HINDUSTAN
INSTITUTE OF TECHNOLOGY & SCIENCE
(DEEMED TO BE UNIVERSITY)

ATAL

AICTE Sponsored ATAL Offline 6-Day Faculty Development Programme on

"Harnessing RF-Optical Synergy for Revolutionary Biomedical Devices in NGW Networks"

17 – 22 November 2025

Organized under the Aegis of

AICTE Training And Learning (ATAL) Academy

Conducted by

Department of Electronics and Communication Engineering

FDP Aligned By SDGs

3 GOOD HEALTH AND WELL-BEING

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

Resource Persons

Academia Experts

Dr. Balaji Srinivasan
Professor & Head,
Fiber Laser and Sensors Group,
IIT(M), Chennai

Dr. P. Senthil Kumar
Associate Professor,
Centre for Pollution Control & Environmental Engineering,
Pondicherry University,
Puducherry

Dr. V. Saminadan
Professor ,
Puducherry Technological University,
Puducherry

Dr.AL.Vallikannu
Assoc.Dean Research & HOD - ECE,
Hindustan Institute of Technology & Science,
Chennai

Industry Experts

Dr. Madhusudan Pal
Scientist-G,
Department of Ergonomics,
DIPAS, DRDO,
New Delhi

Dr. S. Suresh Kumar
Group Head-Fiber optics,
NCRA-TIFR,
Pune

Dr. Swetha Amit
Research Scientist & Founder,
SmartBeam Resonetics,
Bengaluru

Dr. Saravanan Velrajan
Head of Digital Consulting
Ginkos India,
Chennai

Mr. M.E. Sundaravel
Senior Technical Leader,
Lekha Wireless Solutions,
Bengaluru

Dr.R.Raghunathan
Director,
Design & Development
Dhhaventhra Bio Sys,
Chennai

Industrial Visit

Healthcare Technology Innovation Centre
IITM Research Park,
Chennai

About the FDP

The Faculty Development Program titled "Harnessing RF-Optical Synergy for Revolutionary Biomedical Devices in NGW Networks" is a forward-thinking initiative aimed at empowering faculty with cutting-edge knowledge and practical skills. This program focuses on exploring the interplay between Radio Frequency (RF) and optical technologies, emphasizing their transformative applications in biomedical innovations and Next-Generation Wireless (NGW) networks. Through expert-led sessions and hands-on modules, participants will delve into hybrid system design, smart sensing, and data transmission techniques. The FDP also fosters collaborative research and curriculum development aligned with emerging trends in wireless biomedical engineering.

About the Institution

Hindustan Institute of Technology & Science (HITS), a Deemed to be University established in 1985, is a prestigious institution in India renowned for its commitment to excellence in education. HITS offers a broad array of Undergraduate, Postgraduate, Diploma, Research, and Doctoral programmes across diverse disciplines, including Engineering & Technology, Architecture, Management, Law, Fashion & Design, Liberal Arts, Aviation, Applied & Allied Health Sciences. Technical programmes at. UG and PG levels are AICTE approved and NBA accredited. Nine B. Tech programmes are accredited by the Institution of Engineering and Technology (IET). Hindustan Institute of Technology & Science, NAAC A+ accredited is a part of the Hindustan Group of Institutions, serving over 25,000 students globally which is known for four decades of excellence in Aeronautical, Aerospace, and Automotive Engineering.

HITS was honoured with diamond award in the QS I Gauge Indian University Rankings 2024. ranked 601+ in Asia in THE World University Rankings 2024. Overall, HITS was ranked 601-800 out of 1963 in IMPACT Ranking. HITS has been ranked 240 in Southern Asia and in the 751-800 Band in Asia at the QS World University Rankings 2025.

About the Department

The Department of Electronics and Communication Engineering, established in 1985, has made a notable impact on student learning, faculty development, and institutional growth. Accredited by the National Board of Accreditation (NBA) and The Institution of Engineering and Technology (IET), U.K., the department offers B.Tech in ECE with Honors/Minors in Embedded Systems and Bio-Medical Engineering, M.Tech programs in Microelectronics and VLSI Design and Defence Technology, and Ph.D. programs. It is supported by qualified and dedicated faculty, industry-backed laboratories, project labs, Centres of Excellence, and a well-equipped library.

The department hosts two research centres—CENSE (Centre for Sensors & Process Control) and URoC (Centre for Underwater Robotics & Communication)—and one skill centre, e-HITS (Centre for E-Hardware Innovative Test-Technology Systems), focusing on semiconductor technologies, VLSI design, embedded systems, and next-generation communication. Over 50% of students gain real-time industry project experience through MoU collaborations. The department also conducts Faculty Development Programs, Workshops, Seminars, and Career Guidance initiatives to foster innovation and holistic development among students and faculty.

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Mr. Beslin Geo, Assistant Professor, ECE
Mr. Akshay Shaji, Assistant Professor, ECE
Ms. R. Devi, Assistant Professor, ECE

Topics

- Foundations of RF-Optical Synergy in Biomedical Engineering
- Antennas and RF Signal Processing in Next-Generation Medical Devices
- Electrochemical sensing of sulfamethoxazole antibiotic in water at Graphene oxide/Zinc oxide nanocomposites modified glassy-carbon electrode
- Smart Wearables Enabled by RF- Optical Technology
- RF Optical feedback loops on NGW Environment for Biomedical Applications
- Smart Healthcare: The Synergy of Robotics, Medical Devices, and Next-Gen Wireless Networks
- Ensuring EMC Compliance for Implantable RF-Optical Biorobotics in Next-Generation Wireless Networks
- AI and Machine Learning for RF-Optical Biomedical Applications
- Telecom Meets Sensing -Opportunities for Multi-Parameter Distributed Sensing Using Telecom-Grade Optical Fibers

Eligibilty

Faculty members, PG/Research Scholars from AICTE-Approved Institutions, and Industry Professionals are eligible to participate.

Registration is Free !!!

Link For registration

https://atalacademy.aicte.gov.in/signin

Contact Detail

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