Training Program on
Design of Pipelines, Pumping Systems and Surge Analysis

Course Co-ordinator

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Course Schedule

18 to 20 December 2025

Registration Deadline:

30 November 2025

Course Mode: Offline, IISc campus

Contact Us

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Indian Institute of Science (IISc) Bangalore
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Scan here to apply

Course Detail

Training program on Design of Pipelines, Pumping Systems and Surge Analysis is being organized for engineers involved in pipeline design and construction. Till date 20 such programs were organized at IISc Bangalore with more than 700 participants from water boards, public health engineering, irrigation and rural water supply departments of states, consulting firms (Indian and Foreign), construction companies, pump and valve manufactures. Two exclusive programs were organized for public health department engineers of Rajasthan at Jaipur and Mizoram at Aizwal.

Lecture sessions will cover Estimation of friction losses; computation of pump head; system curve analysis; basic concepts of surge; effect of column separation; parameters influencing surge; interpretation of surge results; types of pipes; design criteria for surge protection; control of surge; surge protection devices; design of air vessel, one way surge tank, stand pipe; locating upsurge control devices like zero velocity valve, surge relief valve, air valve and air cushion valve; control of surge for gravity mains. Transient analysis for circulating water systems. Case studies in water transmission mains, lift irrigation schemes and CW systems.

Computer sessions will cover usage of Surge Analysis Program Version 2 software developed at Department of Civil Engineering, Indian Institute of Science, Bangalore for surge analysis, interpretation of results and design of surge protection systems with examples and data from projects. Software will be provided for the participants.

Fee for the program is Rs. 21,186/- plus 18% GST, total Rs. 25,000/- per participant. Fee includes course material, lunch and teas. Candidates can apply to the course at online application portal via https://iisc.online/shortterm/home.html. Any clarifications regarding payment/ accommodation in campus contact The Office Supervisor, CCE through email office.cce@iisc.ac.in or at 080 2293 2247/2491/2508.

Limited accommodation (non a/c single room with attached toilet) is available on campus at Rs. 1500/- + GST per night per person. No catering facility, but couple of restaurants are nearby. Details of hotels around IISc campus can be provided on request.