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COLLEGE OF ENGINEERING
Greater Noida
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Department of ECE
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Newsletter Highlights

Motivational Talk

Industrial visit

Workshop

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Business Plan Competion

Faculty Achievements

Students Achievements

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VOLUME XX ISSUE II
NEWSLETTER

April-June 2025

From Chief Editor's Desk

Dr. Pankaj Jha
HOD ECE

Dear Readers,

The Electronics and Communication Engineering (ECE) Department stands at the forefront of technological innovation, blending fundamental engineering principles with cutting-edge developments in communication systems, embedded technologies, and electronics. Our department is dedicated to nurturing curious minds and preparing students to meet the evolving demands of the industry.

With a strong foundation in areas such as analog and digital electronics, signal processing, VLSI design, wireless communication, and micro controller-based systems, the ECE curriculum equips students with both theoretical knowledge and practical skills. Through hands-on laboratory work, research projects, and industry collaborations, we aim to foster creativity, critical thinking, and problem-solving abilities among our students.

Our mission is not only to provide quality education but also to inspire innovation and contribute to technological advancement. We take pride in the achievements of our students and faculty, and we remain committed to academic excellence, research, and societal contribution.

Dr. Pankaj Jha | Associate Professor | Chief Editor & HOD Dept. of ECE

Bio-Medical in Electronics

Bio-Medical Electronics is a multidisciplinary field that combines principles of electronics and biology to develop devices and technologies for healthcare applications. It plays a vital role in diagnosing, monitoring, and treating medical conditions. This field involves designing and developing medical instruments such as ECG machines, pacemakers, MRI scanners, and wearable health monitors.

Electronics in biomedical applications enhance the accuracy and efficiency of medical procedures, enabling real-time data collection and remote patient monitoring. With advancements in microelectronics and sensor technology, modern biomedical devices are becoming more compact, intelligent, and user-friendly, improving patient care and outcomes.

Source : https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.linkedin.com%2Fpulse%2Frole-electronics-biomedical-engineering

Engineering
is the closest thing
to magic that
exists in the world

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MOTIVATIONAL TALK

Our Esteemed Alumni

Department of Electronics and Communication Engineering (ECE) at IIMT College of Engineering, Greater Noida, successfully organized a session on “Motivational Talk”. The event was organized under the IEEE Student Chapter of IIMT College of Engineering. The keynote speaker for the session was Mr. Vivek Kumar Pandey, Senior Associate Consultant at Infosys Limited. He was nostalgic about various experiences of the college with the students and discussed his success story with all. In his talk, he motivated about some of the important parameters that will help candidates how to appear infront of interviewer and discussed about the questing and answering session. He also motivated the students to perform actively in group projects and to do various advanced research activities.

Glimpse of Motivational Talk

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INDUSTRIAL VISIT

KOXICAN (Thames Steels Pvt. Ltd.)

The Department of ECE organized an industrial visit on 30th April, 2025. Industrial Training is a doorway for aspirants to achieve their professional goals by allowing them to obtain in-depth understanding of their theoretical curriculum while also encouraging them to watch and gain personal experience of the industry, job execution, and work environment.

KOXICAN is the leading producer of Aluminium Monobloc Aerosol Cans in India since 2017 with an integrated production facility. The unit is setup on 6,000 Sq. mtrs. land with a covered area of about 2,250 Sq. mtrs. with air cooled and dust free plant, flooring is epoxy coated to meet Gmp standard. The plant is awarded ISO-14001, 19001:2015. It offers high quality of Aluminium Aerosol Cans and Containers in various shapes and sizes for the Cosmetics, Food & Beverages, Pharmaceuticals, Personal & Hygiene care and Industrial products being sold in the market.

Glimpse of Industrial Visit

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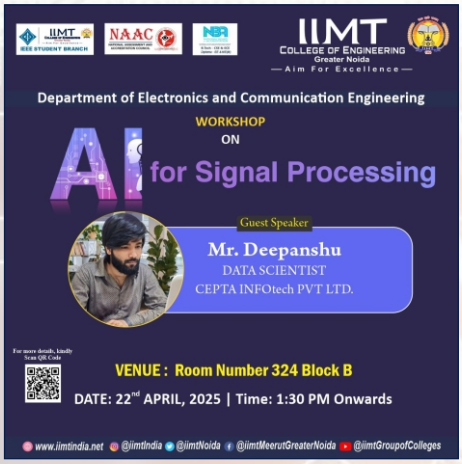
WORKSHOP

AI FOR SIGNAL PROCESSING

The Department of Electronics and Communication Engineering (ECE) at IIMT College of Engineering, Greater Noida, successfully organized a workshop on "AI for Signal Processing" on 22nd April 2025. Mr. Deepanshu, Data Scientist in CEPTA Info. Tech Pvt. Ltd. delivered the session during the workshop.

Mr. Deepanshu explained about the importance of AI in Signal Processing for engineering students in the workshop.

This workshop on AI for signal processing would aim to equip participants with the knowledge and skills to apply AI techniques to various signal processing tasks. Participants would learn how to prepare data, apply machine learning models, and evaluate their performance, ultimately enabling them to design and implement AI-driven signal processing systems.



Glimpse of Workshop

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EXPERT TALK

INNOVATING SELF-SCREEN& IDENTIFY RIGHT OPPORTUNITIES

The Department of Electronics and Communication Engineering (ECE) at IIMT College of Engineering, Greater Noida, successfully hosted an expert talk on “Innovating Self-Screen & Identify Right Opportunities” The event was organized under Institution's Innovation Council (IIC-IIMT). The keynote speaker for the session was Mr. Nitin Bhatt, IT Program Manager (S & P Global).

Mr. Nitin Bhatt emphasized and discussed about finding right opportunities when students graduate in engineering.

Expert discussed about innovate and identify right opportunities and there is a need to cultivate a mindset of continuous learning, experimentation, and self-reflection, while also exploring diverse ideas and seeking feedback to refine your approach. Participating in this session can lead to improved skills in identifying and pursuing innovative business ventures, including understanding the legal and ethical aspects of starting a new business and recognizing opportunities.

Glimpse of Expert Talk

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INTER/INTRA INSTITUTIONAL BUSINESS PLAN COMPETITION

Institution's Innovation Council (IIMT-IIC) & Department of Electronics & Communication Engineering, has jointly organized Inter/Intra Business Plan Competition 2025 on 20th May 2025, 10 am onwards in B-304 (Block-B).

Participants are from different colleges across the Delhi-NCR region.

Many people have ideas, but only a few know how to implement or transform their concept into a viable venture. As a result, this blog post will assist you in this respect, outlining the criteria for being classified as a Innovator and a Critical Thinker. The major objective of the program is to generate awareness among the students, academia, general public etc. about the importance of Technology, its utility for the overall development of the country and its benefit for mankind. The goal is to enable entrepreneurs to grow by leveraging innovation and technology. Many perks are granted to entrepreneurs who create businesses to foster growth and support the Indian economy. The Startup India initiative provides many opportunities to startups that want to establish their niche in a competitive market.

Glimpse of Inter/ Intra Competition

FACULTY ACHIEVEMENTS

- Dr. Rajeev Kumar Chauhan, Associate Professor, ECE Department published a research paper in SCIE (Elsevier- Journal of Molecular Structure)

Journal of Molecular Structure 1344 (2025) 142945

Contents lists available at ScienceDirect

Journal of Molecular Structure

journal homepage: www.elsevier.com/locate/molstr

Recent advancements of plasmonic sensor technologies in healthcare and electronics

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ARTICLE INFO

Keywords:
Plasmonic sensors
Metamaterials, Graphene
Multiplexing
Fabrication challenges
Real-time monitoring

ABSTRACT

Advancements in materials science and nanotechnology have propelled plasmonic sensors to the forefront of medical and electronics industries. Recent developments in plasmonic sensors, such as the integration of metamaterials and graphene, have significantly enhanced their sensitivity, specificity, and functionality, enabling precise detection of biomarkers and environmental contaminants. Nonetheless, plasmonic sensors face certain challenges, such as sensitivity and specificity problems, complicated and expensive fabrication processes, and the requirement for advanced real-time data analysis and system integration. In the coming years, continued research into sensor miniaturization, multiplexing capacity, and economical manufacturing techniques will help to overcome these issues. From these advances, the potential implications are enormous, giving way to better medical diagnostics, personalized medicine, and electronic applications such as optical communication and data storage. The evolving plasmonic sensor technology is poised to have a transformative impact across the medical and electronics industries, catalyzing advancements in health monitoring, environmental detection, and electronic device capabilities.

1. Introduction

Plasmonic sensors based on the principle of plasmonics, have attracted significant attention because of their capability to identify changes in the local refractive index. The development of plasmonic sensors occurs at the unique intersection of physics, material science, and engineering. The core concept of plasmonics, specifically surface plasmon resonance (SPR), was first theorized in the 1960s [1]. Professor Otto and his colleagues' groundbreaking research in the 1980s resulted in the first practical implementation of SPR in sensing. Their experiments demonstrated that light reflected from a metal-dielectric contact can be utilized to evaluate changes in the dielectric properties of the surrounding medium [2]. This groundbreaking discovery facilitated the advancement of contemporary SPR-based sensors, which are currently extensively employed to identify molecular interactions, concentrations, and environmental fluctuations.

In the 1990s, advances in nanotechnology facilitated the development of plasmonic sensors. Studies have been conducted on SPR signals boosted by nanostructured materials, thus leading to the development of ultra-sensitive nanoscale sensors. Recent developments in sensor design include metallic nanoparticles and nanorods, have improved detection and miniaturization [3]. This has been made possible thanks to improved nanofabrication methods and a deeper understanding of nanoscale plasmonic interactions.

In the 2000s and 2010s researchers experienced rapid advancements in the development and utilization of plasmonic sensors. These sensors have been integrated into diverse fields, covering biological diagnostics, environmental monitoring and chemical evaluation. Advancements in sensor technology and materials research have facilitated the detection of individual molecules and enabled real-time monitoring capabilities [4]. Additionally, of new sensing techniques, such as localized surface plasmon resonance (LSPR), have emerged, offering improved sensitivity and versatility compared to traditional SPR sensors.

At present, investigation on plasmonic sensors is focused towards the

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https://doi.org/10.1016/j.molstruc.2025.142945
Received 17 January 2025; Received in revised form 7 May 2025; Accepted 6 June 2025
Available online 7 June 2025

- Dr. Rajeev Kumar Chauhan, Associate Professor, ECE Department received certificate of Appreciation for his contribution as Session Chair in the IEEE Conference ETSEM-2025 organized at Echelon Institute of Technology, Faridabad.

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Certificate no. 125/S

International Conference on

Emerging Trends in Engineering, Science and Management

ETESM-2025

Certificate of Appreciation

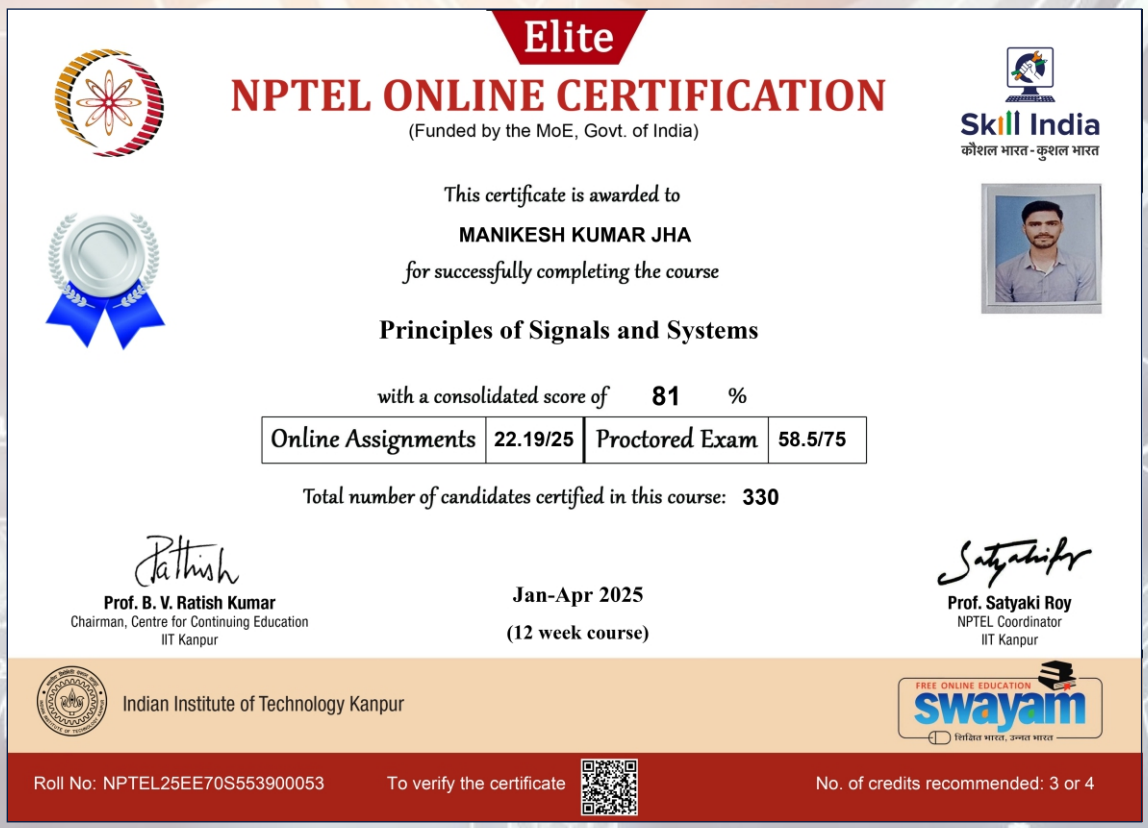
This is to certify that **Dr. Rajeev Kumar Chauhan** from **IIMT College of Engineering, Greater Noida** served as a **Session Chair** and delivered a **Keynote Address** on the topic **"Feature Extraction, Classification and Mitigation of Power Quality Problems in Emerging Power Systems"** during the **International Conference on Emerging Trends in Engineering, Science and Management (ETESM-2025)**, organized by **Echelon Institute of Technology**, Faridabad, Haryana, India, held on **June 14–15, 2025**.

Dr. Anurag Dwivedi
Conference Chair (ETESM-2025)

Dr. Rajesh Kumar Singh
General Chair (ETESM-2025)

Dr. Sudarshan Goswami
Director, EIT Faridabad

- Dr. Rajeev Kumar Chauhan, Associate Professor, ECE Department received certificate of Appreciation for his contribution as Session Chair in the IEEE Conference ETSEM-2025 organized at Echelon Institute of Technology, Faridabad.



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This certificate is awarded to

MANIKESH KUMAR JHA

for successfully completing the course

Principles of Signals and Systems

with a consolidated score of **81** %

Online Assignments	22.19/25	Proctored Exam	58.5/75

Total number of candidates certified in this course: **330**

Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jan-Apr 2025
(12 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

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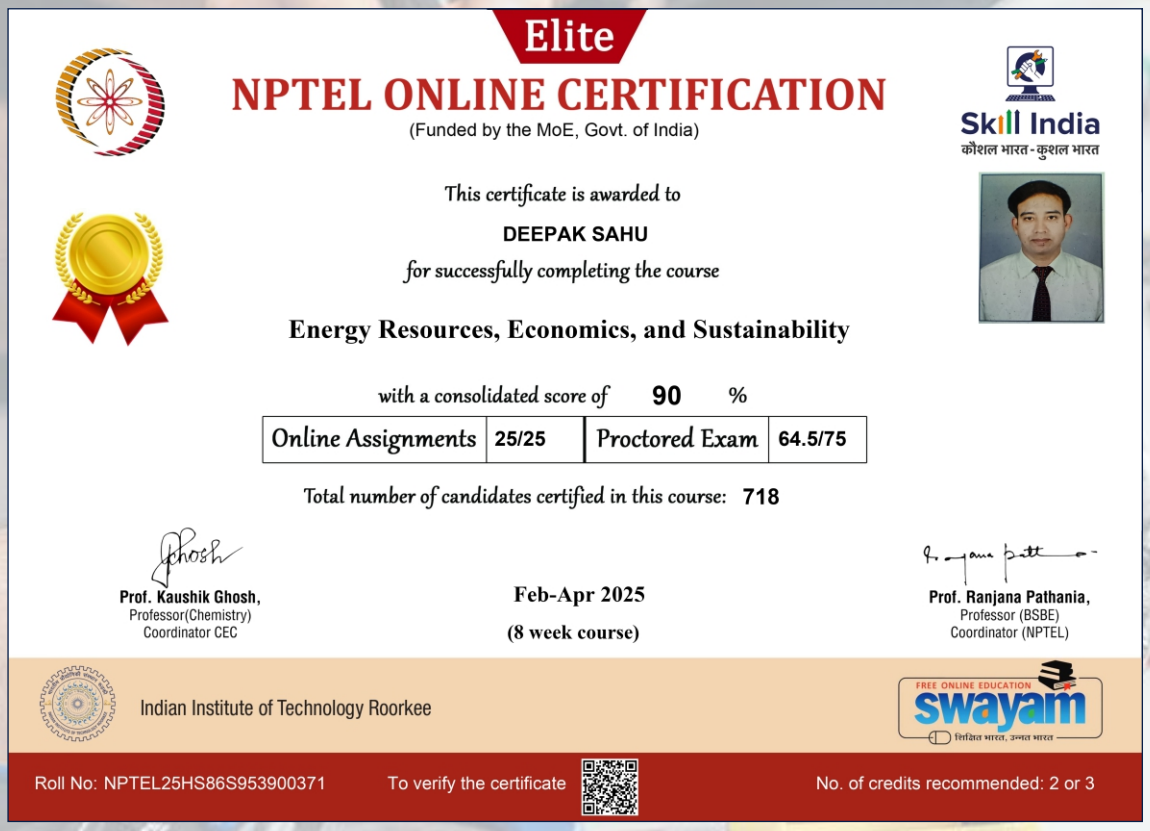
Roll No: NPTEL25EE70S553900053 To verify the certificate No. of credits recommended: 3 or 4

- Mr. Deepak Sahu, Assistant professor, ECE department received certificate with Gold from NPTEL in Energy Resources, Economics and Sustainability.



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Skill India
कौशल भारत-कुशल भारत

This certificate is awarded to

DEEPAK SAHU

for successfully completing the course

Energy Resources, Economics, and Sustainability

with a consolidated score of 90 %

Online Assignments	25/25	Proctored Exam	64.5/75

Total number of candidates certified in this course: 718

Prof. Kaushik Ghosh,
Professor(Chemistry)
Coordinator CEC

Feb-Apr 2025
(8 week course)

Prof. Ranjana Pathania,
Professor (BSBE)
Coordinator (NPTEL)

Indian Institute of Technology Roorkee

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Roll No: NPTEL25HS86S953900371 To verify the certificate No. of credits recommended: 2 or 3

- Mr. Basanta Mahato, Assistant Professor, ECE department completed 5 days MDP programme on Business Management organized by MSME at IIMT College of Engineering

भारत सरकार
Government of India
सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
Ministry of Micro, Small & Medium Enterprises
विकास आयुक्त का कार्यालय
Office of Development Commissioner

Certificate No.: **56712/MDP/2024-25/4**

प्रतिभागिता प्रमाण-पत्र

Certificate of Participation

प्रमाणित किया जाता है कि **श्री वसंता माहतो सुपुत्र श्री चन्डी चरण माहातो** ने संस्थान द्वारा आयोजित **प्रबंधन विकास कार्यक्रम (एमडीपी)**, दिनांक **17/02/2025** से **21/02/2025** तक, विषय **इंटेलेक्चुअल प्रॉपर्टी राईट** स्थान **आईआईएमटी कॉलेज ऑफ इंजीनियरिंग, नॉलेज पार्क 3 ग्रेटर नोएडा उत्तर प्रदेश 201310** पर सफलतापूर्वक पूर्ण किया है |

This is to certify that **Mr. BASANTA MAHATO S/o. Mr. CHANDI CHARAN MAHATO** has successfully completed the **MANAGEMENT DEVELOPMENT PROGRAMME (MDP)** during the period from **17/02/2025** to **21/02/2025** on the topic **Business Management** organized at **IIMT COLLEGE OF ENGINEERING, KNOWLDEGE PARK III GREATER NOIDA UTTAR PRADESH 201310**.

स्थान / Place : **GREATER NOIDA**
दिनांक / Date : **25-04-2025**

नाम और हस्ताक्षर, कार्यक्रम समन्वयक
Name & Signature of Programme Coordinator
VIDIT GUPTA

हस्ताक्षर प्रभारी अधिकारी
एमएसएमई-विकास कार्यालय/ब्रांच डीएफओ/प्रौद्योगिकी केंद्र
Signature of Officer In-charge MSME DFO/Branch DFO/ Technology Centre
MSME-TC - GREATER NOIDA
Seal with name and Designation

STUDENTS ACHIEVEMENTS

- Mr. Adarsh Prakash and Ms. Muskan Kumari, Final Year Students, ECE department got selected in CST UP GRANT SCHEME 2024-25

- Mr. Ram Ashish Maurya and Ms. Riya Tiwari, 2nd year Students, ECE department has won as runner-up and got 20K amount in HACKATHON held in Galgotias College of Engineering, Greater Noida.

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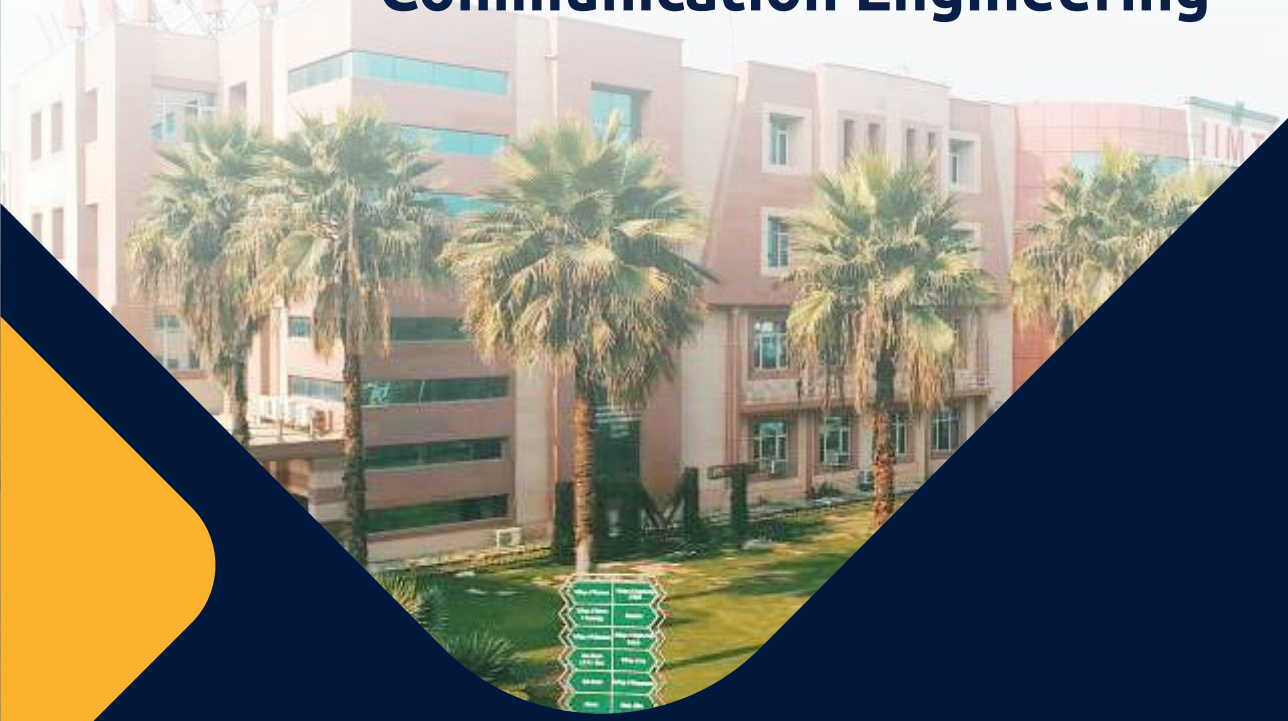
Department Of Electronics & Communication Engineering



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