



# Online FDP on Advanced Digital Signal Processing

26<sup>th</sup> May – 4<sup>th</sup> June 2025



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## Objective (Electronics & ICT Academy-Phase II)

1) To conduct specialized FDPs for faculty/mentor training in line with the vision of MeitY by promoting emerging areas of technology and other high-priority areas that are pillars of both the "Make in India" and the "Digital India" programs.

2) To promote synergy and collaboration with industry, academia, universities and other institutions of learning, especially in emerging technology areas.

3) To support the National Policy on Electronics 2019 (NPE 2019) which envisions positioning India as a global hub for ESDM sector, including MeitY Schemes/policies such as Programme for Semiconductors and Display Fab Ecosystem; India AI; National Programme on AI, Production Linked Incentive Scheme for IT Hardware & Large-Scale Electronics Manufacturing; EMC; SPECS; Chips to System (C2S); etc.

4) To promote standardization of FDPs through Joint Faculty Development Programmes.

5) To support the vision of the National Education Policy (NEP 2020), which mandates that Indian educators go through at least 50 hours in professional development programmes per year.

6) To design, develop & deliver specialised FDPs on emerging technologies/ niche areas/ specialised modules for specific research areas for Faculty in Higher Education Institutions (HEI), besides FDPs on multi-disciplinary areas connected with ICT tools and technologies and other digital hybrid domains, covering a wide spectrum of engineering and non-engineering colleges, polytechnics, ITIs, and PGT educators.

An intensive 40-hour Faculty Development Programme in online mode is being organized for faculty of engineering and technological institutions. It is also open to persons from industry and doctoral students of Indian organizations. The main theme of the training program will be oriented around exploring basics of Digital Signal Processing and their application in real life. The program will be run during **11-01 PM and 3-5 PM daily except Sunday (4-8 PM).**

## Experts/Speakers-

1) Prof. S.D. Joshi, Dept. of Electrical Engineering, IIT Delhi .

2) Prof Vikram Gadre, Dept. of Electrical Engineering, IIT Bombay

3) Prof. R.B Pachori, Dept. of Electrical Engineering, IIT Indore .

4) Dr H.S. Shekhawat, Dept of Electrical Engineering, IIT Guwahati.

5) Prof Anubha Gupta, Dept of Electronics and Communications Engineering, IIIT Delhi.

6) Dr. Himanshu Padole, School of Electrical and Computer Sciences, IIT Bhubaneswar

7) Dr. Hemant Kumar Meena, Dept. of Electrical Engineering, MNIT Jaipur.

## Programme Modules:

Introduction to discrete-time signals, Time Domain Representation, Operation on sequences, Operations on finite length sequences, The sampling process.

Discrete time system examples, Time domain characterization of LTI discrete time system, Z-Transform, DTFT , DFT, FFT.

Basic FIR digital filter structures, Basic IIR digital filter structures, FIR filter design based on windowed Fourier series, Design of minimum phase FIR filters.

Design of lowpass IIR digital filters, Design of Highpass, Bandpass, Bandstop and Allpass IIR digital filters, Wavelets

Applications: Speech, image, Bio-medical, graph signal processing

## Programme Coordinator:

Dr. Hemant K Meena [fdp.academy@mnit.ac.in](mailto:fdp.academy@mnit.ac.in) 9549657324 (M)

## Registration:

Registration is open to faculty, industry persons, doctoral, postgraduate and graduate students. Participants will be admitted on first-come first-served basis.

Register on line at - <http://www.mnit.ac.in/eict/>

**Certification Fee:** Every participant: Rs. 500/-

**Registration fee:** Academic (faculty): Nil/-, Industry/student/Others: 1000/-

(A) Fee once paid will not be refunded back.

(B) The fee covers online participation in the programme, tutorial notes and examination, certification charges.

(C) The organizers should receive the registration amount through online payment gateway provided at the registration portal.

(D) For modules details, see separate sheet attached.

→ For any other query, email us at [fdp.academy@mnit.ac.in](mailto:fdp.academy@mnit.ac.in)

**MNIT Jaipur** one of the oldest NITs, the institute has a rich heritage of sixty years producing world class engineers, managers, architects and scientists. Ranked 43rd nationally in the NIRF ranking-2024 (Engineering), the Institute offers learning opportunities for undergraduate, postgraduate students, and researchers in various domains. Having a lush green campus of over 317 acres within the heart of the pink city, close to Jaipur International Airport, the campus offers a safe and lively environment. A world class teaching infrastructure, state-of-art laboratories welcome you at the campus. The institute has a vision to impart education of international standards and conduct research at the cutting edge of technology.