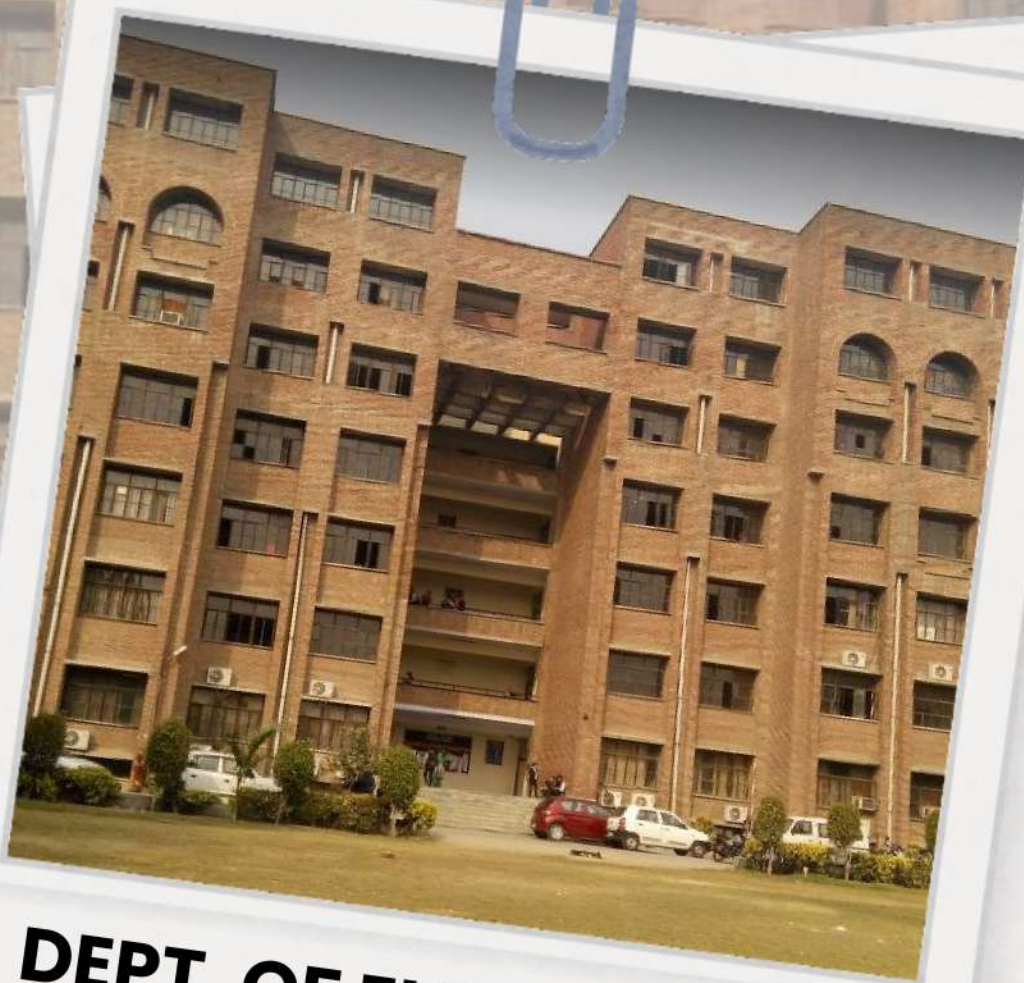




Maharaja Surajmal Institute of Technology
C4, Janakpuri, Delhi 110058

ELEKTRONEWS 2024



DEPT. OF ELECTRONICS

VOL. 5

JAN-DEC '24



Maharaja Surajmal Institute of Technology
C4, Janakpuri, Delhi 110058

Department of Electronics and Communication





FROM HOD'S DESK

Prof. Neeru Rathee

B.Tech, M.Tech, Ph.D (ECE) Experience: 14+ years

Greetings from the Department of Electronics and Communication Engineering at Maharaja Surajmal Institute of Technology, New Delhi! It gives me immense pleasure to lead the Department of Electronics and Communication Engineering which is striving towards the goal of imparting quality education to the students to achieve academic excellence.

Since its inception in the year 2001, the department has maintained an exemplary academic record. We have been accredited by the National Board of Technical Education (NBA) and also National Accreditation Assessment Council (NAAC). We are associated with professional bodies like ISTE.

The major strength of the ECE department is a team of well qualified and dedicated faculties who are continuously inspiring the students for their academic excellence. The department has well-equipped laboratories with modern instrumental facilities. The department has arranged several industrial visits and workshops for our students in this semester.

The motto of the department is to provide quality technical education to make the students industry-ready. We promote teamwork among students through projects and co-curricular activities. The excellent infrastructure, dynamic teaching staff along with training and placement cell ensure a bright future to the students. The faculty members are involved in research and development activities and are pursuing their Ph.D., in their related domains.

We are assured that our students will rise as assets not only to the institution and to the organization they join, but to the society at large. With this, I would like to congratulate the students and staff for their brilliant achievements and wish them a great future.

"All the Best"



ECE Department Vision & Mission

VISION

ECE department strives to become a centre of quality education to meet the global technological needs for the benefit of mankind.

MISSION

M1: To impart high quality education in the field of Electronics & Communication Engineering to meet the national and global challenges.

M2: To provide adequate facilities, infrastructure, and environment to the students as well as faculty members thereby creating an ambience conducive for teaching-learning process.

M3: To empower the students by enhancing their soft skills and ethics to create social awareness and imbibe national values so as to become good citizen.

M4: Creating a thrust for life-long learning through interaction with outside world on contemporary issues and technological trends.

PEO's and PSO's

Programme Educational Objectives (PEO's)

PEO1: To prepare ECE graduates with strong foundation in engineering and technology for personal and professional growth.

PEO2: To prepare ECE graduates with capability of serving and leading various organizations with acquired technical skills and knowledge.

PEO3: To prepare ECE graduates with professional competence to successfully attempt various competitive exams, pursue higher studies, research and other professional activities.

PEO4: To prepare ECE graduates with ability to address the challenging needs of society with ethics and integrity in global context.



Programme Specific Outcome (PSO's)



1. Apply fundamentals of basic sciences and Electronics & Communication Engineering to develop core and multidisciplinary technology for industrial and societal needs.
2. Apply the acquired technical knowledge for successful professional career in the field of Electronics & Communication Engineering and qualifying in various competitive examinations held at national and international level.

Practices Followed in Department

Mentoring

A mentor guides a group of twenty students. The objective of mentoring is to improve the academic performance of the students. The mentors interact with students and identify if they have any learning barriers. Mentors work with students individually to help students to work through difficult issues so that they can stay focussed in the classroom and get the maximum benefit.

COURSE BASED PROJECTS

The students are driven to implement course based projects as an outcome of their laboratory course. This method intends creative imitation leading to research and innovation. Projects are developed for laboratory courses of every semester and are presented.

GUEST LECTURES

Guest speakers from industry/academics are invited to deliver lectures on emerging technologies. These lectures give students exposure to industry oriented technologies and perspective of the guest speaker's field of work or expertise. One important benefit that is derived from having a guest speaker is the enhancement of the students' educational experiences.

ONLINE RESOURCES

Various digital platforms like Coursera at the college provides e-learning opportunities through online courses in many fields, such as Programming in C, Data Structures and Algorithms using Python Programming, Introduction to DBMS etc.

AWARDS

Awards for Academic excellence are given to meritorious students, Gold medallists and to Branch Toppers with Prize money for first and second position.

Students achievements (Jan 2024 onwards)

1. Akanksha Verma's achievements:

- a) 4 x 200m Relay Race: 1st Place, 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- b) 100m Race: 1st Place, 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- c) Discus Throw: 3rd Place, 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- d) 800m Race: 2nd Place, 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- e) 200m Race: 1st Place, 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- f) Shotput: 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- g) Javelin Throw: 29-30 Jan 2024, MSIT, Janakpuri, New Delhi
- h) Best Athlete - Female (2023-24): 1st Place, 3 Feb 2024, MSIT, Janakpuri, New Delhi
- i) Achieved 3rd place in the Dr. Bharat Ram Sports Meet held at Lady Shree Ram College for Women in New Delhi from March 4th to 6th, 2024

2. Anshuman Khanna participated in the ECA Rapid Chess Tournament in the Open Category and earned 3 points out of 7 rounds. He also took part in the Shri Ram Cubing Challenge 2024, where he was recognized as the Fastest Debutant and received a certification of merit.

3. Aum Vashisht served as an Executive Board Member in the role of Rapporteur at the WHO during the IGDTUW MUN, where he was awarded an appreciation certificate.

4. Tushar Mishra, Vedant Arora, and Sidharth Bhardwaj all competed in the Rajasthan Police Hackathon, which took place from January 17th to 18th, 2024.

5. Aayushmaan Garg participated in the Hack2Skills - Build for Bharat event on February 10, 2024.

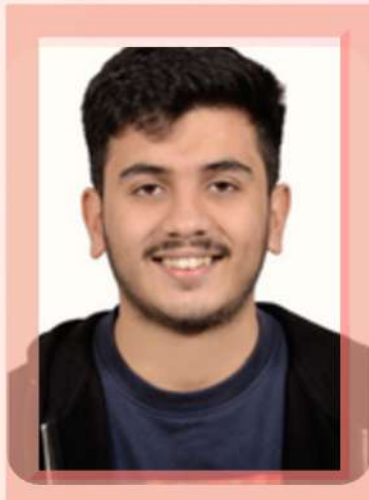
Entrepreneurship and Startups

1. Ruchi Dehwal, who is currently in her 4th year of studies, has embarked on her entrepreneurial journey with her company, **"BANJARA BAZAAR FASHION."**

Placement Record



Nishtha Bali
Company Name: ION
Package: 17.3LPA



Aum Vashisth
Company Name: ION
Package: 17.3LPA



Kriti Gupta
Company Name: ION
Package: 17.3LPA



Major Companies Placement Record



Maharaja Surajmal Institute of Technology			
Batch - 2024			
ECE			
Sr.No.	Company Name	CTC (LPA)	Total No of Students
1	ZS	13.65	08
2	Kimbāl	8	08
3	Polestar	7.7	06
4	TalentServe	7.5	15
5	Vecmocon Technologies	7	01

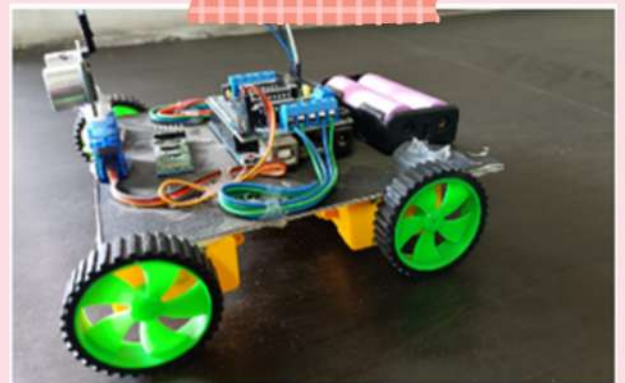
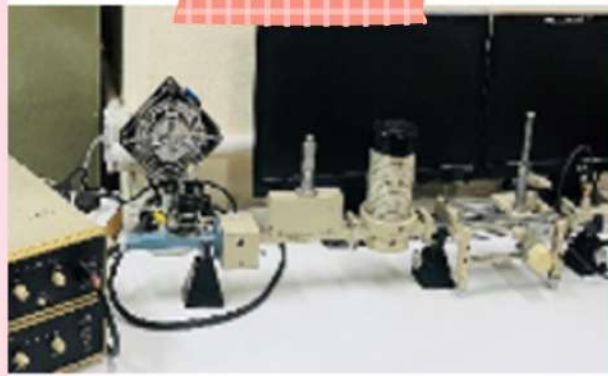
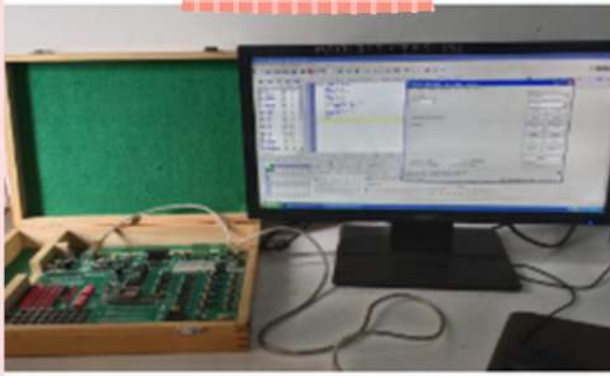
Overall 111 students of ECE branch got placed in major companies. Several Students have multiple offers from various companies as well.

Technological Advancements in Lab

Technological Advancements in Lab

S.No.	New Lab Name	Facilities Created
4th Year Labs 2023-24		
1	Transmission Lines waveguide and Antenna	1. Computer Purchased (qty 20) 2. Licenced Software purchased (CST Microwave Studio) 3. Lab manuals drafting
	Antenna Design & Radiating System	
2	Machine Learning	1. Software installation Jupiter & collab Python Language (open source) 2. Lab manuals drafting
3	Data Analytics Lab	1. Software installation R Software (open source) 2. Lab manuals drafting
4	Artificial Intelligence Lab	1. Software installation SWI-Prolog (open source) 2. Lab manuals drafting
6	SSMDA	1. Software installation SCI Lab & R Software (open source) 2. Lab manuals drafting
7	Micro Electronics	1. Software installation Tanner Tool Software (open source) 2. Lab manuals drafting
3rd Year Labs 2024-25		
8	Machine Learning and Data Analytics	1. Software installation R Programming (open source) 2. Lab manuals drafting
9	Pattern Recognition	1. Software installation Python software (open source) 2. Lab manuals drafting
10	Unsupervised Learning	1. Software installation Python software (open source) 2. Lab manuals drafting
11	Nature Inspired Biological Optimization Techniques	1. Software installation Jupiter notebook (open source) 2. Lab manuals drafting
12	Supervised Learning	1. Software installation PHYTHON (open source) 2. Lab manuals drafting
13	SSMDA and DA Lab	14 new i7 processor computers are purchased

Picture Gallery for Labs



Journal Paper Published

1. Dr.Tripti Sharma, **Dr.Archana Balyan**, Dr.A.K.Singh "Machine Learning-Based Energy Optimization and Anomaly Detection for Heterogeneous Wireless Sensor Network" in SN Computer Science, August 2024.
2. Rani, Mamta & Yadav, Jyoti & **Rathee, Neeru** & Panjwani, Bharti. (2024). Optifusion: advancing visual intelligence in medical imaging through optimized CNN-TQWT fusion. The Visual Computer. 10.1007/s00 371-024-03495-z.
3. **Garima**. Goel, Nidhi, and **Neeru Rathee**. "Novel fractal pattern based features for EEG-based emotion identification." Biomedical Signal Processing and Control 96 (2024): 106505.
4. **Deshwal, D.** et al. "COVID-19 Detection using Hybrid CNN-RNN Architecture with Transfer Learning from X-Rays". Current medical imaging 20(2024), 1573-405.
5. Anshul Pareek, Poonam Kadian, **Shaifali M. Arora** and Nidhi Gupta. "Telecom customer churn prediction model : Analysis of machine learning techniques for churn prediction and factor identification in telecom sector". Journal of Information and Optimization Sciences(2024)2169-0103.
6. **Chhikara, J.**, Goel, **N. & Rathee**, N. Integrating expert guidance with gradual moment approximation (GMAP)-enhanced transfer learning for improved pancreatic cancer classification. Neural Comput & Applic (2024).
7. P. Nandal, S. **Pahal**, A. Khanna and P. Rogério Pinheiro, "Super-Resolution of Medical Images Using Real ESRGAN," in IEEE Access, vol. 12, pp. 176155-176170, 2024.
8. Nandal, P., **Pahal**, S., Malik, S. et al. Enhancing real time object detection for autonomous driving using YOLO-NAS algorithm with CLEO optimizer. Int. j. inf. technol. (2024).
9. **Sudesh Pahal**, Priyanka Nandal, Nidhi Gupta and Neetu Sehrawat, "Multiple Criteria-Based Intelligent Techniques for Efficient Handover in Next-Generation Networks" International Journal of Sensors Wireless Communications and Control, 2024.

10. Meena Rao, Parul Chaudhary, Amina Jafri, Mohd. Shaikhul Ashraf, "Approaches for New Product Development in Biotechnology: An Empirical Study on Problem Inventory Analysis", African Journal of Biological Sciences, Vol. 6, Issue 6, pp. 6661-6669, 2nd July 2024.

11. Lalit Kumar Sharma, **Meena Rao**, Prabu Selvam, Anand Muley, "Role of E-CRM in effectiveness of Strategic Marketing Planning for customer Retention: An Empirical Study", African Journal of Biological Sciences, Vol. 6, Issue 6, pp. 1606-1609, 13th May 2024.

12. Dhand, Geetika, **Meena Rao**, Parul Chaudhary, and Kavita Sheoran. "A Secure Routing and Malicious Node Detection in Mobile Ad Hoc Network Using Trust Value Evaluation With Improved XGBoost Mechanism." Journal of Network and Computer Applications (2024): 104093.

13. Meena Rao, Parul Chaudhary. "An Efficient Student Result Management System" Journal of Technology 1012-3407, November 2024.

14. Sunakshi Mehra, **Meena Rao**, Ankit Vijay Bansal, Nitasha Rathore, Sagar Sidana, Sandeep Raj, Anurag Sinha, G. Madhukar Rao, Rejuwan Shamim, Neetu Singh, Biresh Kuma "Ethical Challenges and Innovations in AI-Driven Healthcare and Engineering: A Review of Blockchain, Cybersecurity, Data Privacy, and Knowledge Management" in IGI Global 1012- 3407, August 2024.

15. Gupta, R., 2024. Design and Testing of Brushless DC Motors in Fan. Indian Journal of Pure & Applied Physics (IJPAP), 62(11), pp.1012-1021.

16. Navdeep Bohra, **Deepti Deshwal**, Ashish Kumari, Amita Yadav, Anamika Rana "Anomaly detection in online social media through advanced AI techniques and topic modeling" in Proceedings on Engineering Sciences 2683-4111, 2024.

17. Nehra, N., Sangwan, P., & Trivedi, N. (2024). A Novel, Robust and Deep Learning based Speaker Recognition System using Three Different Datasets. Journal of Electrical Systems, 20(10s), 1749-1763.

18. Vishakha ,Nishtha "IoT-Enabled Smart Greenhouse: Real-Time Monitoring and Automated Control for Efficient Agriculture", ISSN 3048- 975X, August 2024.

19. Himani Tomar, Deepti Deshwal, Neelu Trivedi "Convolutional neural network based language identification system: A spectrogram based approach" in Multimedia Tools and applications 1573-7721, Oct 2024.

20. Ralhan, Chavi, Navneet Malik, Prateek Agrawal, Charu Gupta, Nishtha jatana, Divya Jatain, and **Geetanjali Sharma**. "Adaptive Prefix Filtering for Accurate Code Clone Detection in Conjunction with Meta-learning." SN Computer Science 5, no. 6 (2024): 789.

21. Tomar, H., Deshwal, D. and Trivedi, N., 2024. Convolutional neural network based language identification system: A spectrogram based approach. Multimedia Tools and Applications, pp.1-26.

22. Lata, S., Kishore, N., & **Sangwan, P.** (2024). Sentiment analysis on speech signals: leveraging mfcc-lstm technique for enhanced emotional understanding. Proceedings on Engineering, 6(3), 1391-1402.

23. Lata, S., Kishore, N., & **Sangwan, P.** (2024). A Comparative Analysis of CNN-LSTM and MFCC-LSTM for Sentiment Recognition from Speech Signals. International Journal of Intelligent Systems and Applications in Engineering, 12(21), 4392-4402.

24. Singh, S., & **Singh, U.** (2024). Improving solar power forecast from meteorological parameters with regression models. Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, 46(1), 2405-2420.

25. Pahal, S., Nandal, P., Gupta, N., & **Sehrawat, N.** (2024). Multiple Criteria-Based Intelligent Techniques for Efficient Handover in Next-Generation Networks. International Journal of Sensors, Wireless Communications and Control.

26. Sharma, S., Trivedi, V., Barak, N., Anand, A., Kumari, V., & Sheoran, G. (2024). DMD Based Microscopic Fringe Projection Profilometry of Copper-Clad Substrates. MAPAN, 39(4), 943- 954.

Paper presented in national/international Seminars/Conferences

1. Jasmine Chhikara, Nidhi Goel, and **Neeru Rathee** "A Critical Analysis of Transfer Learning Models for Computer Vision Tasks" International Conference on Emerging Technology and Sustainable Solutions (ICESS),2024

2. Prof. Neeru Rathee "ATCNN-DWT Integration: A Combined Approach for Advanced Medical Image Fusion" International Conference on Modeling, Simulation & Intelligent Computing(MoSiCom),2024.

3. Puneet Azad "Piezoelectric Energy Harvesting from pavements: A state of the art review",NCRTCES 2024.

4. Sudesh Pahal "Handover Challenges in Wireless Communications and Their Solutions",ICICC 2024.

5. Sudesh Pahal "Upscaling images usingESRGAN with perceptual loss",ICICC 2024.

6. Sudesh Pahal "Decision making based on Business analysis using R language" ,ICTII 2024.

7. Sudesh Pahal "Digitization in operations management practices in organization",TIPSCON 2024.

8. Anshul Pareek, Nidhi Gupta,Shaifali M. Arora "Telecom Customer Churn Prediction Model: Analysis of Machine Learning Techniques for Churn Prediction and Factor Identification in Telecom Sector",REPSI-2024.

9. Richa Gupta,Sakshi Rajput "'Sustainable Energy Transition: India's Renewable Path to 2030",NCRTCES 2024.

10. Shaifali M. Arora,Anshul Pareek, Poonam Kadian."IOT based water quality monitoring system for Aquaculture",2024 International conference on Artificial Intelligence and Applications(ICAIA),MSIT janakpuri.

11. Neelam Nehra,"Speaker Identification System Using Audio Signal and Deep Learning Method",2024 International conference on Artificial Intelligence and Applications(ICAIA),MSIT janakpuri.

12. Dinesh Sheoran,"Telecom Customer Churn Prediction Model: Analysis of Machine Learning Techniques for Churn Prediction and Factor Identification in Telecom Sector" 2024 International conference on Artificial Intelligence and Applications(ICAIA),MSIT janakpuri.

13. Anshul Pareek, Poonam Kadian, Shaifali M. Arora "Telecom Customer Churn Prediction Model: Analysis of Machine Learning Techniques for Churn Prediction and Factor Identification in Telecom Sector",2024 International Conference on Renewable Energy Potential for Sustainable Initiatives.

14. Chhikara, Jasmine, Nidhi Goel, and **Neeru Rathi**. "Deep Learning Techniques for Pancreatic Cancer Analysis: A Systematic Review and Implantation Prerequisites." *Procedia Computer Science* 235 (2024): 3118–3130.

15. Lata, Suman, Neha Kishore, and **Pardeep Sangwan**. "Deep Learning Approaches and Security Domains in Sentiment Analysis." 2024 First International Conference on Electronics, Communication and Signal Processing (ICECSP). IEEE, 2024.

16. Malik, Sonia, Deepti Deshwal, and Neelu Trivedi. "Analysis Of Various Deep Learning Approaches And Security Domains In Speaker Recognition." International Conference on Data Analytics & Management ICDAM, 2024.

Patents (2024)

1. Garima, Nidhi Goel, **Neeru Rathee**, and Amita Dev have published patent on "A method for Modified Multidimensional Scaling of EEG Signals for Emotion Classification" in 2024.

2. Neetu, Sudesh Pahal, et al. have published patent on "Computer Based Irish Detection Device For Biometric Authentication" in 2024.

3. Dr. Neelam Barak et al. have published patent on "Common-path Digital Holographic Configuration for Quantitative Imaging" in 2024.

4. Dr. Neeru Rathee et al patent "A method of Detecting pain from facial expression using domain adaptation technique" granted in 2024.


5. Dr. Deepti Deshwal, Ms. Vishakha Tomar and Dr. Nishtha et al patent "Customer satisfaction survey Kiosk" granted in 2024.

MOOC Courses (2024)

- 1.** Prof. Pardeep Sangwan has completed NPTEL course on AI using prolog Language.
- 2.** Dr. Deepti Deshwal has completed SWAYAM course on Artificial Intelligence using Prolog Programming.
- 3.** Ms. Neelam Nehra has completed NPTEL course on Data Mining.
- 4.** Prof. Neeru Rathee has completed NPTEL course on NBA Accreditation and Teaching Learning in Engineering (NATE).
- 5.** Mr. Deepak Goyal has completed NPTEL course on Introduction to Internet of Things.
- 6.** Dr. Meena Rao has completed NPTEL course on Introduction to Industry 4.0 and Industrial Internet of Things.
- 7.** Ms. Himani has completed NPTEL course on Introduction to Industry 4.0 and Industrial Internet of Things.
- 8.** Dr. Sudesh Pahal has completed NPTEL course on Deep Learning.
- 9.** Ms. Neha has completed NPTEL course on Deep Learning.
- 10.** Dr. Sakshi Rajput has completed NPTEL course on Introduction to Industry 4.0 and Industrial Internet of Things.
- 11.** Dr. Upma Singh has completed NPTEL course on Analog Communication.
- 12.** Dr. Neetu has completed 2 NPTEL courses on Electromagnetic waves in guided and wireless media, and principles of signals and systems.
- 13.** Ms. Suman Lata has completed NPTEL course Introduction to Internet of Things.

Faculty Achievements (2024)

- 1.** Prof. Archana Balyan was the Chairperson for organizing NATIONAL Conference on Recent Trends in Climate Change, Energy and Sustainability (NCERT CES -2024) at MSIT on 9-10 Nov,2024.
- 2.** Prof. Archana Balyan, awarded Letter of appreciation from Chairman, GB, SMES for efficient and successful organization of "International conference on Artificial Intelligence and Applications " at MSIT
- 3.** Prof. Archana Balyan, Delivered a talk on "India Semiconductor Workforce Development Program" at MSIT on 5th September, 2024.
- 4.** Prof. Archana Balyan, received a Letter of appreciation received from Principal, CCCT College, SIKKIM for conducting student exchange program at MSIT Campus under "EK Bharat Shreshtha Bharat Scheme" launched by Gol on 28th -31st Mar, 2024.
- 5.** Prof. Archana Balyan , MSIT received certificate of appreciation from Controller of Patents, Design and Trademarks, Government of India for participation in "NIPAM, 3rd May,2024.
- 6.** Dr.Neeru Rathee was Co-Session Chair in "National Conference on Recent Trends in Climate Change, Energy and Sustainability (NCERT CES 2024)" held at MSIT on 11-12 November, 2024. Also, presented two papers in the conference.
- 7.** Dr.Neeru Rathee Innovation Ambassador training (Reskilling, Total 21 Sessions of 21 contact hours) conducted by MoE's Innovation Cell & AICTE in July 2024.
- 8.** Dr. Neeru Rathee delivered an expert talk on Importance of outcome-based Learning in today's education system on 24th June, 2024 in 6-Day Faculty Development Program (FDP) on "Holistic Approaches to Student Success: Integrating Pedagogy, Ethics, and Wellbeing" scheduled from June 24th, 2024, to June 29th, 2024, at SGT University.



9. Dr. Neeru Rathee delivered an expert talk on "Interpretation of signal Transform" was delivered by Prof. Neeru Rathee on May 7, 2024, held in Seminar Hall No. 206 MSIT.

10. Dr. Neeru Rathee received Research Excellence Award from SMES in 2024.

11. Prof. Neeru Rathee delivered an expert talk on "Basic Tools of Engineering Research: Filters and Their Applications" on December 7, 2024, held in Seminar Hall No. 206. She covered topics such as filter types, design techniques, and applications.

12. Dr. Neeru Rathee presented an orientation session for 5 mentee institutes about Incubation Cell in the institute. She delivered expert talks at Daulat Ram College. regarding Role of IPR for academic Institution.

13. Prof. Neeru Rathee delivered a session on Role of Tech for Change programme for empowering youth in collaboration with Nasscom Foundation on 11.12.2024


14. Prof. Neeru Rathee served as Session Co- Chair of "National Conference on Recent Trends in Climate Change, Energy and Sustainability (NCERT CES 2024)" held at MSIT on 11- 12 November, 2024

15. Dr Neeru and Dr Richa have organised a 6 -day Faculty Development Programme on IOT for the faculty from 15.01.2024 to 19.01.2024.

16. Prof. Puneet Azad was Co-Convener and Co-Session Chair in "National Conference on Recent Trends in Climate Change, Energy and Sustainability (NCERT CES 2024)" held at MSIT on 11-12 November, 2024. Also, presented two papers in the conference.

17. Prof. Puneet Azad awarded with certificate of appreciation for Judging the "Dark Patterns Buster Hackathon" at Acharya Narendra Dev College, University of Delhi 30.01.2024

18. Prof. Puneet Azad Delivered a talk on "India Semiconductor Workforce Development Program" at MSIT on 5th September, 2024



- 19.** Dr.Sudesh Pahal received Research Excellence Award from SMES in 2024.
- 20.** Dr. Sudesh Pahal received Rs. 54000/- grant to host Junior SIH 2023 organized by MoE and AICTE as nodal center head 6.2.2024
- 21.** Dr Sudesh Pahal honored with certificate and Rs. 11000/- by Dr. Kiran bedi for Second Runner up position in National Innovation Award(2024)
- 22.** Dr. Sudesh Pahal presented an orientation session for 5 mentee institutes. She delivered expert talks at Bhagini Nivedita College, University of Delhi and SPMR Govt. college, Jammu. Presented poster for Innovation cell, MSIT in regional meet organized by MoE, Gol at Amity University Noida.
- 23.** Dr. Sudesh Pahal presented poster at IIC regional meet 2024 organized by MoE, Gol at Amity University Noida and selected as member of North region IIC Consortium.
- 24.** Dr. Sudesh Pahal was a resource Person in Impact lecture Series funded by MoE at Bhagini Nivedita College, University of Delhi.
25. Dr Sudesh Pahal, was session Coordinator in "National Conference on Recent Trends in Climate Change, Energy and Sustainability (NCERT CES 2024)" held at MSIT on 11-12 November, 2024.
- 26.** Innovation Ambassador training (Reskilling, Total 21 Sessions of 21 contact hours) conducted by MoE's Innovation Cell & AICTE in July 2024, headed by Dr Sudesh Pahal.
- 27.** Dr Sudesh Pahal received Letter of appreciation from Director MSIT, in Feb, 2024.
- 28.** Dr Meena Rao received the Research Excellence Award from SMES in 2024.
- 29.** Prof. Neeru Rathee, Dr Shaifali M. Arora, Dr Nidhi Gupta organised a 3 Days workshop on IOT for students and trained around 202 students from 21.02.2024 to 23.02.2024.

30. Dr Shaifali, was session Coordinator in "National Conference on Recent Trends in Climate Change, Energy and Sustainability (NCERT CES 2024)" held at MSIT on 11-12 November, 2024.

31. Dr Shaifali received Certificate of Appreciation for delivering an expert lecture in a Webinar on IOT & Project Automation organised by Department of Information, Communication and Technology, Tecnia Institute of Advanced Studies, Rohini on 11.05.2024.

32. Dr.Richa Gupta appointed as Regional coordinator at Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space (DoS), Govt. of India is a premier Training and Educational Institute set up for training professionals in the field of Remote Sensing.

33. MSIT collaborated with Delhi Police and successfully conducted a Hackathon on 01/03/2024 based on Cyber Security. The event was organised by Prof. Pardeep Sangwan, Prof. Naveen Dahiya, Dr. Deepti Deshwal, Ms. Jasmine Chikkara and Dr. Sitender Malik.

34. MSIT received appreciation certificate for successfully organizing an event on "Intellectual Property Rights (IPR) & Patents and Design Filing" in collaboration with the Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM) by the IPR Cell, MSIT.under the National Intellectual Property Awareness Mission (NIPAM). The event was organized by Dr. Deepti Deshwal, Convener IPR cell, MSIT.

35. Dr Aman hosted a special issue of MAPAN (SCIE indexed journal) in Feb,2024.

36. Dr.Geetanjali Sharma delivered a keynote on "EEG based automatic detection of neurological disorders" on October 26, 2024, at Third international conference on advances in electrical and electronic engineering" held at Coimbatore, India.



37. Dr Geetanjali Sharma served as a session chair in 7th International Conference on Recent Trends in Image Processing & Pattern Recognition (RTIP2R) held on 20th Dec, 2024 organised by IIIT Bhopal, India.

38. Dr Geetanjali Sharma served as a Guest Editor in Journal Proceedings of Engineering Sciences (Scopus Indexed) from Feb 2024.

39. Dr Geetanjali Sharma served as a Tropical Editor in Journal SN Computer Sciences (Scopus Indexed) from Jan 2024.

40. Dr Geetanjali Sharma served as a Guest Editor in Journal Proceedings of Engineering Sciences (Scopus Indexed) from Nov 2024.

41. Dr Geetanjali Sharma served as a Topic Editor in Journal Frontiers in Computational Neuroscience (SCI Indexed -IF 2.24) from Oct 2024.

42. Dr. Geetanjali Sharma served as a co-convener in an International Conference ICAIA 2024 organised by MSIT in collaboration with Wentworth Institute of Technology, Boston, USA in March 2024.

43. Prof. Neeru Rathi, Prof. Pardeep Sangwan, Dr. Sudesh Pahal, Dr. Meena Rao, Dr. Richa Gupta, Dr. Deepti Deshwal, Dr. Geetanjali Sharma and Ms. Garima have received Research Excellence Award on 3rd Feb 2024.

Webinars/ Industrial Visits/FDP organized by the Department

- 1.** Industrial visit to STMicroelectronics, Greater Noida, on 23rd Feb., 2024.
- 2.** Industrial visit to India International EV Show 2024 at Yashobhoomi on 15th March, 2024.
- 3.** A Visit to Atal Incubation Center, GGSIPU was conducted for 2nd year students on 11-10- 2024 by ECE Department.
- 4.** A Visit to IMC 2024, Pragati Maidan was conducted for 2nd and 3rd year students on 16/10/2024 by the ECE Department.
- 5.** An Industrial visit to DUCAT, Vikaspuri, New Delhi was conducted for 3rd year students on 25/10/2024 by the ECE Department.
- 6.** One Week FDP on "Internet of things" was organized by the ECE Department in association with Brain Mentors held from 15/01/2024 to 19/01/2024.
- 7.** One Week FDP on "Developing Healthy work culture at workplace" was organized by ECE Department from 2nd Dec 2024 To 6TH Dec 2024.

Seminars, Workshops, Conferences, Trips and guest lectures organized.

- 1.** ECE Department, MSIT organized a Seminar on "Emotional Intelligence" on May 06, 2024 at 10 am, in association with ICT Academy under Information technology and Digital Services Department, Govt. of Tamilnadu.
- 2.** An online workshop has been organized by Intellectual Property Right Cell and ECE Department on "Intellectual Property Rights (IPR) & Patents and Design filing" for students and faculty on 03rd May, 2024 from 11:00am to 12:00pm. Dr. Deepti Deshwal, Convener IPR Cell in coordination with Dr. Bharat N Suryawanshi, Assistant Controller of Patents, and RGNIPM conducted the program.
- 3.** A mock interview for the third-year students of ECE was organized on May 3, 2024. The Mock interview was organized by the ECE-Morning Fourth students Year for their juniors to simulate a real-world recruitment process to prepare students for future job opportunities.
- 4.** An Expert lecture on the topic "Basic tools of engineering research: Filters and their applications" was delivered by Prof. Neeru Rathi in ECE department on 07/12/2024.
- 5.** A two day Workshop on "Fabrication of Semiconductor Devices and Circuits (In Hindi Language)" was organised in SRM University, Delhi-NCR Campus by ECE Department on 20/09/2024.
- 6.** A Half Day Seminar on "Role of Communication in Career" in collaboration with NASSCOM was conducted in ECE Department on 20/09/2024
- 7.** An Expert lecture was delivered by Prof. Neeru Rathi on "Interpretation of Signal transform" on 04/05/2024.

8. Expert Talk on "Unlocking the Door to Top Master's Program: Strategies for Success" was organised by IMS Learning Pvt. Ltd. in the ECE Department on 07/09/2024.

9. A Seminar on VLSI and Embedded systems was organised in the ECE Department by Mr.Vaibhav Mishra(IEEE PES) on 29/04/2024.

10. On 13 March 2024, Jamboree organized a seminar on "Career Options via GRE and GMAT" in Seminar Hall 406 of Maharaja Surajmal Institute of Technology for the students of the 6th sem of the CSE and ECE departments.

11. A workshop on "Interview cum Resume Preparation" was held for third-year ECE students on 7th March 2024 from 10.30 am to 12 pm. The agenda was to make the students prepare a crisp resume and be interview-ready.

12. On 12 Feb, 2024, a seminar & "CyberCon" was conducted by Broadcast Society MSIT in collaboration with ECE and CSE Department.

13. The Department of Electronics and Communication Engineering organized a 1-Week workshop on IoT for Students from 22nd Feb, 2024 to 24th Feb, 2024

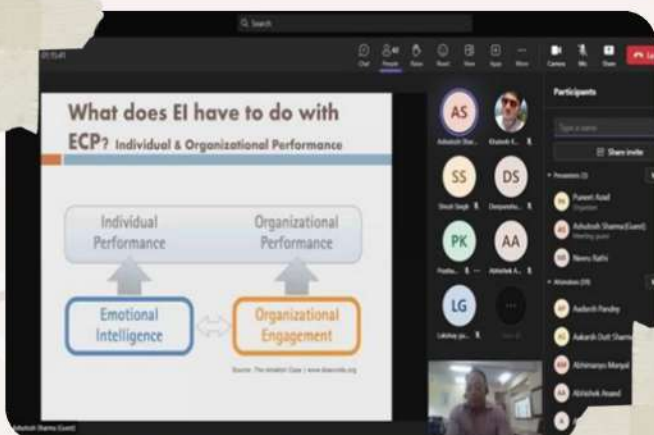
Outreach Activity (2024)

1. **Prof. (Dr.) Neeru Rathi** delivered a session on **Importance of outcome-based Learning in today's education system in** 6-Day Faculty Development Program (FDP) on "**Holistic Approaches to Student Success: Integrating Pedagogy, Ethics, and Wellbeing**" scheduled from **June 24th, 2024, to June 29th, 2024**, at SGT University. Dr. Sudesh Pahal hosted Junior SIH 2023 organized by MoE and AICTE as nodal center head on 6th February 2024.
2. **Prof. (Dr.) Neeru Rathi** Delivered an expert talk in MSIT on Interpretation of Signal Transform on 4th May, 2024.
3. Prof. (Dr.) Neeru Rathee Trained ECE and EEE students in IOT from 22nd Feb. -24th Feb.2024.
4. **Dr. Sudesh Pahal** presnted online orientation session for 5 mentee institutes on 30th March 2024.
5. **Dr. Sudesh Pahal** hosted Junior SIH 2023 organized by MoE and AICTE as nodal center head on 6th February 2024.
6. **Dr. Richa Gupta** is working as a Regional coordinator at Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organization (ISRO), Department of Space (DoS), Govt. of India is a premier Training and Educational Institute set up for training professionals in the field of Remote Sensing.

Events Organized

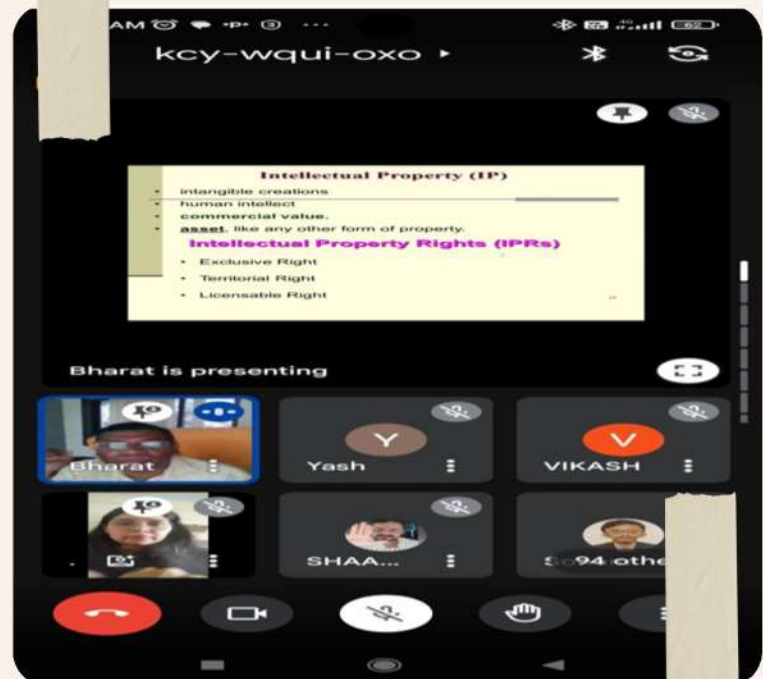
1. Seminar on Emotional Intelligence:

ECE Department, MSIT organized a Seminar on "Emotional Intelligence" on May 06, 2024 at 10 am, in association with ICT Academy under Information technology and Digital Services Department, Govt. of Tamilnadu. The first talk was delivered by Mr. Ashutosh Sharma, an entrepreneurial Business HR Leader & Tech Enthusiast with two decades of cross-cultural expertise of steering transformation and delivering Business & strategic HR value, Management/Stakeholders Advisory, towards curating People & Tech solutions, for immediate and long term success ratios. He is currently associated with HR Technology, SaaS Organization and is an alumnus from Management Development Institute, Gurgaon. The second speaker was Mr. Anjani Kumar Sinha, who is an Entrepreneur and CEO of AdCanyon Technologies, a data analytics firm. He is an Alumnus of IIM Indore and of the University of Texas. With over 15 years of corporate experience holding positions as CIO, Head Marketing, Business Head with Leading firms such as Karvy, Manipal Group and Aditya Birla Group, he has received Export Excellence Award from FICCI and have won data analytics competition in the US. He has also been a faculty of data analytics and entrepreneurship at the YMCA-Delhi. The session was attended by Prof. Archana Balyan, Director, MSIT, Prof. Neeru Rathee, HOD, ECE, Prof. Puneet Azad and students of B.Tech ECE (4th and 6th Sem).



2. Workshop on “Intellectual Property Rights (IPR) & Patents and Design filing”

An online workshop has been organized by Intellectual Property Right Cell and ECE Department on “Intellectual Property Rights (IPR) & Patents and Design filing?” for students and faculty on 03rd May, 2024 from 11:00am to 12:00pm. Dr. Deepti Deshwal, Convener IPR Cell in coordination with Dr. Bharat N Suryawanshi, Assistant Controller of Patents, and RGNIIPM conducted the program. The audience gained benefits in terms of intricacies of intellectual property law, and learn how these legal frameworks safeguard the ideas, promote innovation, and drive economic growth.



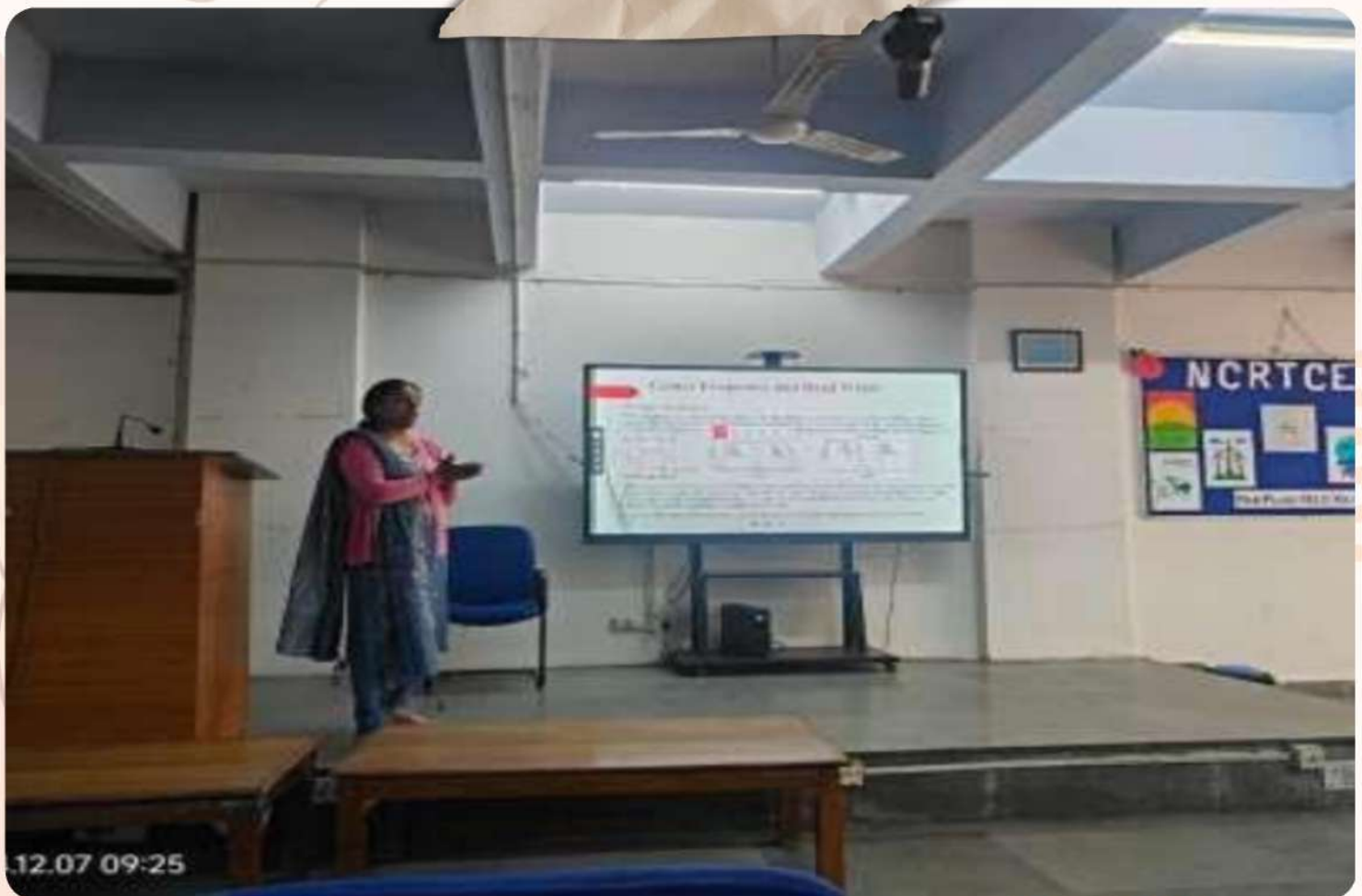
3. Mock Interview by ECE department for third year students:

A mock interview for the third-year students of ECE was organized on May 3, 2024.. The Mock interview was organized by the ECE-Morning Fourth students Year for their juniors to simulate a real-world recruitment process to prepare students for future job opportunities. It took place in the 204 Laboratory of the Electronics and Communication department, conducted entirely offline. Students were grouped in pairs and instructed to bring their resumes. The ambiance simulated a real interview scenario that students might encounter in actual job applications. Each student received constructive feedback on their performance, along with guidance on areas for improvement in interview skills. This opportunity proved highly beneficial for students as they gained valuable insights from the interviewers, helping them identify areas for enhancement in preparation for the upcoming placement season. The Mock Interview Drive focused on enhancing students' understanding of the industry and providing valuable guidance.



4. . Expert Talk on “Basic Tools of Engineering Research: Filters and Their Applications”

The Department of Electronics and Communication Engineering organized an expert lecture as part of its initiative to enrich the academic and research capabilities of students and faculty members. The session was delivered by Prof. Neeru Rathee, an esteemed academician with significant contributions to engineering research and applications. The talk was aimed at introducing fundamental tools of engineering research with a focus on filters and their varied applications in modern technology.



5. Seminar on "Role of Communication in Career" in association with NASSCOM

The Department of Electronics and Communication Engineering (ECE) and Electrical and Electronics Engineering (EEE) organized a seminar titled "Role of Communication in Career" in collaboration with NASSCOM. The seminar was aimed at highlighting the significance of communication skills for students aspiring to excel in their professional careers. The seminar was held on 20th September 2024 at Seminar Hall 206, MSIT, from 12:30 PM to 2:30 PM. Ms. Shreya Chakraborty, an accomplished professional and expert in communication skills, was invited as the guest speaker. She delivered an insightful talk on the importance of communication in the workplace, particularly in the context of engineering and technology careers. The session covered a range of topics, including: - The role of communication skills in career progression - Balancing technical expertise with interpersonal skills - Effective ways to communicate in professional settings Ms. Chakraborty's presentation was well-structured and included real-world examples, making it highly engaging for the attendees



6. Workshop on “Fabrication of Semiconductor Devices and Circuits (In Hindi Language)”

Two Days National Workshop on Fabrication of Semiconductor Devices and Circuits, organized by the Department of Electronics and Communication Engineering (ECE) at SRM Institute of Science and Technology, was held on 20th and 21st September 2024. Sponsored by AICTE-Vibrant Advocacy for Advancement and Nurturing of Indian Languages (AICTE-VAANI), the workshop aimed to facilitate the dissemination of knowledge on semiconductor fabrication and circuit integration, with a special emphasis on delivering the content in Hindi. The workshop successfully provided a comprehensive overview of the latest trends and challenges in semiconductor fabrication and circuit integration. It created a platform for intellectual exchange between academia and industry, offering participants the opportunity to engage with experts and enhance their understanding of emerging technologies in the semiconductor field.



7. Expert Talk: Interpretation of Signal Transformation by Prof. Neeru Rathee;

On May 4th, 2024, the Department of Electronics and Communication Engineering at MSIT hosted an enlightening expert talk on the interpretation of signal transforms, with a special focus on the Laplace transform and its graphical representation. Prof. Neeru Rathee, an eminent authority in the field, graced the occasion as the keynote speaker, captivating the audience with her profound insights and expertise. Prof. Neeru Rathee's expert talk offered a comprehensive exploration of signal transformation, with a particular emphasis on the Laplace transform and its graphical representation. Attendees were provided with a deep understanding of the theoretical foundations and practical applications of this indispensable tool in signal processing. The session commenced with an overview of signal transforms, setting the stage for a detailed discussion on the Laplace transform. Prof. Rathee elucidated the mathematical framework underlying the Laplace transform, clarifying its significance in analyzing complex signals and systems.



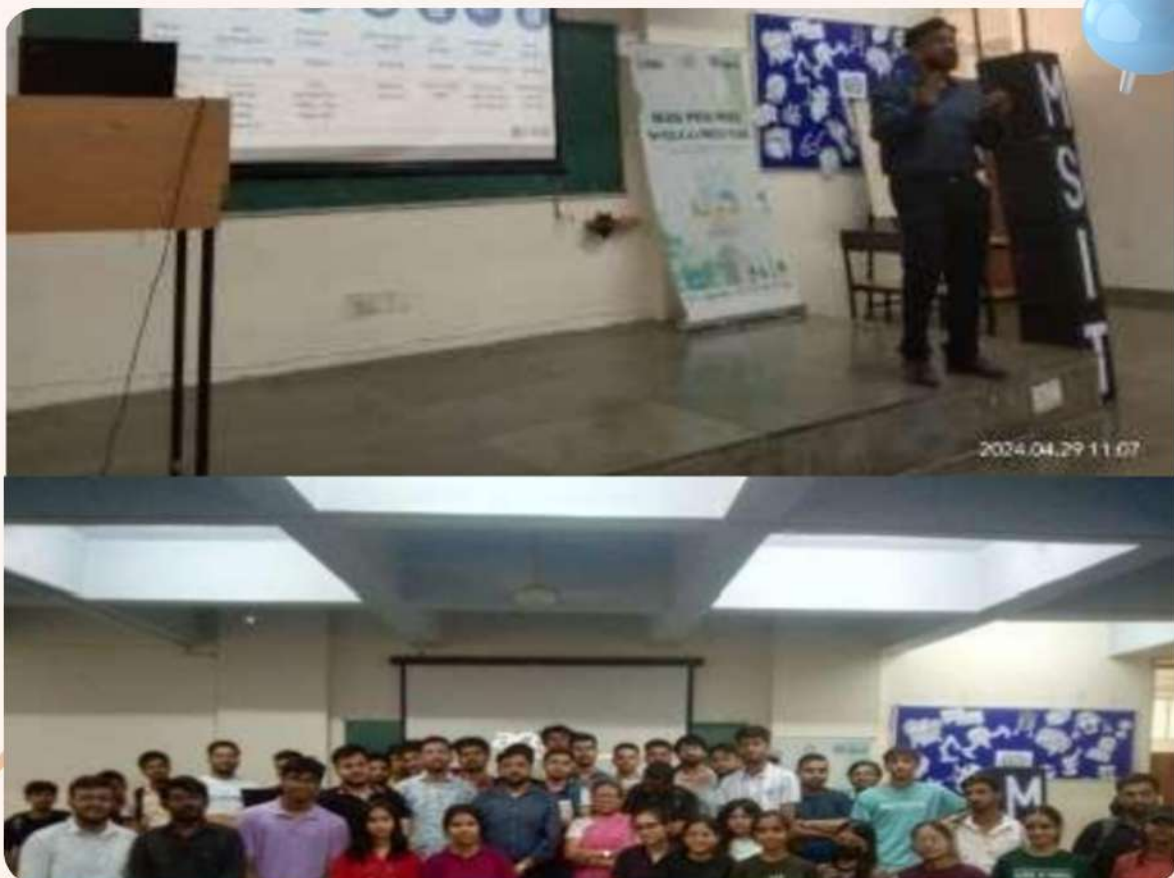
8. Expert Talk on "Unlocking the Door to Top Master's Program: Strategies for Success"

On 7th September IMS Learning Resources conducted an insightful seminar on "Unlocking the Door to Top Master's Program: Strategies for Success". The session began with a detailed workshop on profile building, focusing on how students can customize their academic and extracurricular activities to strengthen their applications for international master's programs. The importance of aligning profiles with department-specific requirements was emphasized. Next, there was an analysis of common profile gaps through case studies, offering insights into how students can strategically plan their careers and avoid mistakes. The facilitator provided examples from real-life scenarios to illustrate the significance of early preparation. Following this, students were introduced to a wide range of study abroad opportunities, including popular exams such as GRE, CAT, GMAT, UPSC, and GATE. The discussion covered potential destinations like the US, UK, Singapore, Germany, and New Zealand. Additionally, funding options, profile building strategies, and part-time job opportunities were highlighted.



9.Seminar on VLSI and Embedded systems

IEEE PES MSIT student chapter, Electrical & Electronics Engineering, Electronics & Communication Engineering Department of MSIT, in collaboration with IEEE PES IAS CHAPTER DELHI and PELS CHAPTER DELHI, under the guidance of chapter advisor, Dr. Jyoti Jain, hosted a seminar on the compelling topic of "VLSI and Embedded Systems". The seminar aimed to delve into the intricacies of these cutting-edge technologies and their profound implications across various industries. – Mr. Vaibhav Mishra, a renowned figure in the fields of FPGA, Embedded Systems, and Management, was the esteemed speaker. – Throughout the seminar, Mr. Mishra delved into the technical intricacies of VLSI and Embedded Systems, shedding light on their applications and advancements. He shared invaluable perspectives gained from his collaborations with leading technology companies, emphasizing the importance of innovation and strategic partnerships in driving success.



10.Seminar on Career Options via GRE and GMAT: Exploring MS, PhD, and Beyond:

On 13 March 2024, Jambooree organized a seminar on "Career Options via GRE and GMAT" in Seminar Hall 406 of Maharaja Surajmal Institute of Technology for the students of 6th sem of CSE and ECE department. This seminar aimed to guide students interested in pursuing higher education abroad, specifically focusing on options available through GRE and GMAT. Mr. Rajan Bhati, was speaker for this seminar who is an eminent figure in the field of international education and admissions. Assisted by his subordinate, Mr. Rajeev Lakra, the duo provided valuable insights into career paths after GRE and GMAT examinations. During the hour-long seminar, Mr. Bhati and Mr. Lakra covered various aspects crucial for students considering GRE and GMAT that includes various opportunities like: MS Study Options: Emphasizing the importance of choosing the right Master's program, the speakers provided insights into popular study destinations, universities, and fields of specialization. PhD Opportunities: Exploring the avenues beyond a Master's degree, the speakers delved into the prospects and prerequisites for pursuing a Ph.D. They discussed the significance of research-oriented careers. Clarifying the eligibility criteria for GRE and GMAT, the speakers guided attendees on academic requirements, application processes, and essential documents. For the test Preparation they offered comprehensive advice and highlighted effective strategies for GRE and GMAT preparation including study plans, resource utilization, and the importance of mock tests.



11. A session on “Interview cum Resume preparation” for 3rd year ECE Dept. students:

A session on “Interview cum Resume Preparation” was held for third year ECE students on 7th March 2024 from 10.30 am to 12 pm. The session was organized by Dr. Meena Rao, Associate Prof., ECE in Seminar Room 06. Agenda of the session was to make the third-year students prepare a crisp resume, make them interview ready, clear their doubts regarding how to answer the interviewer’s questions and various other related things. The session was conducted by Mr. Manjinder Singh, Ms. Apurva and team from IAE Global India.



12.Cybercon Seminar

On 12 Feb, 2024, a seminar "CyberCon" was conducted by Broadcast Society MSIT in collaboration with ECE and CSE Department. Mr. Gaurav Kumar, a renowned Ethical hacker guiding and counselling advisor specializing in Cybersecurity delivered the seminar. The seminar aimed to provide students with valuable insights into pursuing Cybersecurity as a career and spread awareness on the world of Ethical Hacking.



13. Training Programme on Internet of Things (IoT)

A three day's training program on Internet of things was scheduled for the students of 2nd year ECE and EEE students jointly by ECE, EEE and ISTE chapter MSIT from 22nd -25th Feb. 2024 by Prof. Neeru Rathee, Dr. Shaifali Madan Arora and Dr. Nidhi Gupta. The training session was specifically designed for 161 second-year students from the Electrical and Electronics Engineering (EEE) and Electronics and Communication Engineering (ECE) departments. The seminar provided an enriching experience, equipping students with essential knowledge and skills in these cutting-edge technologies. On February 22nd, 2024, Professor Neeru Rathee conducted an insightful and comprehensive training program in Seminar Room 206, focusing on the fundamentals of Internet of Things (IoT), sensors, and Arduino basics.



14. Seminar on 'MBA in India and Abroad'

ECE Dept., 2 nd shift conducted a seminar on "MBA in India and Abroad" by TIME Education, Delhi on 15th October 2024 at 12:00 pm in seminar room #206. The talk was organized by Dr. Upma Singh, Assistant Professor, ECE Dept. and the lecture was delivered by Mr. Amit Poddar, Faculty – A graduate of Sri Venkateswara College and an MBA from the Indian Institute of Planning and Management. He worked for a US-based MNC-Primus Telecom for two years and then shifted to the Education Industry. Headed a Pune-based based Company-Bull's Eye for 3 and a half years and looked after Academics and Marketing. Joined T.I.M.E. in 2006 as a Knowledge expert and have grown to a Senior Regional Head Position. It has been a good 16+ years of exploring the corporate world. The students of ECE-Evening (2nd and 3rd year) attended the 2-hour session.





Recently joined faculty:

NONE

Recently promoted faculty with designation

1. Prof. Pradeep Sangwan
2. Prof. Puneet Azad, Professor
3. Prof. Neeru Rathee, Professor (HOD, ECE)
4. Dr. Richa Gupta, Associate Professor
5. Dr. Aman Dahiya, Associate Professor
6. Dr. Dinesh Sheoran, Associate Professor

Faculty members pursuing M.Tech/ Ph.D

Mr. Deepak Goyal, Assistant Professor
Ms. Neelam Nehra, Assistant Professor
Ms. Jasmine, Assistant Professor
Ms. Garima, Assistant Professor
Ms. Vishakha, Assistant Professor
Ms. Himani, Assistant Professor
Ms. Suman Lata, Assistant Professor
Ms. Anjali Balyan, Assistant Professor
Ms. Sonia, Assistant Professor
Ms. Neha, Assistant Professor

Faculty members completed M.Tech/ Ph.D

Dr. Geetanjali, Assistant Professor
Dr. Nishtha, Assistant Professor



Event Gallery





DEPARTMENT OF ECE



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