



Short-term course on
Source to Tap: Design and Analysis of Water Supply Systems

10th – 15th November 2025, IIT Kanpur

Venue: PBCEC Classroom

Day 1 (November 10, Monday)	
10:00 – 10:30	Registration
10:30 – 11:00	Inauguration
11:15 – 12:15	Drinking water quality parameters and Indian standards (IS 10500); Quality issues in rural/urban context – Prof. Purnendu Bose, IIT Kanpur
12:30 – 13:30	Overview of water supply systems: Components, source selection, and demand estimation – Prof. Manoj Kumar Tiwari, IIT Kanpur
13:30 – 15:00	Lunch
15:00 – 16:00	Introduction to water treatment processes and quality monitoring methods – Prof. Abhas Singh, IIT Kanpur
16:15 – 17:15	Overview of water distribution networks and basics of hydraulic modelling – Prof. Avi Ostfeld, Technion
Day 2 (November 11, Tuesday)	
07:30 – 09:00	Tour of IIT Kanpur
10:30 – 13:00	Laboratory session: Analysis of basic water quality parameters; demonstration of advanced analytical instruments
13:00 – 14:00	Lunch
14:00 – 15:45	Building and understanding a water distribution model in EPANET - Prof. G. R. Abhijith, IIT Kanpur
16:00 – 17:00	(Online) Steady-state and extended period simulations: Interpreting pressure, flow, and demand – Dr. Sriman Pankaj Boindala, Technion
Day 3 (November 12, Wednesday)	
10:00 – 11:15	Intermittent water supply: Uncertainties, coping behaviours, and water safety – Prof. Dipteek Parmar, HBTU Kanpur
11:30 – 13:00	Leak detection & localisation using pressure/flow data and AI methods – Dr. Perna Pandey, EY
13:00 – 14:15	Lunch
14:15 – 15:30	Pipe sizing and optimal network design: Cost-performance trade-offs – Prof. Rajesh Gupta, VNIT Nagpur
15:45 – 17:30	Hydraulic analysis using EPANET – Prof. G. R. Abhijith, IIT Kanpur



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Day 4 (November 13, Thursday)	
10:00 – 13:00	Design and analysis of a water distribution network using ESurveying Softech (a Made-in-India Product) – Mr. Raju. N and Mr Dhananjeyan. M. G., ESurveying
13:00 – 14:00	Lunch
14:00 – 15:30	Water quality post-treatment in distribution networks: Chlorine decay, disinfection by-products formation, and biofilm growth – Prof. Avi Ostfeld, Technion
15:45 – 17:00	Water quality modelling: Chlorine decay and water age – Prof. G. R. Abhijith, IIT Kanpur
Day 5 (November 14, Friday)	
10:00 – 11:00	Water demand forecasting: Principles and techniques – Dr. Perna Pandey, EY
11:15 – 12:45	Water supply systems design: Constraints, challenges, and innovations – Mr. Geevarghese Mammen Koyippally, AECOM
12:45 – 14:00	Lunch
14:00 – 15:30	Water quality analysis using EPANET – Prof. G. R. Abhijith, IIT Kanpur
15:30 – 17:30	Visit – Ganga Barrage
19:30 onwards	Farewell dinner
Day 6 (November 15, Saturday)	
10:00 – 11:30	Group presentations on design/modelling challenges
12:00 – 13:00	Valedictory session