EUCI ONLINE COURSE

EUCI is pleased to offer this virtual course on its online interactive platform. Enjoy a valuable learning experience with a smaller impact on your time and budget. You will gain new knowledge, skills, and hands-on experience from the convenience of your remote location.

“Great class! It was useful to be able to try out the software during the course. Kedric did a great job of catering to participants with no modeling experience as well as those with many years of experience.”

Project Engineer, Parker Water & Sanitation District

EUCI is authorized by IACET to offer 1.0 CEUs for the course.
OVERVIEW

This course introduces hydraulic models for water utility distribution systems and covers how modeling can be applied to benefit water utilities. Ensuring a robust and redundant infrastructure, reducing operating costs, planning for outages, and determining firefighting capabilities are some of the items that attendees should have new ideas about after this course.

Hydraulic Modeling for Water Utility Distribution Systems will highlight the fundamentals of modeling including the purpose of a model, inputs, and results while covering the more challenging basics of data collection, defining capacity and demand, and outage analysis.

LEARNING OUTCOMES

Upon completion of this course, participants will be able to successfully:

- Layout the components of a hydraulic model
- Collect hydraulic modeling data from GIS and other sources
- Define Hydraulic Grade Line (HGL) and Headloss and interpret the impacts to HGL in the distribution system and pressure pipe models based on minor Losses
- Assign consumption to the model
- Recognize how to ensure robust and redundant infrastructure
- Determine fire-fighting capabilities
- Analyze the distribution system
- Perform outage analysis and better plan for outages
- Assess water quality within the distribution system
- Refine operational modeling skills: linking the model to SCADA, forecasting, and forensics
- Optimize operations and reduce costs

WHO SHOULD ATTEND

This course is designed for anyone who wishes to obtain a basic understanding of hydraulic modeling for water utility distribution systems

- Engineers
- Water modeling specialist
- GIS specialist
- Project managers
- Water operations
- Mid managers and supervisors

“This was a good course. It struck a good balance between providing instruction for those with more and less experience.”

Senior Engineer, Anderson Consulting Engineering

“Very interesting and informative.”

Engineering Technician, Scottie Valley Water
AGENDA

THURSDAY, AUGUST 6, 2020 - CENTRAL TIME

8:30 – 9:00 am  Login and Welcome

9:00 am – 4:00 pm  Course Timing

12:00 – 12:30 pm  Lunch Break

Short breaks will be taken throughout the course.

Hydraulic Modeling Overview
- Transmission
- Storage
- Operations

GIS and Modeling
- Useful data for Modeling in GIS
- 1 to 1 Models
- Data needed not found in GIS

Hydraulic Grade Line (HGL) and Headloss
- Major impacts to HGL in Distribution Systems
- Minor losses in pressure pipe models
- Impacts of pumps, control valves, and PRV’s

12:00 – 12:30 pm  Lunch Break

Consumption
- Common Data
- Assigning Consumption to the Model
- Diurnal Patterns
- AMI

Redundancy Assessments Using Hydraulic Models
- One side out analysis
- Criticality of pipes

Afternoon Break

Fire Flow Analysis
- Benefits of hydrants being in the hydraulic model
- Multiple hydrant analysis
- Available flow at a hydrant

Analysis of Distribution System
- Main Sizing
- PRV Set Points
- System Head Curves for Pumping

“Great for personnel running hydraulics.”
Sr. GIS Analyst, American Water

“Teams was very easy to navigate and made for a great and easy platform to use.”
Sr. Communications Specialist, Pepco Holding
AGENDA

FRIDAY, AUGUST 7, 2020 - CENTRAL TIME

8:30 – 9:00 am       Login and Welcome

9:00 am – 12:30 pm   Course Timing

Short breaks will be taken throughout the course.

Outage Analysis
• Storage offline
• Conduit outages
• Comparing solutions

Water Quality
• Water age
• Source tracing
• Introduction to multi species modeling

Operational Modeling
• The reality of operations
• Linking the model to SCADA
• Forecasting
• Forensics

Optimization
• Pumping Operations
• Valve Control
• Demand planning

Wrap up: Questions, Comments, and Remarks

INSTRUCTOR

Kedric Szana
Water Modeling Specialist, Denver Water

Kedric is Denver Water’s lead hydraulic modeler. He specializes in hydraulic and water quality modeling of distribution systems, collection systems, raw water systems, and transients. He has worked extensively on GIS integrated hydraulic models and the benefits of AMI for distribution system modeling. He has been focused on SCADA integrated, operational, and real-time modeling for the past decade.
INSTRUCTIONAL METHODS

This program will use PowerPoint presentations and active participation with modeling software (laptops needed). Please download EPANET software prior to event: [https://www.epa.gov/water-research/epanet](https://www.epa.gov/water-research/epanet)

IACET CREDITS

EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

**EUCI is authorized by IACET to offer 1.0 CEUs for the course.**

ONLINE COURSE DELIVERY & PARTICIPATION DETAILS

We will be using Microsoft Teams to facilitate your participation in the upcoming event. You do not need to have an existing Teams account in order to participate in the broadcast – the course will play in your browser and you will have the option of using a microphone to speak with the room and ask questions, or type any questions in via the chat window and our online administrator will relay your question to the instructor.

- You will receive a meeting invitation which will include a link to join the meeting.
- Separate meeting invitations will be sent for the morning and afternoon sessions of the course.
  - You will need to join the appropriate meeting at the appropriate time.
- If you are using a microphone, please ensure that it is muted until such time as you need to ask a question.
- The remote meeting connection will be open approximately 30 minutes before the start of the course. We encourage you to connect as early as possible in case you experience any unforeseen problems.

REQUIREMENTS FOR SUCCESSFUL COMPLETION

Participants must login for the entirety of the course to be eligible for continuing education credit.
Substitutions & Cancellations
Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before July 3, 2020 in order to be refunded and will be subject to a US $195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI’s liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices.
EUCI reserves the right to alter this program without prior notice.

HYDRAULIC MODELING FOR WATER UTILITY DISTRIBUTION SYSTEMS ONLINE COURSE:
AUGUST 6-7, 2020: US $1195 (Single Connection)
PACK OF 5 CONNECTIONS: US $5,375
PACK OF 10 CONNECTIONS: US $8,965

For volume discounts call +1.303.770.8800 for quote

* all other discounts do not apply to license packs

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name
Job Title

Company

Address

City State/Province Zip/Postal Code Country

Phone Email

CREDIT CARD INFORMATION

Name on Card Billing Address

Account Number

Exp. Date Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

Billing City Billing State

Billing Zip Code/Postal Code

OR Enclosed is a check for $ to cover registrations.