



राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर
NATIONAL INSTITUTE OF TECHNOLOGY, RAIPUR
(राष्ट्रीय महत्त्व का संस्थान/Institute of National Importance)

शिक्षा मंत्रालय के अधीन, भारत सरकार/ Under Ministry of Education, Govt. of India
जी. ई. रोड, रायपुर – 492010 (छ. ग.), G.E. Road, Raipur – 492010 (C.G.)

One Week Self-Financed Short-Term Course
on
Responsible and Sustainable Mining: Currency for Modern Workforce

Patron

Dr. N. V. Ramana Rao

Director, National Institute of Technology Raipur

Co-Patrons

Dr. G. P. S. C. Mishra, Dean (R&C), National Institute of Technology Raipur

Dr. Narendra D. Londhe, Registrar (I/c), National Institute of Technology Raipur

Chairman

Dr. Pankaj Kumar Dewangan

Professor & Head, Department Mining Engineering
National Institute of Technology Raipur

Convenor

Dr. Prem Sagar Mishra

Professor of Practice, Department Mining Engineering
National Institute of Technology Raipur

Coordinator

Dr. Vineeth Balakrishnan

Assistant Professor Gr-I, Department Mining Engineering
National Institute of Technology Raipur

About the Institute:

National Institute of Technology Raipur situated in the capital of Chhattisgarh, has proven to be 'avant-grade' in the field of science and technology over past few decades in this region. With sweet memory of foundation ceremony by our president Hon'ble Dr. Rajendra Prasad on 14th September 1956. the institute started with two departments namely Metallurgical and Mining Engineering. Later the inauguration of the Institute building was done by our Prime Minister Hon'ble Pt. Jawahar Lal Nehru on 14th March 1963. From 1st December 2005, the institute has become the National Institute of Technology. It is well connected with Mumbai, Delhi and all metro cities by regular flights and is on the main Howrah-Mumbai railway route. The institute is 5 km from the Raipur railways station and 18 km from airport on NH-6, the Great Eastern Road.



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About Mining Engineering Department:

The Department of Mining Engineering was established in the Year 1956 with intake capacity of only 15 students. Due to increasing demand of mining engineers from coal and mineral industry, the intake capacity has now been increased to 97. Presently the department is offering B. Tech. (Mining) and Ph.D. course. The Department is equipped with state-of-the-art modern instruments and equipment's for conducting various laboratory and research work. The Department has undertaken and successfully completed number of testing and consultancy projects.

Vision of the Department

- To produce Mining Engineers of high calibre, fully equipped with state-of-the-art Technology, to cope with the challenges of Sustainable Development in Mining and Mineral Industry
- To be recognized nationally and internationally as one of the leading institutes in research and providers of quality engineers in field of Mining Engineering.

Mission of the Department

- To be recognized as a premier Mining Engineering Education Centre by all stakeholders in the Mining and Mineral Industry.
- To impart Quality Education for meeting the needs of Mining Engineering Profession & Society, and achieve excellence through creative Teaching- Learning and Research
- To inculcate the spirit of Sustainable Development and Conservation of natural resources through the advancement of technology in exploration and production of minerals with due regard to Health, Safety and Environment.
- To impart quality education and training to undergraduate students in Mining Engineering so as to prepare them for the Mining & other allied industries and higher studies

Objectives of the Course:

1. To understand the principles and frameworks of responsible and sustainable mining.
2. To recognize the importance of ESG (Environmental, Social, and Governance) standards in mining operations.
3. To explore modern technologies that support sustainable mine planning and operations.
4. To develop insights into mine closure, land reclamation, and community engagement.
5. To understand the role of the modern workforce in driving sustainability in the mining sector.

Theme/ Scope:

This Short-Term Training Program aims to sensitize participants to the evolving global standards and practices in responsible and sustainable mining. The course will address the technical, environmental, social, and governance dimensions of mining and how modern digital technologies, policy frameworks, and community-centric approaches are shaping the future of the mining workforce.



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Topics to be Covered:

1. Foundations of Responsible and Sustainable Mining
2. Environmental Management and Resource Efficiency
3. Technology and Innovation for Sustainable Mining
4. Socio-Economic and Ethical Dimensions
5. Future Pathways and Capacity Building

Targeted Participants:

Mining professionals and engineers, Academic and research faculty, Postgraduate and doctoral students, Representatives from mining organizations, policymakers, and regulatory bodies

Registration Fee Details: ₹ 35000 + 18% GST i.e. **₹ 41,300/-**

The entire registration fees (i.e. ₹ 41,300/-) must be deposited in advance (including GST) in favor of Director, NIT, Raipur through net-banking. The bank details are as follows:

Bank Name: State Bank of India, NIT Branch, GE Road Raipur

Account Name: Director NIT Raipur

Account No.: 38027633250

IFSC Code: SBIN0002852

Swift Code: SBININBB646

MICR Code of Bank: 492002004

The GST and PAN details of NIT Raipur are:

GST No.: 22AAAJN0643G1ZN

PAN No.: AAJN0643G

Venue:

The Short-Term Course will be conducted at the **National Institute of Technology Raipur, GE Road, Raipur, Chhattisgarh – 492010**. Participants are required to make their own travel and accommodation arrangements. However, on prior request, assistance may be provided in arranging accommodation on a chargeable basis, subject to availability.

Date: 19th to 23rd January 2026.

Outline of the Course:

The course will cover following areas:

1. Introduction to Responsible and Sustainable Mining
2. Environmental and Social Dimensions in Mining
3. Regulatory Frameworks and Governance in Mining
4. Case Studies on Responsible Mining Practices
5. Mine Waste Management and Pollution Control



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6. Reclamation, Rehabilitation and Mine Closure Planning
7. Energy Efficiency and Decarbonization in Mining
8. Sustainable Water and Biodiversity Management
9. Digital Transformation in Mining
10. Drone-Based Monitoring and Remote Sensing Applications
11. Automation and Smart Mining Systems
12. Life Cycle Assessment (LCA) and Sustainable Design in Mining Projects
13. Corporate Social Responsibility (CSR) and Community Engagement
14. Occupational Health, Safety and Well-being in Mining
15. Ethics, Transparency and Governance in Mining
16. Gender Diversity and Inclusive Workforce Development
17. Mine Closure to Post-Mining Land Use, Just Transition and Circular Economy
18. Sustainability Reporting and ESG Performance Indicators
19. Policy and Financial Instruments for Sustainable Mining

Pedagogy:

- Expert lectures from industry, academia, and government agencies
- Case studies and best practice demonstrations
- Group discussions and problem-solving exercises
- Hands-on sessions
- Panel discussions and participant presentations

Expected Learning Outcomes:

- By the end of the program, participants will:
- Gain an in-depth understanding of sustainable mining principles and frameworks.
- Develop awareness of environmental and social governance in mining operations.
- Acquire knowledge of digital tools and technologies for sustainable mine management.
- Understand strategies for energy efficiency, waste reduction, and mine closure.
- Build capacity to contribute to responsible and ethical mining practices.

Contact information

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Couse Coordinator and Assistant Professor Gr-I,

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