

*Five days Executive Development Programme
under
IIT Kharagpur Outreach
on*

**SAFETY, PRODUCTIVITY AND ENVIRONMENTAL MANAGEMENT IN SURFACE
MINING: PERSPECTIVES AND CHALLENGES OF FUTURE ENGINEERING**

Organized by

Department of Mining Engineering, IIT Kharagpur

at

IIT Kharagpur Research Park, Rajarhat, Kolkata

(June 24-28, 2024)

Success of future surface mines will depend on careful handling of large size machinery, GPS technology remote diagnostics, automation and robotics along with reliable down time minimizing techniques etc. Wide range application of data acquisition system, digital ore body modeling integrated with mining machinery controls, computerized mine planning, reliable on line machine diagnostics and advanced communication systems will make the industry more competitive. Implementation of automation, cleaner mining systems and advances of machinery management etc. will be needed for the promising growth.

The purpose of this five-day course is to enable the participants to enhance their understanding of surface mining operations in the light of the recent trends of developments to apply in their work place. This includes an assessment of the techniques of the safety and productivity enhancement in mines with special attention to the post mining liabilities. Spoil dump management and Catchment Area Treatment issues are highlighted in this course

We at the Department of Mining Engineering of Indian Institute of Technology, Kharagpur believe in continuous and lifelong learning and we design courses for the engineers in the mining Industry to train them in specific areas. The present course is one of such courses for the practicing engineers in Indian opencast mines.

The course will be conducted during June 24-28, 2024 at the IIT Kharagpur Research Park, Rajarhat, Kolkata from 10:00AM to 5:30PM with lunch and tea breaks. Soft copy of the **Course Materials** and **Certificate of Participation** will be available to the participants through a MOODLE platform accessible to the registered participants. The lectures will be delivered by faculty members of Indian Institute of Technology Kharagpur and by experts with experience from India and abroad. The session will be conducted in work shop mode including, lectures, panel discussions and interactive Q &A session. Depending on the participants' responses white papers will be developed for each of the themes

How will this course benefit you? Upon completion participants will be able to:

- Identify and evaluate the recent developments in surface mining technologies that could be useful for their work sites and how to introduce them through outsourcing
- Define the requirements of safety and productivity enhancement in mines and plan a programmes to achieve that
- Explain how to undertake safety and productivity audit in their mines.
- Prepare an executable project proposal for spoil dump management and Catchment Area Treatment

Course Content: The course will include the following broad areas:

- Introduction to skill and competency needs for future engineering i.e AI, Big, data, Automation and Robotics, Additive manufacturing and renewable energy systems.
- Purpose and role of *outsourcing management* in different mining activities
- Data driven decision making and monitoring of safety and productivity in surface mines
- Star rating system for environmental and safety performance for in-house capacity building

- Monitoring and performance assessment of outsourced activities in Surface mines.
- Emerging trends of safety and productivity auditing in Surface mining
- Recent developments in managing critical operations in Surface mining: Spoil dump management, transportation and material handling, drainage and dust control.
- Potential hazards due extreme weather events and preparedness
- Strategies for sustainable mine closure and post mining transition.

Who should attend?

- ✓ Any engineer/manager working in surface mines
- ✓ The system engineer and finance officers working in surface mines
- ✓ Academics involved in teaching learning of Surface Mining and involved in R&D and consultancy jobs.
- ✓ Consultants for Surface Mining and planning operations
- ✓ Safety Officers, Environmental Managers and Excavation Engineers working in Surface mines

Venue: IIT Kharagpur Research Park, New Town, Rajarhat, Kolkata-700160, West Bengal

Course fees

The course fee of this *non-residential* programme is

- **Rs. 32,000.00 (Rupees Thirty thousand only) + GST** per nominated participant from industries.
- **Rs. 12,000.00 (Rupees Twelve thousand only) + GST** for faculty members of technical institutes.
- **Rs. 5,000.00 (Rupees Five thousand only) + GST** for students and Research Scholars of technical institutes

Additional 18% GST will be levied as per GOI rules. The course fee is payable by electronic money transfer to “CEP STC IIT Kharagpur” to the account number **95562200002955 of Canara Bank at Branch SRIC IIT Kharagpur (IFSC Code CNRB0019556)**. The course fee does not include boarding and lodging charges. IIT Kharagpur is exempted from Income Tax and while sending the course fee no Tax should be deducted. The Tax Exemption Certificate will be provided. *Please let us know the complete transaction details with date after the payment.*

Accommodation for the Course Participants

The course will be *Non-Residential*. Nominated participants will have to arrange their accommodation in Kolkata.

How to send Nominations:

Please email the nomination letter with the names of your nominated participants, designations, valid email address and mobile numbers to the Course Coordinator as early as possible preferably on or before June 14, 2024.

For any other information, or sending nomination please contact:

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