

*Five days Offline Training Program (Executive
Development) Under*
Continuing Education Program of IIT Kharagpur
On

**State-of-the-art on Occupational Safety and Health Practices in Mines Including
Automation and Digitization**
(AUGUST 22-26, 2022)

Organized by the Department of Mining Engineering, IIT Kharagpur

Mining has been and continues to be an industry where the concern for miners' safety is of great importance. Even though the mining industry in India has experienced a considerable improvement in the reduction of accident rates in underground and surface mines, further reduction of accident rates is necessary. In general safety problems in mining and allied industry in terms of the reduction of accidents and injuries are usually addressed through reactive measures of hazard control rather than proactive measures. It is now widely accepted across the globe that risk assessment and safety management greatly contribute towards improvement of safety of mining and other industries. Moreover, the role of ergonomics at workplaces is a significant factor in determining the level of safety in any given situation. Therefore, the ergonomics aspect should also be given due consideration in accident prevention.

During the recent time, safety aspects have been focused in emerging areas such as safety engineering, risk assessment and safety management plan, occupational health, automation and digitization, ergonomics, safety data analytics and 'Vision Zero' approach. This course is specifically tailored to address these thrust areas of safety as well emerging methods which can be used as valuable techniques by the safety management to deal with risk assessment and management of mining industry and to address the specific safety problems including the issues of near-miss / near- hit incidences. The course is primarily designed for all personnel involved in safety.

SCOPE OF THE COURSE

The following topics will be covered in the programme:

- Concept of safety engineering and its role in mining
- Recent trends in techniques of risk assessment across the globe
- Risk assessment and safety management plan of DGMS and other organizations
- Analysis of human factors related accidents and behavioural based safety
- Safety systems analysis using fault tree approach for identification of potential safety problems
- Safety data analytics
- Emerging technologies in mine safety including ergonomics, wireless tracking of mine workers, virtual reality, and injury epidemiology
- Whole-body vibration exposure of workers who are operating heavy machineries in surface mines
- Automation and digitization in mines (Industry 4.0)
- ISSA 'Vision Zero' concept
- Case studies.

COURSE STRUCTURE

The lecture classes will be taken mainly by the faculty members of Mining Engineering Department of the Institute. Some of the lecture sessions will be taken by experts from outside organizations. All lectures will be conducted through physical mode (Offline).

SPONSORED PARTICIPANTS

The course fee is Rs.30,000/- per participant which will include course material. As per GOI, GST of 18% will be applicable on the registration fee. The accommodation of the participants will be arranged at the Main Guest House of the institute at their own expense (non-residential course).

MODE OF PAYMENT

Option 1: Demand Draft

Demand Draft in favour of “CEP-STC, IIT Kharagpur”, payable at any bank in Kharagpur should be sent by post to the Course Coordinator

Option 2: Electronic Transfer

Name of Bank: Canara Bank,

SRIC, IIT Kharagpur 721302;

Name of Account:

CEP-STC, IIT KHARAGPUR

Account No: 95562200002955

RTGS No: CNRB0019555

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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.