



Experts/Speakers-

Dr Satish Sharma	Assistant Professor, MNIT Jaipur
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EICT Academy MNIT Jaipur

Chairman, EICT Academy &
Director MNIT Jaipur

Prof. Narayana Prasad Padhy

Chief Investigator: **Prof. Vineet Sahula**

Coordinator: **Dr. Satyasai Jagannath Nanda**

Co- Chief Investigators: **Prof. Lava**

Bhargava, Prof. Pilli Emmanuel

Shubhakar,

Dr. Ravi Kumar Maddila

Objective (Electronics & ICT Academy-Phase II)

1) To conduct specialized FDPs for faculty/mentor training in line with the vision of MeitY in high-priority areas supporting the "Make in India" and the "Digital India" programs.

2) To promote synergy and collaboration with industry, academia, universities and other institutions of learning

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.

Modern power systems rely heavily on optimization for secure, reliable, and economical operation, renewable energy integration, and electricity market applications. This 40-hour online course provides a practical understanding of optimization techniques and their applications in power systems.

Participants will learn to formulate and solve optimization problems using **GAMS** and **MATLAB** through hands-on exercises and case studies.

Designed for **faculty, UG/PG students, researchers, and industry professionals**, the course bridges optimization theory, computation, and practice, empowering learners to apply optimization methods confidently.

The programme will be run 2 hours/day during 12:00 - 02:00 PM on week days.

Programme Modules:

Module 1: Fundamentals of Optimization: Linear & nonlinear programming, Convexity & optimality conditions, Classical methods (gradient, Newton), Problem formulation in power systems.

Module 2: Linear & Nonlinear Optimization in Power Systems: Economic dispatch, Optimal power flow, Transmission loss minimization, Reactive power optimization, Network reconfiguration,

Module 3: Metaheuristic & Evolutionary Algorithms: Genetic algorithms, Particle swarm optimization, and etc., Hybrid approaches for grid applications.

Module 4: Advanced Optimization Techniques: Mixed-integer programming, Stochastic optimization, Robust methods, Multi objective optimization in power system, Distributed optimization

Module 5: Emerging Applications in Smart Grids: Demand response optimization, Renewable energy integration, Storage charging coordination, Cyber security of power system.

Programme Coordinators

Dr Satish Sharma	fdp.academy@mnit.ac.in	8824845500 (M)
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Registration:

Registration is open to faculty, working professionals, industry persons, doctoral, postgraduate, and graduate students from India and the rest of the world. Participants will be admitted on a first-come, first-served basis.

Registration Fee

Mode of Programme	India/SAARC/Africa (18% GST extra)		Rest of the world
	Academia (faculty/Students)	Others	
Online	Rs. 750/-	Rs. 1500/-	US \$60/-

- Fee once paid will not be refunded back; however, can be adjusted for a future programme.
- The fee covers online participation in the programme, tutorial, notes and examination, certification charges etc.
- The registration amount may be paid through online mode- NEFT/UPI/Cards/SWIFT, provided at the registration portal.
- A detailed schedule will be shared after receiving the registration form.

Register online at- <http://online.mnit.ac.in/eict/>

→ For queries, contact us at 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 42nd nationally in the NIRF ranking-2025 (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.