Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)

Old Bombay Road, Gachi Bowli, Hyderabad – 500 032. TS, India

ESCI

WATER RESOURCES DEVELOPMENT DIVISION

Continuing Professional Development Programme on

GNSS Survey Theory and Practical's

19 – 21 May, 2025

(**An ISO 9001:2015 Certified, AICTE & CEA Recognized Institution)**

Centre for Promotion of Professional Execellence

INTRODUCTION

Traditionally, land measurement and mapping relied on physical survey instruments such as chains, compasses, plane tables, dumpy and auto levels, theodolites, and total stations. While these conventional methods have been widely used, they are often time-consuming, labor-intensive, and require highly skilled surveyors. Additionally, many older cadastral and town planning maps, though valuable for property taxation and urban planning, often present challenges when overlaid with modern satellite imagery, leading to feature mismatches and inaccuracies. These discrepancies can result in legal disputes, administrative hurdles, and inefficient land management. To overcome these challenges, professionals such as civil engineers, irrigation engineers, R&B engineers, town planners, surveyors, GIS professionals, and researchers must adopt modern geospatial technologies for accurate, efficient, and data-driven mapping.

One of the most transformative technologies in land surveying today is GNSS (Global Navigation Satellite System). GNSS utilizes satellite signals to provide highly precise positioning and navigation, significantly enhancing survey accuracy, efficiency, and scalability. Compared to traditional methods, GNSS-based surveys are faster, more reliable, and capable of covering vast areas with minimal effort. With integration into GIS, remote sensing, and AI-based analysis, GNSS plays a critical role in urban planning, infrastructure development, water resource management, and disaster mitigation.

Government of India announced the launch of the **National Geospatial Mission**, aiming to modernize land records and enhance urban planning across India. This initiative leverages the existing PM Gati Shakti framework to develop foundational geospatial infrastructure and data, facilitating improved design and execution of infrastructure projects. Geospatial refers to data or information that is associated with a specific location on the Earth's surface. The National Geospatial Mission is expected to significantly impact various sectors, particularly in urban development and land management.

COURSE COVERAGE

- Over view on GNSS, Survey Importance using GNSS, demonstrate the Base station and Collection of features using Rover station
- Data transformation using software
- Mapping
- Hands on experience on GPS and GNSS

METHODOLOGY

Methodology includes class room lectures with audio visuals, Software Applications, interactive sessions through group discussions, case studies etc. Emphasis would be laid on sharing of experiences of participants. Active participation is solicited from participants. Medium of training is English.

TARGET PARTICIPANTS:

The course is meant for Engineers of Civil Engineers, Irrigation engineers, R&B Engineers, Town Planners, Graduate & Postgraduate Students in Civil Engineering, Surveyors & GIS Professionals, academician's & Researchers, Government & Private Sector Employees.

BENEFITS TO THE PARTICIPANTS

In this training program, we will explore the theory and practical applications of GNSS technology, covering different survey techniques, data collection, processing, and interpretation, equipping participants with the necessary skills for modern geospatial surveying.

PROGRAMME VENUE, DATES & TIMINGS

VENUE :

Engineering Staff College of India (ESCI) Campus, Old Bombay Road, Gachi Bowli, Hyderabad - 500032, TS India.

DATES

19 – 21 May, 2025

TIMINGS

On the first day, registration will commence at 0900 Hrs. On all other days the programme timings will be from 0945 to 1715 hrs with breaks in between for tea and lunch.

COURSE DIRECTOR

Er. M. Rajasekhar Reddy, M.E, FIE
Former – Chief Engineer
Panchayat Raj Engg. Dept., Govt. of Telangana
Senior Faculty and Head
Contact details: 040-66304117 (D)

Dr. P. Sridhar
Senior Faculty,
Water Resources Development Divison
Mobile : **9848665296**

Er. G Naresh, M.Tech (Ph.D), MIE
Faculty,
Water Resources Development Divison
Mobile : +91 8801193075

COURSE FEE

Residential Fee Rs. 16,500 + GST @ 18 % (As applicable) Per participant. Residential fee includes course material, course kit, and twin-sharing / single AC accommodation as per availability, Breakfast, Lunch, Dinner, Tea / Coffee and Snacks.

DISCOUNTS

Non-Residential Fee: 10% discount on course fee is allowed for non-residential participants.

Group Discount: Additional 10% discount for three or more participants if sponsored by the same organization.

(All discounts are applicable only if fee is received at ESCI before the commencement of the programme)

GST @18% as applicable is to be paid extra over and above the training fee. **PAN Card No** AAATT3439Q**; GSTIN** 36AAATT3439Q1ZV (under commercial training or coaching services).

Programme fee is to be paid in favour of **"IE(I)-Engineering Staff College of India"** in the form of demand draft payable at Hyderabad.

Alternatively the payment may be made by **Electronic Fund Transfer (EFT)** to ESCI - SB A/c No. 10007111201 with The SBI, PBB, Rajbhavan Road Branch, Khairatabad, Hyderabad-500004 by NEFT/ RTGS/ IFSC Code No. SBIN 0004159 – MICR No.500002075. **While using EFT method of payment, please ensure to communicate us your company name, our invoice reference and programme title.**

REGISTRATION

Online registration shall be available on ESCI website. To register manually, please send your nominations giving details of name, designation, contact address, email address, mobile, telephone and fax numbers of the participant along with the details of mode of payment of fee, addressed to:

Head
Water Resources Development Division
Engineering Staff College of India
Gachi Bowli, Hyderabad – 500 032
Phone: 040 – 66304117 – 9 (Dir.) 23000465 (EPABX): Extn: 4117– 9
Fax: 040 - 23000336
E-Mail : wrd@escihyd.org
Url : www.escihyd.org

CERTIFICATE: A certificate of participation will be awarded to each participant on conclusion of the programme.

GENERAL INSTRUCTIONS

- ESCI encourages participants to present case studies from their respective organizations.
- For the convenience of the outstation participants ESCI will facilitate pickup and drop from Airport / Railway Station/ Bus stations, if travel plans are received at least 3 days in advance along with mobile number by fax or email. The charges shall be paid by the participants directly to the cab.
- ESCI provides complimentary accommodation to participants a day prior to the commencement and after the conclusion of the programme. (Check in at 12:00Hrs) one day after conclusion (Check out at 12:00 hrs) of the programme duration.
- Overstay charges of @ Rs.990/- per day, per head will be charged.
- Well developed Information Centre and internet facilities are available to the participants.