

QIP Short Term Course On Theory and Applications of Geo- Spatial, Geo-Imaging & Remote Sensing Technology

A Continuing Education Programme of
Indian Institute of Technology
Kharagpur

15th July - 20th July 2013



Coordinator

Prof. D Chakravarty
Department of Mining Engineering
E-mail : dc@iitkgp.ac.in
stcdciitkgp@gmail.com
Phone: 91-3222-283708
Mobile: 9434084681 / 9332036095

Organized by

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

OBJECTIVES AND INTRODUCTION

Understanding of the different methods, the modern technologies, the underlying principles, their high application potentials and limitations of the geo-spatial, geo-imaging & remote sensing techniques including learning about the criteria for useful applications - understanding the processes of creating digital databases & environments - gaining the practical skills by using existing tools in laboratory sessions - developing complete applications through field / group projects forms the basics of this course.

The Geo-spatial, Geo-imaging & Remote Sensing Division of the department has developed high level of expertise and experience in the applications of these modern techniques and advanced information handling algorithms with the recent methods including remote sensing, digital photogrammetry, Geographic Information System (GIS) and Differential Global Positioning System (DGPS) etc. in the past years. The proposed academic / executive development program will be offered as a first of its kind in the country for the academia and industry officials including the managerial executives, with the theoretical and practical hands-on exercises.

SCOPE

The aim of this course is to focus on the fundamentals and applications of geo-spatial, geo-imaging and remote sensing technologies. This will include lectures, tutorials and practical sessions covering almost all the

aspects of the three broad areas mentioned above. Broad topics will be:

- Linear Algebra and Probability Theory
- Coordinate Systems & Reference Frames, Introductory Mathematics of Positioning and Satellite based Navigation
- Theory and mathematical concepts for GPS, DGPS, GNSS, Geo-ERM, Geo-Intelligence
- Localization Concepts & the Mathematical Methods for Image Based Localization
- Basics of Remote Sensing
- Theory and Hands-on exercises of Optical Remote Sensing; Radar Remote Sensing; InSAR, DInSAR, PSInSAR;
- Theory and Hands-on exercises of TLS
- Theory and Hands-on exercises of Stereo Imaging
- Data capture using Terrestrial Laser Scanner and its Processing

COURSE FACULTY

The entire course will be covered by the faculty members of IIT Kharagpur and / or a few experts from industry.

WHO SHOULD ATTEND

Faculty members of University and AICTE approved engineering colleges who want a thorough guided tour on Theory and Applications of Geo-Spatial, Geo-Imaging & Remote Sensing Technology.

Practicing Field Engineers, Professionals, Functional managers, administrators and researchers in the positioning, mapping, satellite based navigation and geo-imaging industry; may also join the course.

ELIGIBILITY

B.E. / B.Tech / M.E / M.Tech or equivalent degree in relevant engineering disciplines. Science back ground students, having sufficient work experience in relevant field, may also apply.

REGISTRATION

Category of eligible participants / delegates:

- (a) Teachers from AICTE Approved Engineering Colleges – No registration fee and AICTE, Govt. of India norms would be followed. However, a Demand Draft of ₹ 1,000/- should be enclosed with the application which will be refunded to the participants attending the course (*Filled Application/ Registration form should reach at the Department of Mining Engineering, IIT Kharagpur by 5th July, 2013; total participants limited to 30: selection of participants is on first-come-first-serve basis*).
- (b) Scientists / Technologists / Engineers: Participants from Industry may also attend (limited no. of seats on first-come-first-serve basis): **should apply by 5th July, 2013 course fee ₹20,000/-**. Self sponsored candidates will be provided course materials, working lunch, tea & snacks during the course hours. Traveling, boarding & lodging expenses should be borne by participants.
- The registration fees to be paid through Bank Draft should be in favour of '**CEP - STC, IIT, Kharagpur**' payable at Kharagpur along with completed registration form to be sent to Prof. D. Chakravarty, Department of Mining Engineering, I.I.T., Kharagpur – 721 302, West Bengal, INDIA.

LOCATION

Kharagpur is an important Railway junction station about 116 km west of Kolkata. There are frequent train services from Howrah Railway Station and it is well connected to almost all parts of the country. The Institute is about 5 km away from Kharagpur Railway Station. Taxis, Auto-rickshaws, cycle rickshaws are available as transport.

ACCOMMODATION

Limited shared accommodation in the guest house is available. However, efforts will be made to book accommodation in the guest houses on receipt of confirmed request from the participants by 5th July, 2013.

Enquires should be addressed to:

Prof. D Chakravarty
Mining Engineering Department, IIT
Kharagpur
Kharagpur – 721 302
E-mail: dc@iitkgp.ac.in
stcdciitkgp@gmail.com
Phone: 91-3222-283708
Mobile: 9434084681 / 9332036095
Telefax: 91-3222-282299 / 2282
Fax : 91-3222-255303



Cut here

QIP Short Term Course on Theory and Applications of Geo-Spatial, Geo- Imaging & Remote Sensing Technology, 15th July - 20th July 2013

REGISTRATION FORM

Please complete the details below and mail it to the Course-Coordinator's address along with the registration fee. You may scan and email all the documents as an advance copy of your application.

1. Name :
2. Designation :
3. Address (Office):
4. Phone (Mob.) :
Phone (Res.) :
- E-mail (compulsory):
5. Male/Female:
6. Highest academic qualification:
7. Accommodation Required (Y/N):
8. Bank Draft No..... Date.....
Amounting ₹.....drawn on.....Bank

For QIP Sponsored Candidates [Category-(a)]

Recommended and forwarded

Date: _____
Signature and Seal of the
Head of the Organization

For others [Category-(b)]

1. Draft No. _____ dt. _____
amounting ₹ _____ drawn on
_____ Bank.
2. Recommendation and forwarding letter from the organization where working.

Date: _____ Signature of the Applicant

Place: _____

Cut here