



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
**Instrumentation and Seismic Analysis of
Gravity Dams with Software Applications**
07 – 10 November, 2017



(An ISO 9001:2008 Certified, AICTE & CEA Recognized Institution)

Centre for Promotion of Professional Excellence

INTRODUCTION

The purpose of instrumentation and monitoring in Dams is to maintain and improve dam safety by providing information to 1) evaluate whether a dam is performing as expected and 2) warn of changes that could endanger the safety of a dam. Instrumentation and monitoring combined with vigilant visual observations can provide early warning of many conditions that could contribute to dam failures and unpleasant incidents.

Instrumentation and monitoring must be carefully planned and executed to meet defined objectives. Installation of instruments or accumulation of instrument data by itself does not improve dam safety or avoid disasters. It is essential that Instruments are carefully selected, located and installed. Data must be conscientiously collected, meticulously deduced, tabulated, and plotted, and must be judiciously evaluated with respect to the safety of the dam in a timely manner.

Every instrument in a dam should have a specific purpose. If it does not have a specific purpose, it should not be installed or it should be abandoned. Instrumentation is used to accurately quantify certain parameters of structural behavior over time and to monitor their rate of change. The scope of the monitoring methods employed depends on the potential risk associated with dam and site characteristics. The use of instrumentation as part of dam safety programs is increasing as the technology of instrumentation and ease of use advances.

Earth quake is one of the major source of induced dynamic forces that creates structural instability in gravity dams resulting into disasters, though rare. The first failure of a dam due to earth-quake reported in the literature was Auguston Dam during 1886. The milestone in the seismic analysis of dams in India was after 1967 Koyna Earth-quake. Computer softwares have been developed for the static & seismic stability evaluations of gravity dams to help design engineers.

OBJECTIVES

The proposed programme aims at providing an opportunity to the Engineers involved with design, construction, maintenance and analysis of gravity dams to enhance their knowledge on Instrumentation and Applications of Software for Seismic Analysis of Gravity Dams.

COVERAGE

- Introduction to Instrumentation for dams
- Design Principles of gravity dams and codal provisions
- Dam Safety guidelines and implementation
- Stability analysis of gravity dams – software applications
- Planning and installation and O&M of Instruments
- Instrumentation and Monitoring schemes of concrete, Earth fill and Rock fill dams
- Seismic instrumentation of dams
- Earthquake monitoring system or dam safety
- Case studies
- Field Visit

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 participants. Medium of training is English.

TARGET PARTICIPANTS

The programme is meant for Junior and Middle level officers involved in Design, Construction, Maintenance and Analysis of Dams for structural stability and safety.

PROGRAMME VENUE

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

DATES

07 – 10 November, 2017

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 (S)

G.D. Ojha, *B.E., M.Tech*
(Former Regional Director
Central Ground Water Board, MoWR GoI),
Head & Sr. Faculty, WRD Division

B. Leela Prasada Rao, *B.E., M.Tech*
Sr. Faculty
WRD Division

COURSE FEE

Residential Fee is Rs.20,000/- 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, mobiles no, telephone and fax number 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.