

TEQIP III APPROVED SHORT TERM COURSE
on

DIGITAL LAND SURVEYING

03 – 07 June 2019
(REVISED DATE)

Organized by



Geomatics Engineering Group
Civil Engineering Department
Indian Institute of Technology Roorkee
Roorkee - 247667

Venue

Civil Engineering Department
IIT Roorkee

Course Coordinator

Dr. Jayanta Kumar Ghosh

SHORT TERM COURSE ON “DIGITAL LAND SURVEYING”

(Geomatics Engineering Group, IIT Roorkee)

1. Importance of the course :

Digital Land surveying is the state-of-art for collection of geo-spatial data. It makes use of GPS to establish control stations and total station to collect detail geo-spatial data. GPS provides highly accurate position of points in its pre-defined global reference frame with little effort, time and cost. But, it demands judicious field works and competent data processing. Total station provides high quality field data. As society is marching towards digital world, there is/ will be a great demand of personnel capable of digital land surveying.

2. Background of the course

NPTEL Online Course on Digital Land Surveying and Mapping is a popular course. Each year thousands of students get registered to this course. Last year, more than 7500 students, from all over India, have participated in this course. But, unfortunately, very small number of students could pass the examination. This indicates that though a vast number of students are interested to learn the subject but they need teaching in personal level which can only be imparted by the faculty members of the institutes in which students belong. So, the course on Digital Land Surveying has been proposed. This will impart an opportunity for faculty members from various institutes from all over India may learn a state-of-art in engineering surveying.

3. Aim of the course

The aim of the course is to develop human resources capable of carrying out digital land surveying. Emphasis of the course is to inculcate insight for generation of geo-spatial digital information. The course should benefit for academicians to introduce/popularize the state-of-art of surveying to fellow students in their institutes.

4. Brief objective of the course

The objective of the course is to provide basics of digital land surveying. The objective will be realized through introduction to land surveying followed by fundamentals, working and measurements using GPS for establishment of control stations; fundamentals, working and measurements for land surveying using Total Station; and finally, working and demonstration of a land surveying using GPS and total station.

5. Course Contents in brief:

- Fundamentals of Land Surveying
- GPS: Introduction - System, signals; Receivers & Software - Demonstration, Features, processing etc.

- TOTAL STATION (TS) : Introduction & Demonstration of instrument (Parts), Measurement : Basics, Principle, Reflector/reflectorless etc. with demonstration; Measurements of Distance, Height & Angle (Theory & Demonstration); Errors in total station measurements; Quality Analysis of total station measurements.
- DIGITAL LAND SURVEYING : Theory, Procedure, Data Collection, Download & Processing
- DIGITAL LAND SURVEYING Field work.

6. Deliverables of the course

After successful completion of course, a candidate will be conversant with GPS receivers, Total Station and their software. The candidate will be able to carry out collection of data using GPS receiver and Total Station. Finally, will be capable of carrying out digital land surveying.

7. Faculty

Highly learned and experienced faculty members of Geomatics Engineering Group, Civil Engineering Department IIT Roorkee will deliver lectures and coordinate laboratory exercises. **Surveyor General of India, Survey of India, Dehradun will deliver EXPERT lecture.**

8. About Geomatics Engineering Laboratory

The Geomatics Engineering Laboratory of Civil Engineering Department IIT Roorkee may be considered as the best Geomatics laboratory those are available in any educational institute in India. It contains most of the state-of-art instruments as well as software that geomatics education demands. It has large numbers of different types of GPS receivers as well as total stations those will be useful for the course.

9. Who can participate?

TEQIP III approved university/institution/college teachers

10. Course Fee

No course fee shall be charged from faculty of TEQIP III approved Universities/Institutions/Colleges. TA and DA of the participants will be borne by their parent institute.

11. Accommodation

Lodging and boarding will be provided to the participants on twin-sharing basis, if available.

12. How to apply

Please fill the Nomination Proforma (Annexure-1) and send the duly approved and signed copy of the Nomination Proforma by Speed post. Also, mail a copy of the approved copy Nomination Proforma to gjkumfce@iitr.ac.in

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13. Important dates

Last date for receiving application: 30 April 2019.
Last day of Intimation to Participants (by email): 07 May 2019
Course Dates: 03 – 07 June 2019

14. Contact Information

Dr. (Er.) Jayanta Kumar Ghosh, Ph.D.
[**National Geospatial Award for Excellence - 2017**]
Visiting Professor, ISEGI Lisbon, Portugal
Associate Professor, Civil Engineering Department
Indian Institute of Technology Roorkee,
Roorkee Uttarakhand 247 667 INDIA
Phone: 091-1332-285429(O)/ 9411111721
Fax: 091-1332-273560,275568
URL: <http://www.iitr.ac.in/~CE/gjkumfce>
[e-mail: gjkumfce@iitr.ac.in](mailto:gjkumfce@iitr.ac.in); gjkumfce@gmail.com; gjkumfce@yahoo.com;

Nomination Proforma

Geomatics Engineering Group
Civil Engineering Department
Indian Institute of Technology Roorkee
Roorkee - 247667

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03 – 07 June 2019

Name of Applicant:..... Designation:.....
Educational Qualification Specialization
Affiliating Institution:
Address.....
.....
State :..... Pin:.....
Phone..... Email:.....
Mobile number:

Signature of Applicant with date

Forwarded:

The applicant will be permitted to participate in the above program, if selected.

Date:

Signature (Director/Principal/Head/TEQIP Coordinator)
Seal of the Univ./Institute/Dept. / Organization