

## COURSE COORDINATOR AND INSTRUCTORS

Contact the course coordinator for any Queries:

### Prof. Abhiram Kumar Verma

#### *Course Coordinator and Instructor*

Associate Professor

Department of Mining Engineering

IIT Kharagpur-721302

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Email: verma@iitkgp.ac.in

**Interests:** Excavation design, rock mechanics and ground control, numerical modeling.

### Prof. Debasis Deb

#### *Course Co-Coordinator and Instructor*

Professor and Head

Department of Mining Engineering

IIT Kharagpur-721302

Ph: 03222-283724 (O)/ 09434701966 (Cell)

Email: deb@iitkgp.ac.in

**Interests:** Rock mechanics and ground control, numerical methods.

### Prof. Y. P. Chugh

#### *Course Instructor*

Professor Emeritus and Visiting Professor

Mining and Mineral Resources Engineering

Southern Illinois University Carbondale

Carbondale, Illinois 62901-6603, USA

Tel: 618-201-3675 (m), 618-453-7922(O)

E-mail: ypchugh1940@gmail.com

**Interests:** Underground coal mining, rock mass reinforcement, mine subsidence.

## DEPARTMENT OF MINING ENGINEERING

Set up in 1956, Mining Engineering Department at IIT Kharagpur offers B.Tech (Hons.), M.Tech, MS and PhD academic programs. It is actively involved in research in the areas of Rock Mechanics and Ground Control, Numerical Analysis, Modeling Studies in Ventilation, Underground and Surface Mine Environment, Mine Fire and Explosions, Geomatics and Remote Sensing, Mine Safety, Reliability, Mineral Processing and computer applications.

The department has strong industry interaction with all major mining affiliated industries in India and abroad. The sponsored research projects and consultancies in the department cover all aspects of mining activities.

To further, strengthen the academic and industrial relations, department offers tailor made off-campus short term courses on topics of interest to the industry.



Visit the Institute Website for more Information  
[www.iitkgp.ac.in](http://www.iitkgp.ac.in)



Short Term Course

On

## GROUND CONTROL FOR MINE PLANNING, PRODUCTION AND SAFETY

Feb 13-16, 2018



Department of Mining Engineering  
Indian Institute of Technology  
Kharagpur – 721 302

## ABOUT THE COURSE

The principal objective of the course is to train participants in planning and maintenance of safe excavations and structures in rock to enhance productivity and safety. Ground control founded on the principles of rock mechanics finds applications in underground and opencast mines, including waste dumps. The principles can also be extended to tunnels, hydro-electric and nuclear waste facilities.

The course will provide participants with the principles of ground control for mine design with relevant case studies in underground and open-pit mining. The problems will be analyzed from basic principles, calculations in the classroom, and interactions among participants and instructors. Participants will be encouraged to share their problems and solutions that may have been attempted.

The course will be taught by team of three experienced rock mechanics and ground control professionals, with field experiences in India and USA. They are highly regarded by industry professionals in their fields.

**DISCUSSION AMONG PARTICIPANTS ON IN- FIELD PROBLEMS AND ATTEMPTED SOLUTIONS IS PLANNED. PARTICIPANTS ARE ENCOURAGED TO ENGAGE IN THESE DISCUSSIONS. THIS ACTIVITY CAN BE BETTER**

**PLANNED IF PARTICIPANTS INFORM THE COURSE COORDINATOR ABOUT INTENT TO PARTICIPATE, THE PROBLEM AND TIME REQUIREMENTS.**

## COURSE CONTENT

The course will cover rock mechanics and ground control principles to prepare participants in the design, implementation, monitoring, and control steps of the planning process. The applications will cover both partial and high extraction underground mining systems, and open-pit mining, including waste dump problems. More specifically, opening and pillar design, panel design geometry, in-mine observations and monitoring, and reinforcement of rock structures will be discussed. Appropriate examples and case studies will be an integral part of discussions.

## ABOUT PARTICIPANTS

The course is designed for industry engineers and mid-level executives actively engaged in the mine planning process. It would also be excellent for young faculty members and research scholars planning to specialize in this topical area, and others who wish to refresh their background to develop research in these areas.

## APPLICATION AND COURSE FEE

Interested participants are requested to send their application to the course coordinator

(Dr. Verma) latest by February 10, 2018. It is proposed to limit enrollment to 40 participants to make teaching more effective.

The course fee is ₹25,000 per participant from industry and research organizations and ₹10,000 from academic institutions. However, GST (18%) is to be paid extra as per GOI directives. Fee is payable by demand draft or by electronic money transfer to "CEP-STC IIT Kharagpur" to the A/C No. 95562200002955 of Syndicate Bank at Branch SRIC-IIT Kharagpur (IFSC code : SYNB0009556). The course fee does not include boarding and lodging charges. IIT Kharagpur is exempted from Income Tax and while sending the course fee no TDS is applicable.

If a industry/research organisation sponsors five or more participants then the course fee will be ₹20,000 per participant.

## VENUE

The venue of the course will be **Dept. of Mining Engineering, IIT Kharagpur**. Kharagpur is well connected by railways from all parts of the country. The nearest airport is Netaji Subhas Chandra Bose International Airport about 150 Km. from Kharagpur.

## ACCOMODATION

The course is non-residential. Participants can arrange their own accommodation, however accomodations will be arranged for all participants at IIT Kharagpur Guest House on payment basis.



Short Term Course on  
**Ground Control For Mine Planning, Production and Safety**  
(February 13 - 16, 2018)

Organised by: Dept. of Mining Engg., IIT Kharagpur – 721 302

**Course Venue: Dept. of Mining Engg., IIT Kharagpur**

**REGISTRATION FORM**

Name:

Designation:

Organization:

Academic Qualification:

Sex:

*(use separate form for each participants)*

**Address of Communication:**

E-mail(s):

Fax:

Phone/mobile

**Bank Draft/Banker's Cheque/ ECS Detail:**

Bank draft/Banker's Cheque/ Ref. No:

Amount:

Bank Name:

Dated:

Departure Plan:

Date:

Place:

Signature of the Applicant