# National Institute of Technology Raipur

## Department of Mathematics & Continuing Education Cell (CEC)

**One-Week National Level Short-Term Training Programme (STTP) in Online Mode**

**on**

***"Knowledge Discovery through Mathematical Modeling, Rough Sets, and Machine Learning (KDMRM-2025)"***

**November 17-21, 2025**

## About Course

**Objectives of Training Programme:** The "KDMRM-2025" workshop aims to equip participants with advanced tools in mathematical modeling, rough sets, and machine learning for meaningful knowledge discovery. It bridges theory and practice through Python-based implementations, data visualization, and decision-making frameworks, preparing researchers and professionals to address uncertainty and enhance predictive performance across diverse real-world domains.

## About CEC

Continuing Education Cell (CEC) , NIT Raipur aims to update skills, broaden knowledge, enhance qualifications, foster personal growth, and promote National and International technological advancement through training and expertise.

## About NIT Raipur

National Institute of Technology Raipur (An Autonomous institute of National Importance) fully funded by the Govt. of India. NIT Raipur is located in Raipur, the Capital City of Chhattisgarh State and spread over an area of approx. 100 acres. NIT Raipur is ranked 70th in engineering category in India by the NIRF, and it is the highest ranked engineering college in Chhattisgarh. Presently NIT Raipur offers 12 undergraduate, 14 Postgraduate (including M.Sc., M.C.A and M.Tech. in Applied Geology) and 18 Ph.D. programs. The institute offers facilities for research and also undertakes R & D activities, provides testing, consultancy and other extension services including continuing education to the industry through the Industry Institute Interaction cell and the placement of the student through the Department of Training & Placement. More details about NIT Raipur are at: http://www.nitrr.ac.in.

## About Department

The **Department of Mathematics** came in existencesince 1956. The department provides an outstanding research environment and offers academic program leading to the award of PG/Ph.D. degree. Apart from this, department taking care of Mathematical input to all undergraduate and postgraduate courses in Engineering and Computer Science Applications

## Eligibility for Participation

Participation is open to faculty, research scholars, UG/PG students of Science and Engineering, and professionals from R&D, industry, or academia seeking foundational knowledge in relevant mathematical, scientific, or engineering concepts.

## For Registration

**For More Details Click**

**https://www.nitrr.ac.in/conference.php**

***Scan QR for More Details***

## Course Outline

- **Mathematical Modeling of Real-World Problems:** Foundations of modeling complex systems and practical applications.
- **Crisp, Fuzzy, and Rough Sets:** Introduction to fundamental concepts and their role in uncertainty handling.
- **Indiscernibility Relations & Set Approximation:** Focus on positive regions, knowledge reduction, and decision support.
- **Machine Learning Algorithms:** Exploration of supervised and unsupervised approaches for predictive analytics.
- **Python Implementation & Data Visualization:** Practical training in coding, visualization, and interpretability of models.
- **Applications in Diverse Domains:** Case studies in healthcare, ecology, finance, and engineering.
- **Hands-on Predictive Modeling:** Development of decision-support systems, rough set implementation, and visualization for actionable insights.

## Features of Course

The course features integration of mathematical modeling, rough sets, and machine learning with Python-based implementation. It emphasizes hands-on training, data visualization, and real-world applications in healthcare, ecology, finance, and engineering, fostering innovation, knowledge discovery, and data-driven decision-making.

## Important Dates

| | |
|---|---|
| **Registration Last Date:** | **11th November 2025** |
| **List of shortlisted Candidates:** | **14th November 2025** |
| **Course Start Date:** | **17th November 2025** |
| **Course End Date:** | **21st November 2025** |

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## Chief Patron

**Prof. N.V. Ramana Rao, Director, NITRR**

## Patron

**Dr. Subhojit Ghosh, Chairman (CEC), NITRR**

## Chairman

**Dr. S. K. Samanta, HOD (Maths), NITRR**

## Co-ordinators & Contacts


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## Speakers

Subject experts of the course may be from re-nowned institutes and Industries.

## Account Details

| | | |
|---|---|---|
| **Account No.** | : | **38027633250** |
| **Name** | : | **Director, NIT Raipur** |
| **Bank Name** | : | **State Bank of India** |
| **Bank Branch** | : | **NIT Branch** |
| **IFSC Code** | : | **SBIN0002852** |
| MICR Code | : | 492002004 |
| Swift Code | : | SBININBB646 |
| PAN Card Number | : | AAAJN0643G |
| GSTIN Number | : | 22AAAJN0643G1ZN |

OR

Scan the QR Code for fee payment

**Note: Applicants must upload the proof of fee payment via Google Form. Please note that the registration fee is non-refundable.**

## Fee Details

| Category | Fee (Rupees) |
|---|---|
| NITRR Students | (₹ 500 + 18% GST) = ₹ **590 /-** |
| External Students/ NITRR Staff | (₹ 750 + 18% GST) = ₹ **885 /-** |
| Industry Delegates/Faculty | (₹ 1500 + 18% GST) = ₹ **1770 /-** |
| | |

## Registration Process

**The payment must be done through ONLINE mode in the given account details. After payment, participant is required to fill the following Google form:**

**Click Google Form:** https://forms.gle/id2hN46fyJJjLbNe8

**Or**
**Scan Google Form**