

Department of Electronics and Communication Engineering

ELECTRO PLUS

2024-25 | VOLUME 3 | MAGAZINE



ABOUT ECE

The Department of Electronics and Communication Engineering, under School of Engineering and Technology of I.T.S Engineering College was established in the year 2006 with an aim to produce globally competitive and socially sensitized engineering graduates along with a passion to bring out quality research in the frontier areas of Electronics and Communication Engineering. The Department offers four years Bachelor of Technology (B.Tech) program

(comprising eight semesters in Electronics & Communication Engineering, affiliated to Dr. A. P. J. Abdul Kalam Technical University, Lucknow (formerly UPTU) and has been accredited by NBA (National Board of Accreditation), New Delhi. The NI Innovation Centre focuses on the Virtual Instrumentation & Automation and is in collaboration with renowned, MNC National Instruments.

The student activity club "Envision" and students' technical society "(IEEE student Branch)" of the departments also includes ethical and professional skill development programs which includes workshop, webinar, technical quiz, technical rangoli, poster presentation etc. that helps students to grow their overall personality along with technical skills.

Vision And Mission

Vision of Institute

“To be a leading educational institution that provides a transformative education to create technically competent and socially responsible professionals and innovators”.

Mission of Institute

- **To accomplish excellence in the field of Technical Education through rigorous coursework and by providing an understanding of the needs of society and industry.**
- **To impart advanced and contemporary technical skills to turn students into potential professionals.**
- **To develop potential Engineers and Managers by enhancing their technical skills and research capabilities to become successful innovators and entrepreneurs.**
- **To inculcate professionalism, leadership and business acumen amongst students in a dynamic business environment.**
- **To induce high ethical standards and moral values to our make students socially responsible professionals.**
- **To promote our students to learn technological advancements and encourage them to keep updating their knowledge and skills by inculcating their habit of continuous learning.**

Vision of Department

“To become a department of academic excellence that would produce technically competent and socially responsible professionals in the field of Electronics, Communication and related domains”.

Mission of Department

- **M1: To achieve an educational excellence through effective teaching-learning processes.**
- **M2: To create a conducive atmosphere for self learning to face contemporary challenges.**
- **M3: To foster an environment for nurturing the spirit of creativity, innovation and entrepreneurship with industry participation.**
- **M4: To imbibe professional ethics, social responsibilities and moral values in students and faculty members.**

PEO, PSO And PO

Program Specific Outcomes (PSO)

PSO1: An Ability to apply the knowledge of Analog and Digital electronics to solve, analyze and design electronic circuits and systems.

PSO2: An Ability to synthesize, evaluate and analyze communication systems and networks for multidisciplinary tasks.

Program Educational Objectives (PEO)

- PEO1: Graduates of the program will have multifaceted competency for greater employability and accomplished professional career.
- PEO2: Graduates of the program will emerge as leaders and entrepreneurs and will be able to pursue higher education.
- PEO3: Graduates of the program will have thorough knowledge and skill set to deal with real-time complex problems.
- PEO4: Graduates of the program will be able to adjust to a fast changing world with socially responsible and ethical mindset.

Program Outcomes

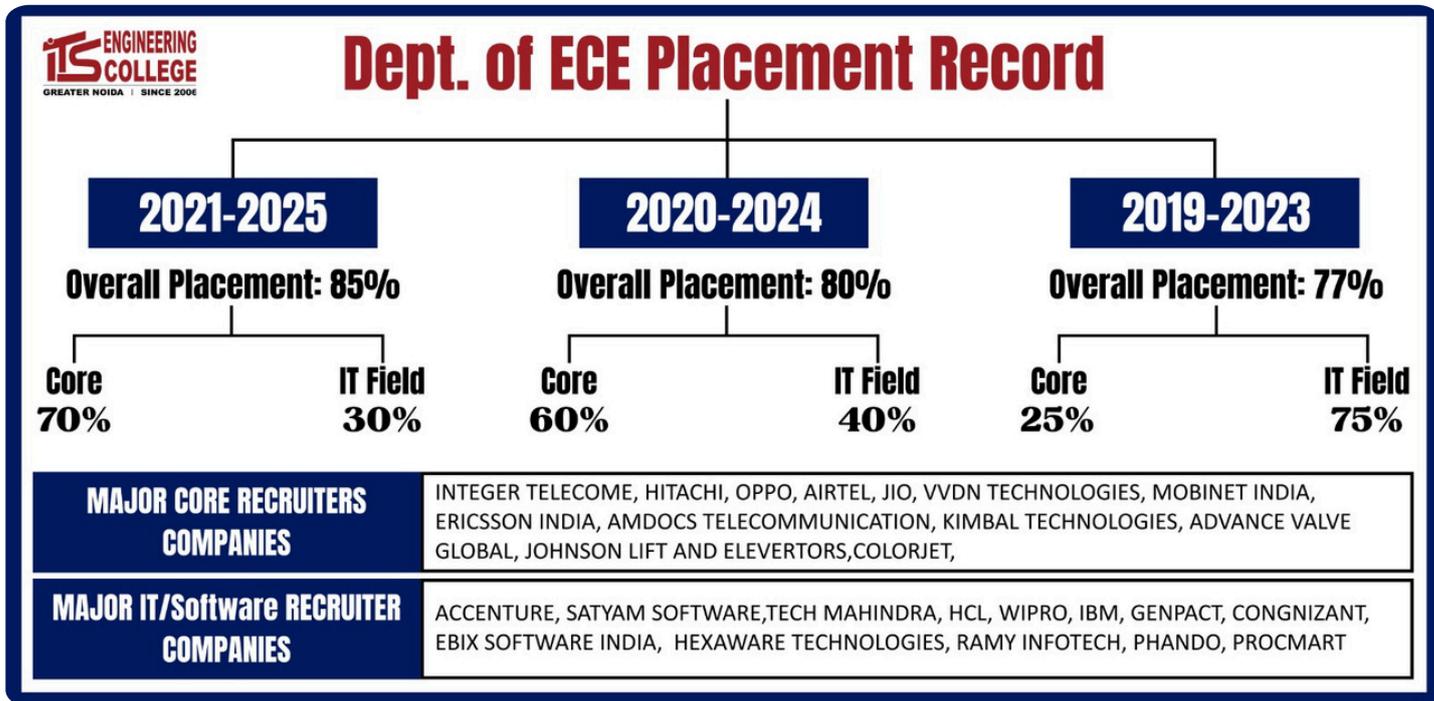
1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PEO, PSO And PO

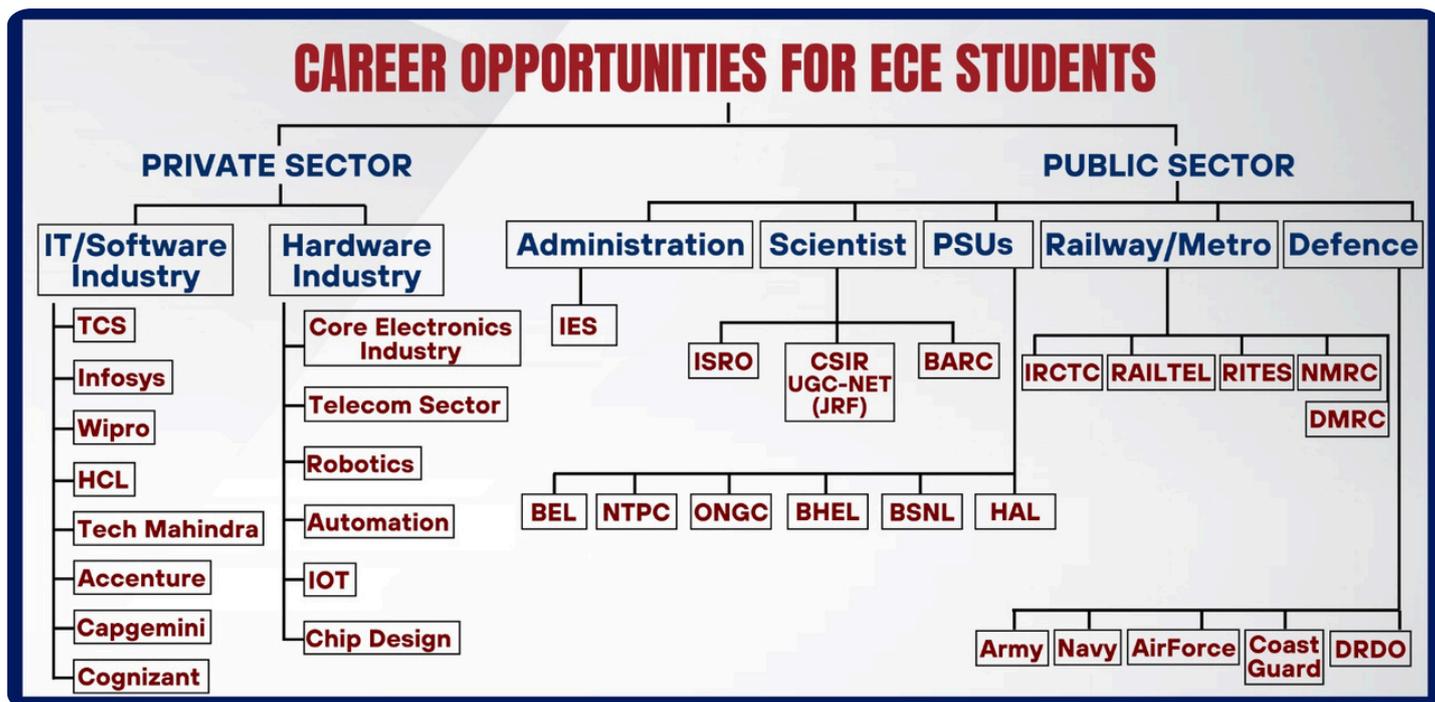
Program Outcomes

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Placements Record



Career Options for ECE Engineers



Student's Articles

QUANTUM COMMUNICATION



Quantum communication is an advanced field of communication technology that uses the principles of quantum mechanics, such as superposition and entanglement, to transmit information securely and efficiently. Unlike classical communication, which relies on conventional bits, quantum communication employs quantum bits or qubits, which can exist in multiple states simultaneously, enabling high-speed data transfer and enhanced security. One of its most promising applications is Quantum Key Distribution (QKD), which allows two parties to share encryption keys with absolute security guaranteed by the laws of physics—any attempt to intercept the keys disturbs their quantum state, alerting the users to potential eavesdropping. This technology has the potential to revolutionize secure data transmission in fields like defense, finance, and space communication, paving the way for an unhackable global communication network in the future.

PRIYA SAINI
(2302220310033)

Student's Articles

The Need for Electronics and Communication in Today's World

In the 21st century, electronics and communication have become the backbone of modern society, transforming the way we live, work, and connect with each other. From smartphones in our pockets to satellites orbiting the Earth, this field plays a vital role in every sector, enabling convenience, efficiency, and global connectivity.

1. Bridging Distances Through Communication

In earlier times, messages took days or even months to travel between locations. Today, thanks to advancements in electronics and communication, people can connect instantly through voice calls, video conferencing, and instant messaging—regardless of geographical boundaries. Technologies such as 5G networks and fiber-optic communication make real-time global interaction possible, supporting both personal and professional relationships.

2. Revolutionizing Industries

Electronics and communication systems have transformed industries like healthcare, education, transportation, and business. For example:

- Healthcare: Telemedicine allows doctors to consult patients remotely, while medical devices monitor vital signs in real-time.
- Education: Online learning platforms and virtual classrooms reach millions of students worldwide.
- Business: Video conferencing, cloud computing, and digital marketing have made global trade faster and more efficient.

3. Enhancing Everyday Life

From home automation systems that control lights and appliances to GPS navigation that guides us on the road, electronics and communication have deeply integrated into our daily routines. Wearable technology, such as fitness trackers and smartwatches, helps individuals maintain healthier lifestyles, while entertainment platforms provide endless on-demand content.

4. Driving Innovation and Economic Growth

The electronics and communication industry is one of the fastest-growing sectors, contributing significantly to global economies. Continuous research in semiconductors, artificial intelligence (AI), and Internet of Things (IoT) is creating new job opportunities and pushing technological boundaries. Innovations in this field often act as catalysts for advancements in other sectors.

5. Supporting Safety and Security

Security systems, from CCTV surveillance to biometric authentication, rely heavily on electronics and communication technologies. In national defense, advanced communication systems enable secure coordination between military units, while satellite networks help in disaster management and rescue operations.

Conclusion

In today's interconnected world, electronics and communication are not just luxuries—they are necessities. They connect people, empower industries, enhance lifestyles, and drive economic progress. As technology continues to evolve, the role of electronics and communication will only grow stronger, shaping a more connected and advanced future for humanity.

PRINCE GAUTAM
(2302220310032)

Student's Articles

Our Country in the Semiconductor Race

Semiconductors are the backbone of modern electronics. Devices such as smartphones, computers, automobiles, and medical equipment depend on semiconductor components like chips, LEDs, Zener diodes, and Silicon Controlled Rectifiers (SCRs). For many years, India has contributed significantly to the global semiconductor ecosystem through chip design, research, and engineering talent. However, large-scale semiconductor manufacturing within the country was missing.



Today, India is taking major steps to strengthen its position in the semiconductor industry. The Government of India launched the India Semiconductor Mission (ISM) with an investment of about ₹76,000 crore (USD 9.2 billion). The mission aims to build a complete semiconductor ecosystem in India, including design, fabrication, assembly, testing, marking, and packaging.

The growth of semiconductor manufacturing in India is creating exciting opportunities for Electronics Engineering students. Rising demand for electronic devices, supportive government policies, and global partnerships are helping India become an important part of the global semiconductor supply chain. This expansion is expected to create many jobs in areas such as chip design, fabrication, testing, and packaging, with reports suggesting nearly one million new jobs by 2026.

In conclusion, India is entering an important phase in the semiconductor sector. With strong government support, international collaborations, and a skilled workforce, the country is steadily moving toward becoming a global semiconductor hub, creating promising career opportunities for future engineers.

DIKSHA SINGH
(2302220310019)

Student's Articles

VLSI is the Future for India

Very Large Scale Integration (VLSI) technology is a key component of modern electronics. It enables the integration of millions of transistors onto a single chip, making devices such as smartphones, computers, automobiles, and communication systems faster and more efficient. As technology advances, VLSI is becoming increasingly important for India's technological growth and self-reliance in the semiconductor sector.



A recent report by The Times of India highlighted a major step forward, where the Union Cabinet approved four new semiconductor projects worth about ₹4,600 crore. These projects demonstrate the government's commitment to strengthening domestic chip manufacturing and VLSI capabilities. Such initiatives are aligned with the India Semiconductor Mission (ISM), which aims to build a complete semiconductor ecosystem in India.

The expansion of the semiconductor sector is also creating strong opportunities for Electronics and Communication Engineering students. Academic institutions are responding to this demand. For example, Indian Institute of Technology Indore is focusing on research in CAD-VLSI and semiconductor devices, while Dr. A.P.J. Abdul Kalam Technical University plans to update its VLSI curriculum with industry collaboration from 2025–26.

With increasing government support, academic initiatives, and industry investment, VLSI is expected to play a major role in India's semiconductor future and create promising career opportunities for engineers.

SARTHAK GAUR
(2302220310038)

Student's POEM



PRINCE GAUTAM

POEM

📖 "B.Tech Journey"

Four years, a path so wide,
With books and dreams side by side,
Circuits buzzing, codes that run,
Deadlines chasing under the sun.

Morning labs and endless notes,
Coffee-fueled all-night quotes,
Assignments due, exams in sight,
Still laughing loud at 2 a.m. night.

Friends like family, bonds so deep,
Promises made we'll always keep,
From canteen talks to hostel fun,
Every moment — second to none.

Failures taught us, success cheered,
Professors strict, yet quietly revered,
Projects built with sweat and care,
Dreaming big of futures rare.

And when the journey comes to end,
We'll miss the nights we couldn't spend,
For B.Tech was more than just a degree —
It was building the best of "you" and "me."

Students Achievement



Aadarsh & Deepak Prajapati secured 3rd Position in state level Aktu literary and management tech fest 2024-25 at AKTU New Campus Lucknow



Abhishek Patel, Aadarsh, Deepak Prajapati, Preetam Gupta and Ankit Mishra participated in Dr. Abdul Kalam Inter-Technical University Literary, Management and Technical Fest, 2024-25 (Zonal Level) held at KCC Gr. Noida and secured 1st position in Robo War, Junkyard War



First position in the Mind Installer Hackathon



Udgosh 2025

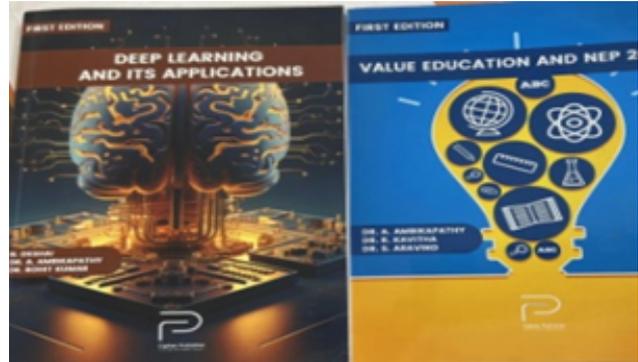
Glimbes of Students Project



Department Highlights



Dr A Ambikapathy, HOD, ECE won Er. Nivesh Kumar Varshney Memorial Award for UP/Uttarakhand State for Best Engineering College Teacher from ISTE, New Delhi on 14th feb 2025.



Dr Setu Garg published books on “Basic Concepts of Cloud Computing” Feb 2025



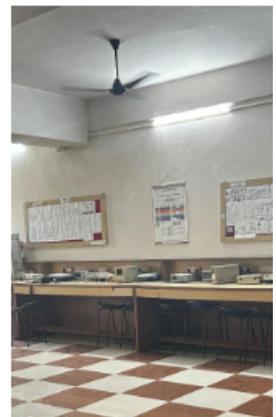
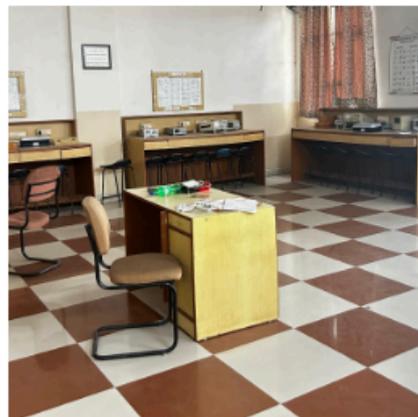
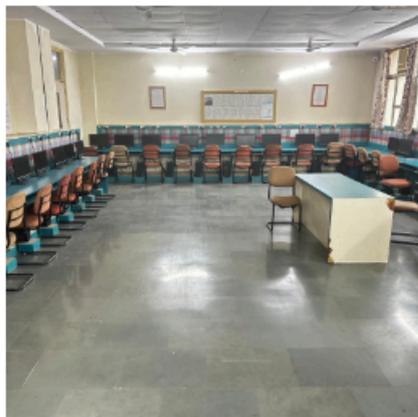
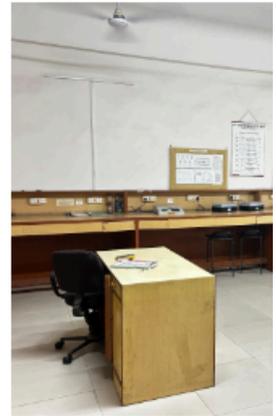
Dr Setu Garg published books on “Machine Learning: Enabling Health Care”



Prabhakar Sharma published book on “Mobile & Wireless Communication”



Laboratories in Department



International Events



International Conference on Advanced Computing and Ingenious Technology in Engineering Science (ICACITES-24) on 19-20th December 2024.

Events Diary



Expert Talk on “Guiding Researchers in Indian Engineering Colleges in Effective Research Proposal and Grants”



Training Program on: “ Embedded Systems, Robotics with IoT and PLC Design”

I.T.S. ENGINEERING COLLEGE
Greater Noida
Department of Electronics & Communication Engineering
organizes
1-Day MATLAB-Simulink Awareness Session
Date : 3rd December ,2024
Venue: ECE Department
10:00 am onwards

Mr. Arman Ansari
(Application Engineer)
MathWorks

Dr. Varun Srivastav
(Technical Support team)
DesignTech
Technology for shaping the future

One day workshop on MATLAB-Simulink Awareness session



Alumni Talk (Mr. Siddhant Jain, Batch: 2012-2016)

Events Diary



**Alumni Talk (Mr. Abhishek Jaiswal,
Batch: 2016-2021)**



**Expert Talk on "Career Counseling
for GATE/PSU Aspirants"**



**Alumni Talk (Mr. Himalaya Gupta,
Batch: 2015-2019)**



World Radio Day 2025 Celebration

Industrial Visit



Industry Visit (OGO Energy, Noida)



Industry visit (Global Electrical and Control Pvt. Ltd., Greater Noida)

RESEARCH PAPER Published By Faculty

Sr. No	Title of paper	Name of Author	Name of Journal	Page No.	Year	DOI	Indexing
1	Advanced generative adversarial network for	Setu Garg	Scientific Reports, Nature Publishing Group UK	32139	Dec, 2024	https://www.nature.com/articles/s41598-024-83957-	SCIE
2	Sustainable augmented framework using smart sensors with ATM	A Ambikapathy	International Journal of Information Technology	Jan 8, 2...	June, 2024	https://doi.org/10.1007/s41870-024-02013-7	Scopus
3	Enhancing and Optimising Solar Power	Prabhakar Sharma, Praveen Bhola	Smart Grids and Sustainable Energy	Vol 9, Issue 1, p.16	Feb, 2024	https://link.springer.com/article/10.1007/s40866-024-	ESCI
4	An enhanced framework for identifying	Pragati Tripathi	International Journal of Imaging Systems and	Vol 34, Issue 1, p.e22983	Nov, 2023	https://doi.org/10.1002/ima.22983	SCIE
5	A Review on Different Design Techniques of Current Mirrors	Shahid Khan, Agha Asim Husain	International Journal of Research and Analytical Reviews	Vol 10, Issue 1, Page No pp.772-779	March, 2023	http://www.ijrar.org/papers/IJRA23A2710.pdf	UGC
6	IoT Virtual Doctor: Revolutionizing Healthcare	Setu Garg, Monika Jain	International Scientific Journal of Engineering	Vol 2, Issue 5	May, 2023	DOI: 10.55041/I SJEM01038	Google Scholar
7	A Comprehensive Study on Near-	Setu Garg, Monika Jain	International Scientific Journal of Engineering	Vol 2, Issue 5	May, 2023	DOI: 10.55041/I SJEM01037	Google Scholar



INDUSTRIAL VISITS@ I.T.S



CELEBRITIES @ I.T.S



COURSES OFFERED BY I.T.S. - THE EDUCATION GROUP

CAMPUS - I
Mohan Nagar
(ESTD. 1995)

COURSES OFFERED
PGDM/ MBA/ MCA
/ BBA/ BCA



CAMPUS - II
Murad Nagar
(ESTD. 2000)

COURSES OFFERED
Ph.D (Pharmaceutical Science) /
MDS/BDS/BPT/MPT
D. Pharma/B.Pharma/M.Pharma



CAMPUS - III
Greater Noida
(ESTD. 2006)

**MBA, B.Tech - ME CSE,
CE, E&CE, SE-AI&ML
CSE-DS, BBA, BCA
BPT**



CAMPUS - IV
Greater Noida
(ESTD. 2006)

MDS/BDS



CAMPUS - V

CHADHA PUBLIC SCHOOL
Meerut - 250501



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