biosensor for Pesticide Detection",
4th prize - Dr. Vipasha Sharma, Mkelly Biotech - "Vegan Sausages Product of Button/oyster Mushroom"
5th Prize - Dr. Sukhdeep Kaur, CEC Landran - "Low cost-effective and Efficient Method for Brain Tumor Detection using Microwave Imaging" and Dr. Sneh Bansal, CCE Landran - "Ek Nayi Asha"

70 teams were registered for the event out of which 23 teams were shortlisted based upon their innovation, idea, novelty and uniqueness. Among them, top 5 positions were bestowed to the winners. **Dr Sukhdeep Kaur and Ms Gagandeep Kaur from ECE department** bagged **5th position** and won **cash prize of 5000Rs.**

STUDENT ACHIEVEMENTS

An event called "Navdhara" was held on 19th April, 2022 at Dev Bhumi University, Dehradun to display science projects. There were total 60 teams from 30 different colleges. **Akshay Verma and Simon Roy from ECE** bagged **1st position of Rs. 1 Lakh** in Navadhara 2022 for Project- 3D Printer under the guidance of Ms. Nidhi and Dr. Dinesh.

PLACEMENTS

- **Yash Baliyase from ECE** grabbed a package of **8.5 lakhs** just at the beginning of his career which is an immensely great start for any fresher.
- **Maninder Pal Singh** got placed in Play Simple Games Private Limited grabbed a package of **20 LPA** as a Business Analyst.
- Our **80 students from ECE** department got placed in BOSCH GLOBAL with package of **7 LPA**.
- **1 student** from ECE department grabbed package of **5 LPA**.

SCI/SCIE PUBLICATIONS

Many of our Faculty members have published research papers in SCI and SCIE Journals.

- ➢ Dr. Mohit, "A hybrid machine learning technique for feature optimization in object-based classification of debris-covered glaciers, **Elsevier** - Ain Shams Engineering Journal-**SCI.**
- ➢ Gagandeep Kaur , "A low cost and efficient breast cancer detection method with a Staircase Shaped Ultra Band Dielectric Resonator Antenna using Monostatic Radar Based Microwave Imaging Technique", SADHNA journal-**SCIE.**
- ➢ Ashima Kalra, "Optimization of Electric Automation Control Model Based on Artificial Intelligence Algorithm", Wireless communication and Mobile computing/Hindawi-**SCIE.**
- ➢ Ashima Kalra, "A comparative analysis of block chain in enhancing the drug traceability in edible foods using multiple regression analysis" , Journal of Food quality/Hindawi-Wiley-**SCIE**

BOOK CHAPTERS PUBLISHED

Many of our Faculty members have published book chapters with renowned publishers like CRC press Taylor Francis and Springer.

- ➤ Ashima Kalra, Empirical Investigation of the Use of Artificial Neural Networks (ANN) for Lung Cancer Disease Diagnosis, in Book: Lecture Notes in Networks and Systems" (LNNS), **Springer.**
- ➤ Dr. Ramanpreet Kaur**,** Preliminary Study of Retinal Lesions Classification on Retinal Fundus Images for the Diagnosis of Retinal Diseases, in Book : Artificial Intelligence applications for health care- **CRC Press (Taylor & Francis).**
- ➤ Dr. Bhawna Tandon, Unified Smith Predictor", in Book :Smart Electrical Grid System: Design Principle, Modernization, and Techniques, **CRC Press, Taylor and Francis.**

FACULTY CERTIFICATIONS

We have got online certifications on different courses from different platforms like Upgrad, Udemy, research academy, Courseera, AWS etc during the month of April to June 2022.

Name of faculty	No. of certifications	Certification agency	Title of certification
Dr. Rinkesh Mittal	2	1. UpGrad 2.Researcher Academy	1. Building Digital Transformation Strategies 2.Ethics responsibilities for peer reviewers
Dr. Mohit Srivastava	1	Research Academy,	How to manage and publish research data,
Dr. Dinesh Arora	2	Researcher Academy	1. Making Academia Industry Collaboration work 2. How to conduct eveidence based research
Dr. Pooja Sahni	2	1. UpGrad 2.Researcher Academy	1. Building Digital Transformation Strategies 2.How to peer review a review article
Dr. Ankur Singhal	2	1. Linkedin 2. Research Academy	Java What is peer review
Dr. Abhishek Sharma	3	1. Coursera(2), Researcher Academy	1. Create and Design digital products using Canva, 2. Tesla Stock price prediction using facebook prophet, 3. How to promote your research as an early career researcher
Dr. Simarpreet Kaur	2	AWS Academy	AWS Academy Graduate - AWS Academy Cloud Foundations
Rachna Manchanda	2	Researcher Academy Elsevier	1.How to secure funding - ECR edition 2. Introduction to the certified Peer Reviwer courses
Preeti Bansal	2	AWS Academy	AWS Academy Graduate - AWS Academy Cloud Foundations
Nidhi Chahal	3	AWS,	AWS Academy Graduate - AWS Academy Cloud Foundations,
Ashima Kalra	2	1.coursera 2. UpGrad	1.Machine Learning Pipelines with Azure ML Studio 2.Artificial Intelligence in the Real World
Aanchal Gupta	2	AWS Academy	AWS Academy Graduate - AWS Academy Cloud Foundations
Gagandeep Kaur	2	Aws academy	AWS Academy Graduate - AWS Academy Cloud Foundations
Vikas Malhotra	2	Researcher Academy Elsevier	1. Make your data reusable- Improving Data Publishing Practices in Research 2.How to prepare a proposal for a review article

STUDENT MOOC CERTIFICATIONS

We have got approx. 120 student MOOC certifications from different online certification platforms like Coursera, Udemy, Swayam, AWS, future learn ,skill up, Technophilia, Hebeon technologies, pantech solutions, AWS Educate, KPIT, Great Learning, GUVI etc. in the month of June 2022 on various courses like c++, Arduino,pcb design,iot wireless,SQL,8051 microcontroller , python etc.

PATENTS

- ➢ Waste water Management System, PIE No. 1113
- ➢ Bore well Evacuation System, PIE No. 1119
- ➢ Aseptic Doorbell (System & method for sterilized doorbell), PE No. 1047
- ➢ Hover Road Monitor, PIE No.1126

CHIEF EDITOR MESSAGE

This newsletter is intended to be published quarterly in a year. This inaugural issue is a brief account of the important events held from April to June 2022. It is expected that wide support for this mission will be provided through the reader's valuable suggestions and comments. This is only a small step towards a long journey. This issue of newsletter should inspire all of us for a new beginning enlighten with hope, confidence and faith in each other in the road ahead.

Chief Editor: Ms Ashima Kalra