

Agenda

Presented by George Walters III, PE, CPD

Agenda Day One:

Thursday, September 19, 2024 | 9:00 am - 12:15 pm CDT

Introduction to Pumps: Operations, Principles and Calculations

Operation of centrifugal pumps

- Intro, terms, definitions
- Centrifugal pump construction, components, impeller, motor, volute
- Incompressible fluid, pumping equations
- Closed system, open system, parallel and series pumping applications

Reviewing hydraulic principles and calculations

- Fixture units and GPM
- Friction losses/allowable pressure drop
- Static pressure vs. dynamic pressure
- Equivalent lengths

Design Standards and Codes

IPC – International Plumbing Code – state amendments NFPA

UFC – Unified Facilities Criteria (military requirements)

WBDG – Whole Building Design Guide

AHJ – Authority Having Jurisdiction

The interpreter of the Code, plumbing inspector, fire marshal

LEED – Leadership in Energy & Environmental Design

USGBC

Agenda Day Two:

Friday, September 20, 2024 | 9:00 am - 12:15 pm CDT

Piping System Components, Materials and Calculations

Piping system components and materials

- Copper vs. plastics, galvanized steel and stainless steel

When, where, why

- BFP, PRV, meters
- Valves, ball valves, gate valves, butterfly valves, flow-balancing valves

Making basic system calculations

- Pipe sizing
- Friction loss calculation
- Pump sizing

Handling Pump and Piping System Problems

Booster pumps

Circulating pumps, chilled water, hydronic heating, domestic hot water

Fire pumps

Pumping and Piping Systems

Online - Thurs., September 19 and Fri., September 20, 2024

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Learning Objectives

You'll be able to:

Learn about centrifugal pump construction and components.

Review hydraulic principles and calculations.

Comply with design standards, including those in the International Plumbing Code.

Compare piping system components and materials including copper, plastics and steel.

Explore different types of valves, including ball valves and gate valves.

Make basic system calculations, and size piping and pumps.



HalfMoon Education Inc.,
Your LIVE Education Leader Presents

Pumping and Piping Systems

Live, Interactive Webinar

Thursday, September 19, 2024 | 9:00 am - 12:15 pm CDT

Friday, September 20, 2024 | 9:00 am - 12:15 pm CDT



Explore the operation of centrifugal pumps

Review hydraulic principles and calculations

Comply with design standards and codes

Examine piping system components and materials

Make basic system calculations

Handle pump and piping system problems

Continuing Education Credits

Professional Engineers

6.0 PDHs

International Code Council

.6 CEUs (Building)

Architects

6.0 HSW CE Hours

6.0 AIA LU | HSW

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Webinar Information

Day One: Thursday, September 19, 2024
9:00 am - 12:15 pm CDT (including a 15-min. break)

Day Two: Friday, September 20, 2024
9:00 am - 12:15 pm CDT (including a 15-min. break)
(please log into the webinar 15 - 30 minutes before start time)

Tuition
\$339 for individual registration.
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Faculty

George Walters III, PE, CPD *Mechanical Engineer at BMH Engineering LLC*
Mr. Walters is a professional engineer and is certified in plumbing design through the American Society of Plumbing Engineers. His responsibilities overlap into the professional engineering areas of civil engineering, mechanical engineering, chemical engineering, fire protection engineering, and process engineering. He performs calculations, sizes equipment, and prepares plumbing design and construction documents. Mr. Walters is a member of the Atlanta Chapter of the American Society of Plumbing Engineers (ASPE). He earned his B.S. degree in Mechanical Engineering from Georgia Tech.

Credit Information

This webinar is open to the public and is designed to qualify for 6.0 PDHs for professional engineers and 6.0 HSW continuing education hours for licensed architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider License No: CEA362), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00049300) and North Carolina (S-0130). HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.0 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .6 CEUs in the specialty area of Building (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

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Additional Learning

Designing and Constructing Net-Zero Energy Homes
- Friday, August 23, 2024 | 8:30 am - 4:00 pm CDT

Improving Interior Air Quality in Residential and Commercial Buildings
- Friday, August 23, 2024 | 12:00 - 2:00 pm CDT

2024 International Building Code: Administration and Enforcement
- Tuesday, August 27, 2024 | 12:00 - 4:30 pm CDT

Complying with Commercial Provisions of the 2021 International Energy Conservation Code
- Tuesday, August 27, 2024 | 9:00 am - 4:30 pm CDT

How to Calculate the Proper Size and Volume for Water Lines (Pex & Copper), Drain-Waste-Vent Lines and Natural Gas Lines
- Tuesday, August 27, 2024 | 8:30 am - 3:30 pm CDT

Structural Engineering Calculations for Wood Construction
- Tuesday, August 27, 2024 | 10:00 am - 1:15 pm CDT

Physics of Construction of a Building
- Wednesday, August 28, 2024 | 8:30 am - 4:30 pm CDT

How to Design Using Natural Ventilation
- Wednesday, September 4, 2024 | 11:00 am - 1:00 pm CDT

Residential and Small Commercial Roof Design and Construction
- Friday, September 6, 2024 | 9:00 am - 4:30 pm CDT

Engineered Lumber Design and Construction
- Monday, September 9, 2024 | 9:00 am - 5:00 pm CDT

2024 International Building Code: Occupancy Classifications
- Tuesday, September 10, 2024 | 12:00 - 4:30 pm CDT

Designing and Constructing Vegetated Roofs
- Tuesday, September 10, 2024 | 9:00 am - 4:00 pm CDT

Ethical Issues in Structural Engineering
- Tuesday, September 10, 2024 | 10:00 - 11:00 am CDT

Plumbing Basics for Non-Plumbing Professionals
- Tuesday, September 10, 2024 | 8:30 am - 3:30 pm CDT

Soil Mechanics, Bearing Capacity and Slope Stabilization
- Tuesday, September 10, 2024 | 8:30 am - 4:30 pm CDT

Distinguishing Between Construction Defects and Failures
- Wednesday, September 25, 2024 | 1:00 - 3:00 pm CDT

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