

*Five days Online Training (Executive Development)*  
*under*  
***Continuing Education Program of IIT Kharagpur***  
*On*

**SAFETY ENGINEERING IN MINES FOR AUGMENTING SAFETY MANAGEMENT**  
**(May 04 -08, 2021)**

Organized by the Department of Mining Engineering, IIT Kharagpur

The new global philosophy of **VISION ZERO** aims for complete prevention from risk and hazards. Safety performance is no more a mere compliance of safety standards. Industrial performance is measured through widely accepted various indicators of productivity and safety including its image in the society as an employer which respects humanity.

ISSA Mining (International Social Security Association-Mining) is clearly committed to the prevention strategy **VISION ZERO**, targeting a working environment in which nobody is injured, killed or so severely injured or falls ill that she or he suffers lifelong harm. **VISION ZERO** is the strategic backbone of ISSA Mining's work. Safety, health and well-being of mining community are the most desirable indicators of its performance that identifies a mining company as a distinguished entity. The safety behavior and level of awareness the employees is the reflection of performance of the operational and supervisory systems. Our nation has come a long way in slowly and steadily reducing the accident rates in mining industry over the last one hundred years. But we are still not free from accidents, hazards or adverse health effects related to our occupation. In a critical and historical junction when we are switching over to Industry 4.0, we are even more concerned about the new challenges involving large scale mechanization, automation, remote sensing and application of robotics in mines. In the present trend of information based industrial management, information driven decision making is obviously becoming very important. The mining industry needs to explore the new opportunities that this new technologies offer as well as augment its capacity to prevent occupational risks and hazards associated with it. With a view to ensure better safety standards such as Vision Zero, international trends are also towards switching over to large scale integration of monitoring and control through IoT (internet of Things). With encouraging efforts from the Government of India, the mining industry is marching towards a new era of safe and digital mining. Now is the time when we work hand in hand towards a better and safe mining with more knowledgeable manpower and advanced digital technology.

**Objectives:**

- Enhancing the performance of Safety Management by engineering solutions.
- Capacity building of Mine system by capturing, archiving and analyzing safety data for Safety Analytics.
- Application of Industry 4.0 for enhancing quality of technology management in mines.
- Understanding Risk management with applied statistics and reliability
- Exploring virtual reality and simulation in accident analysis and prevention.

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

- Industry 4.0: Challenges and opportunities
- Root cause analysis of safety deterioration
- Assessment of wellness of engineering systems
- Mechatronics for understanding system performance
- Slope Stability Radars (SSR)- Practical application in mines for monitoring of slope failures
- VISION ZERO: from concept to realization in mining industry

The online course will be conducted during May 04-08, 2021 from 10:00AM to 5:00 PM with lunch and tea breaks. Soft copy of the **Course Materials** will be emailed and the **Certificate of Participation** will be sent by post to the registered/nominated 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 Bank at Branch SRIC IIT Kharagpur (IFSC: CNRB0019556)].

- ✓ **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** (Details are enclosed)

(<https://erp.iitkgp.ac.in/CEP/courses.htm>)



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

For any other information, or sending nomination please contact:

### **Prof. Bibhuti Bhusan Mandal**

Department of Mining Engineering

IIT Kharagpur-721302

Phone: +91-3222-304822

Mobile: +91- 9423638180/7972924672

Email: [bbmandal@mining.iitkgp.ac.in](mailto:bbmandal@mining.iitkgp.ac.in);

[bbmandal@gmail.com](mailto:bbmandal@gmail.com)

### **Prof. Khanindra Pathak**

Department of Mining Engineering

IIT Kharagpur-721302

Phone: +91-3222-283722

Mobile: 09800877877

E-mail: [khanindra@mining.iitkgp.ac.in](mailto:khanindra@mining.iitkgp.ac.in);

[khanindra.p@gmail.com](mailto:khanindra.p@gmail.com)

Alternatively, please contact **Mr. Sourav Kr. Mandal**, Course Manager

(Email:[souravm.iitkgp@gmail.com](mailto:souravm.iitkgp@gmail.com); Mobile: 8436718289)

## **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.

## Office of the Dean (Continuing Education)

Indian Institute of Technology Kharagpur

### Procedure for applying through IIT Kharagpur online program 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. Fill up profile details
5. Choose your program from the dashboard
6. Click on 'APPLY NOW' button.

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

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



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

or Email us: [cep\\_erp@iitkgp.ac.in](mailto:cep_erp@iitkgp.ac.in)

**Payment procedure for CEP Programs (if applicable)**

Once short listed for the program the candidate receives an email for making fee payment (if applicable) from ERP System, IIT Kharagpur. He/She is redirected to IIT Kharagpur Payment Gateway page by clicking on the Fee Payment option of the program chosen after login at <https://erp.iitkgp.ac.in/CEP/secure/courses.htm>.

**A. Fee Payment**























1) Click on the button “**Pay Fees**”. You will be redirected to IIT Kharagpur Payment Gateway page.

The screenshot displays the 'IIT Kharagpur Payment Gateway' interface. It features a table with payment details and other information, along with two buttons at the bottom: 'PROCEED INR 1.0' and 'CANCEL PAYMENT'.

| PAYMENT DETAILS     |                                   |
|---------------------|-----------------------------------|
| IITKGP REFERENCE NO | SEMREG-08IM7001-2014-105          |
| TYPE                | Semeter Registration Fees Payment |
| INITIATED BY        | ABCDHFGE KSAKAK (10AB8907)        |
| AMOUNT              | 1.0                               |
| CURRENCY            | INR                               |
| OTHER DETAILS       |                                   |
| SESSION             | 2014-2015                         |
| DEPARTMENT          | Electrical Engineering            |
| SEMESTER            | AUTUMN                            |

At the bottom of the form, there are two buttons: a green button labeled 'PROCEED INR 1.0' and a yellow button labeled 'CANCEL PAYMENT'.

2) Check the details shown and click on **Proceed**. You will be redirected to State Bank of India MOPS facility (SBIMOPS).

| NET BANKING  | CARD PAYMENTS   |
|--|---|
|  <b>State Bank of India</b><br><i>With you - all the way</i> Bank Charges: Nil                     |  <b>State Bank ATM-cum-Debit Card</b> Bank Charges: 11.0  |
|  <b>State Bank of Bikaner and Jaipur</b><br><i>The Best with a vision</i> Bank Charges: Nil        |  <b>Other Banks Debit Cards</b> Bank Charges: 11.0        |
|  <b>State Bank of Hyderabad</b><br><i>You Can Always Bank on Us</i> Bank Charges: Nil              |  <b>Credit Cards</b> Bank Charges: 0.02                   |
|  <b>State Bank of Mysore</b><br><i>Working for a better tomorrow</i> Bank Charges: Nil             | <b>OTHER PAYMENT MODES</b>  |
|  <b>State Bank of Patiala</b><br><i>With You Everyday Every Inch of The Way</i> Bank Charges: Nil  |  <b>SBI BRANCH</b> Bank Charges: 50.0                     |
|  <b>State Bank of Travancore</b><br><i>A Long Tradition of Trust</i> Bank Charges: Nil             |  <b>Other Banks Internet Banking</b> Bank Charges: 15.0   |

[Click here to abort this transaction and return to the IIT Kharagpur semester fee site.](#)

3) Choose the mode of payment and proceed as per instructions.

4) After successful payment through SBI MOPS click on “**Click here to return to IIT Kharagpur e-Transaction**”. This ensures redirection to the page from where payment has been initiated, and subsequently updating payment status. In some cases successful payment status may not be updated immediately due to some technical reasons. The status would be updated within two hours (from the time of realization of payment in IITKGP account) in such cases. The status of branch payment will be updated within two hours of payment.

**If transaction fails due to some technical reason and amount is debited from your account, please do not pay again. Kindly wait for the last transaction to be settled. It can be refunded to you or credited to IITKGP account.**