Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)

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

WATER RESOURCES DEVELOPMENT DIVISION

Continuing Professional Development Programme on

Automation in Micro Irrigation Systems for improving Irrigation Efficiency

09 – 13 June, 2025

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

Centre for Promotion of Professional Execellence

INTRODUCTION

In India, water is the most crucial input for agricultural production. The consumption of water is quite high for agriculture production. With a growing world population, agriculture will face more competition from industrial and domestic water users. This is why agriculture will have to use water more efficiently. The irrigated area in developing countries is expected to increase by 40 million hectares (20 percent) by 2030. By 2050, human population is projected to increase to 9 billion people and it is estimated that 70% of additional food have to be produced in order to feed the humanity over the next 40 years. Water demands increase not only for food production but also for other sectors like industry, domestic, power etc. to meet the needs of the increased population. Strategies for efficient management of water for agricultural use involves reduction in water losses in conveyance and distribution system through periodic maintenance, applying the right quantity at right time, participation of farmers in water management, right cultivation techniques and irrigation practices including increased use of water saving devices like sprinkler and drip, conjunctive use of surface and ground waters and moisture conservation practices. The use of pressurized irrigation technology could increase water-use efficiency and reduce cost.

To meet the increasing food demand for growing population it is the need of the hour to increase agriculture production with minimum expenditure and loss of resources. The Government of India has been implementing Centrally Sponsored Scheme on Per Drop More Crop with the objective to enhance water use efficiency in the agriculture sector. Under the scheme, technological interventions like drip & sprinkler irrigation systems are promoted to encourage the farmers to use them for conservation and saving of water & improved yield. The National Water Mission (NWM) has been established with the objective of “conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management”.

CRIWAR Model Software is a significant practice for the assessment of crop evaporation, crop water requirement, and irrigation scheduling. Irrigation scheduling is important to maximize crop yield, quality, optimizing costs and improving water use efficiently.

OBJECTIVES

The objective of the proposed training programme aims at providing an opportunity to engineers and scientists involved in irrigation and agricultural activities to enhance their knowledge and skill on “Smart Irrigation Systems” with latest technologies like Internet of Things (IoT), irrigation scheduling with software.

COVERAGE

- Irrigation Development in India
- Introduction to Automation Irrigation System
- Crop water requirements – FAO guidelines.
- Irrigation Scheduling
- CRIWAR Model Software
- Internet of things (IoT) in Smart farm watering System
- Water Use Efficiency –Water Audit and Bench Marking of Irrigation Systems

- Monitoring Canal Network using SCADA Software applications
- Participator Irrigation Management
- Bhuvan - Per Drop More Crop App

METHODOLOGY

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

TARGET PARTICIPANTS

The programme is meant all officers working in Irrigation, Agriculture, Soil & Water Conservation, Water resources departments, NABARD, Academics, Research and Development Organizations.

PROGRAMME VENUE

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

DATES

09 – 13 June, 2025

TIMINGS

On the first day registration will commence at 0900 Hrs. On all other days the programme timings will be from 0915 to 1615 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)

Er. G Naresh, M.Tech (Ph.D), MIE
Faculty
Mobile : +918801193075

COURSE FEE

Residential Fee is Rs. 27,500/- 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.