

**Self-sponsored 10 days Short Term  
Training Program  
(Online mode)**

**on**

**“AI-Driven Solutions for Electrical  
Engineering: Intelligent Strategies to  
Tackle Modern EE Challenges”**

**From**

**3<sup>rd</sup> October to 12<sup>th</sup> October, 2025**

**(Timing: 5 pm to 8 pm)**

**(2 Lectures per day)**

**REGISTRATION FORM**

Name: .....

Designation: .....

Organization: .....

Qualification: .....

Correspondence Address: .....

.....

(M) .....

E-Mail: .....

Registration Fee is paid in the form of  
online mode

Amount .....

No.....Date .....

Name of the Bank.....

Date: Place:

Signature

**▪ Address for Correspondence**

**Dept. of Electrical Engineering,**

**NIT Raipur, C.G.**

**E-mail: ekoley.ele@nitrr.ac.in,**

**asharaff.cs@nitrr.ac.in**

**bbag.ee@nitrr.ac.in**

**Telephone (M) :**

**9827215396, 8817813946, 6371505040,**

**8950045927**

**CHIEF PATRON**

**Dr. N. V. Ramana Rao**

Director

National Institute of Technology Raipur

**PATRON**

**Dr. S. Gupta**

Dean (Academics)

National Institute of Technology Raipur

**Dr. G. P. S. C. Mishra**

Dean (Research & Consultancy),

National Institute of Technology Raipur

**CO-PATRON**

Dr. Subhojit Ghosh

Chairman, CEC

**CHAIRMAN**

Dr. Sachin Jain

HOD, Department of Electrical Engineering

NIT Raipur

Dr. Dilip Singh Sisodia

HOD, Department of Computer Science &

Engineering

NIT Raipur

**COORDINATORS**

**Dr. Ebha Koley**

Associate Professor

Department of EED, NITRR

**Dr. Aakanksha Sharaff**

Associate Professor

Department of CSE, NITRR

**Dr. Baidyanath Bag**

Assistant Professor Grade-I

Department of EED, NITRR

**Self-sponsored 10 days Short Term  
Training Program  
(Online mode)**

**on**

**“AI-Driven Solutions for Electrical  
Engineering: Intelligent Strategies to Tackle  
Modern EE Challenges”**

**From**

**3<sup>rd</sup> October to 12<sup>th</sup> October, 2025**

**(Timing: 5 pm to 8 pm)**

**(2 Lectures per day)**



**Organized by**

**Department of Electrical Engineering  
and  
Department of Computer Science**



**National Institute of Technology  
Raipur-492010 (Chhattisgarh)**

## About the Institute:

National Institute of Technology Raipur (Formerly Government Engineering College Raipur) was established in 1956 and enquired the status of National Institute of Technology (an Institution of National Importance) on 1st December 2005. The institute is committed to the challenging task of development of technical education by preparing seasoned graduates in highly sophisticated fields of engineering and technology. Core values adopted by the Institute as enduring principles are Integrity, Excellence, Transparency and Accountability. At present the institute offers graduate level courses in 12 disciplines, postgraduate in 13 disciplines and doctorate programs in all the advanced and core fields of engineering.

## About EED & CSE Department:

The **Department of Electrical Engineering** came in existence since 1958. The department offers undergraduate as well as postgraduate programs. National/International level research papers are contributed by all faculty members every year. National and International level research projects are also undertaken by faculty members. The Department provides an outstanding research environment and offers academic program leading to the award of Ph.D. degree.

The **Department of Computer Science & Engineering** came into existence in year 2000. CSE Department is the study, research and work place of approximately 300 students from across India. The department provides an outstanding research environment and offers academic program leading to the award of B.Tech, M.Tech, and Ph.D. degree.

### Google form

[https://docs.google.com/forms/d/1Phy21G6GE\\_k\\_pQY4z5XZR6gHytY2JiTIT3sObYhyHeE](https://docs.google.com/forms/d/1Phy21G6GE_k_pQY4z5XZR6gHytY2JiTIT3sObYhyHeE)

## Objectives:

The main objectives of this STTP are to provide participants with a comprehensive understanding of how AI-driven technologies are revolutionizing the field of Electrical Engineering. Through interactive sessions, practical demonstrations, and real-world case studies, participants will gain insights into how AI is reshaping modern electrical engineering practices. This STTP also aims to promote interdisciplinary collaboration between electrical and computer science domains. The STTP relies on the following themes

- **Introduction to fundamentals of AI and Optimization Techniques**
- **Development of ML based models:** Understanding the simulation of physical systems with ML applications.
- **Hands-on coding exercises:** It includes hands-on coding exercises and real-world datasets, making it a good way to practice skill sets.
- **Developing AI/ML and Optimization-based Solutions for Engineering Applications:** Enhancing problem-solving skills with practical training to implement artificial intelligence, machine learning, and optimization techniques tailored to engineering applications.

## THEME / SCOPE

The short-term training programme (STTP) on “**Self-sponsored 10 days Short Term Training Program (online mode)**” is proposed to give a thorough exposure to the recent research trends, and analytical analysis in the introduction and application of Artificial Intelligence, Machine Learning and Optimization Algorithms in Engineering Applications. Distinguishing features of this programme include expert lectures on practical and future technological advancements. The proposed STTP will provide opportunity to faculty, engineers, and utility/industrial personnel to know the latest advancement in machine learning and optimization algorithms. The programme will also focus on the challenges to be taken up by the researchers from power system, power electronics, health care, speech recognition and cyber security applications. The course will also cover the detailed discussions about the hybrid algorithms.

## Topics to be covered:

- Understand Fundamentals of Artificial Intelligence
- Introduction to optimization techniques
- AI in Electrical Engineering Applications
- Optimization techniques in Electrical Engineering Applications
- Data Acquisition and AI-Driven Analytics
- Data Acquisition and Pre-processing
- Challenges in AI Integration
- Analyze and interpret results
- Smart Grid Optimization Using AI
- Deep learning for electrical machine fault detection
- Case Studies and Real-World Applications
- Signal and Image Processing using AI
- Edge AI and IoT for monitoring
- Identify Engineering Applications where Artificial Intelligence and optimization techniques can be implemented.
- Cyber security in power system

## Registration Fee Details (in INR):

Participants	Amount (in Rs)
Students/ Research Scholars/ Contract Faculty	500/-+18%GST=Rs 590/-
Faculty/ Industry Delegates	1000/-+18%GST=Rs 1180/-

## ACCOUNT DETAILS

Account Name: Director NIT Raipur

Account No.: 38027633250

Bank Name: State Bank of India, NIT Raipur Branch  
IFSC Code: SBIN0002852

Online payment of fee with filled registration from must be forwarded to following email ids

**ekoley.ele@nitrr.ac.in, asharaff.cs@nitrr.ac.in  
bbag.ee@nitrr.ac.in**

The subject matter of the mail should be “**STTP on AI-Driven Solutions for Electrical Engineering.**”

Fee is non-refundable. Selected candidate will be informed by email as per the schedule. Certificates will be issued to the participants only after attending the complete course.

**Last Date of Registration: 1<sup>st</sup> October 2025**