Five days Online Training (Executive Development)
Under
Continuing Education Program of IIT Kharagpur
On
MINE CLOSURE & POST MINING LIABILITY MANAGEMENT: REMOTE SENSING, GIS AND PHOTOGRAMMETRY BASED PLANNING & MONITORING
(**November 18-22, 2020**)
Organized by Department of Mining Engineering, IIT Kharagpur

Mine Closure Planning is now mandatory for all mining operations in India. The policies practiced for reclamation and site restoration are now streamlined for regional sustainable development. The FR and DPR of any mining project now need to take care of detailed mine closure planning. Mining ventures are now committed to minimize the long lasting impacts on landscape, ecology and on the mind set of local inhabitants. Today's mining operations require to pay careful attention to post closure impacts and post mining mine-site restoration while carrying out the present production as well as environmental and maintenance oriented activities.

Mine closure related activities are to be aligned & integrated with various mining activities. Closing of mining operation involves numerous issues like reclamation and environmental protection, community issues, socio-economic consideration, planning for alternate use of available facilities, cost estimation and asset disposal. Mines must have continuously reviewed and updated closure plan, aimed at rehabilitation of disturbed area, which should be acceptable to local community as well as regulatory authority. The concepts of integrated planning to facilitate the activities at the closing phase of a mine need now serious and scientific deliberations. Development of mine closure plans requires understanding number of interrelated concepts and aligning with societal transformations. Without adequate environmental management system, cost effective mine closure or outcome based post-closure development of mine site is impossible.

Considering that numbers of mines are already abandoned or working without economic performance in our country, we need to be more serious regarding handling the technological and environmental issues pertaining to these mines. The mining companies need to think positively on mine closure and develop present work strategy accordingly for eliminating critical socio-economic and environmental crisis. To this end, contemporary scientific and technological developments could serve the mine operators. However, it demands judicious implementation.

Recent advances in the field of Remote Sensing (RS) technology and computer based automated Geographic Information System (GIS) and Photogrammetry have emerged as very useful tools for problem solving and decision making for environmental management and mine closure. The GIS technology integrates common database operations such as query and statistical analysis with the unique visualization and benefits of geographic analysis offered by maps. These abilities distinguish GIS from other information systems and make it valuable to a wide range of public and private enterprises for explaining events, predicting outcomes, and planning strategies.

This online course has been designed to impart essential scientific and technical background for mine closure planning, environmental management and Remote Sensing and GIS applications through theoretical and online practical classes. The course aims at providing the competency of the practicing engineers for mine closure management activities.

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

- COVID19 induced challenges for mining operations
- Baseline information for mine closure planning - their acquisition and analysis techniques.
- Integrated Mine Planning for Environmental Management during Operations and Closure

- Risk Analysis for Mine Closure
- Post closure monitoring and management of mining sites
- Catchment Area Treatment near mining sites
- Environmental Management -Tools and Techniques
- Assessment of socio-economic impacts of mine closure
- Safety analysis of abandoned mines
- Satellite Remote Sensing and GIS for environmental management - concepts, application and introductory hand-on exercise on geo-rectification, merging, subsetting, mosaicing, vectorisation etc. of satellite imagery, digital photogrammetry and GPS
- Case studies of mine closure

The online course will be conducted during November 18-22, 2020 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 registered/nominated participants through a MOODLE platform accessible to the registered participants. The online lectures will be delivered by faculty members of Indian Institute of Technology Kharagpur and by experts with experience from India and abroad. Each session will be followed by interactive Q &A session. The link for participation and password will be emailed to the registered/nominated participants.

Fees and How to Apply:

Fees of the online training is Rs. 15,000.00 (Rupees Fifteen Thousand only) per participant. GST @ 18% is to be paid extra as per GoI rules.

[The fees should be paid by electronic money transfer to "CEP STC IIT Kharagpur" to the account number 95562200002955 of Canara (Syndicate) Bank at Branch SRIC IIT Kharagpur (IFSC Code SYNB0009556)].

- ✓ **Please email the Name(s) of the participants, their designation, valid email address and mobile numbers as early as possible.**
- ✓ **Alternatively, application may be made online using the following link** (https://erp.iitkgp.ac.in/CEP/courses.htm)

Payment is to be done **ONLINE** after getting short listed for the program.

(The detailed procedure for applying through IIT Kharagpur online course registration portal is enclosed along with this brochure)

For any other information, or sending nomination please contact:

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Department of Mining Engineering, IIT Kharagpur

Set up in the year of 1956, this Department has steadily grown as one of the best mining education centre in the country. Besides offering undergraduate, postgraduate, and doctoral courses in Mining Engineering, it is actively involved in short term courses and research activities in the areas of Mining Machinery, Mine Safety and Reliability, Mine Fire and Explosions, Model Studies in Ventilation, Rock Mechanics and Ground Controls, Numerical Analysis of Mine Structures, Underground and Surface Environment, Geometrics and Remote Sensing, Mine Closure Planning and relevant computer applications. Short-term courses, consultancy, sponsored research programmes and postgraduate project works are part of the department's regular activities.

Continuing Education Programme (CEP)

Indian Institute of Technology Kharagpur

Procedure for applying through IIT Kharagpur online course registration portal

Use the link: https://erp.iitkgp.ac.in/CEP/courses.htm

Steps to be followed:

1. Sign-Up
2. Verify your email-id (link will be sent to your e-mail)
3. Login
4. Edit Profile(Fill up all the mandatory fields, upload photo and signature)
5. Click on 'APPLY NOW' button.
6. Upload your **.pdf** format id-card (if necessary).
7. Payment Gateway activated

***An e-mail will be communicated from Principal Coordinator/Convenor/Organiser, IIT Kharagpur to the shortlisted applicants stating the payment procedure.

*** This is a one time sign up process for applying through IIT Kharagpur online course registration portal. You can apply for any other programme using the same Login-id and Password.

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For any help please call @ the following help-line numbers:(0)-3222-269626

or Email us: cep_erp@iitkgp.ac.in