

Agenda

Presented by Melissa Zeis, PE

Agenda Day One:
Wednesday, August 28, 2024 | 9:00 am - 12:30 pm CDT
Residential and Small Commercial Pools, Water Features and Related Amenities

- History of regulation of outdoor pools in the U.S.
- Changing requirements for construction permits
- Differences between permitting a residential pool vs. a small commercial pool

Complying with Codes and Standards for Pools and Water Features
Complying with codes and standards:

- International Building Code, International Residential Code, and accessibility standards
 - ISPSC
 - MAHC
- Electrical and MEP Code

Design of In-Ground Pools and Water Features
Identifying the type of pool and desired uses
Location, sizing, and excavation
Common permitting Issues that drive design of the pool and/or the site

Agenda Day Two
Thursday, August 29, 2024 | 9:00 am - 12:30 pm CDT
Design of In-Ground Pools and Water Features

- Construction of pool bases: the role of granular fill and hydrostatic relief
 - Steel cages and reinforcement
 - Shotcrete vs pour-in-place concrete
 - Waterproofing
- Recirculation Equipment**
Pumps – residential vs commercial
Pumps – VSF and VFD – what are they and how do we design them?
Filters – sand, cartridge, DE
Heaters vs heat pumps
Heaters: using your geothermal system to heat your pool with a heat exchanger
Disinfection options: chlorine, UV, AOP

Virginia Graeme Baker Pool and Spa Safety Act, (VGBA) Requirements
NSF certification
Safe design of drain connections
Drain and pipe sizing



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Swimming Pool Design and Construction

Online - Wednesday, August 28 and Thursday, August 29, 2024

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Learning Objectives

You'll be able to:

- Explore** changing requirements for permitting pools and water features.
- Comply** with codes and standards, including IBC, IRC, ISPSC and MAHC.
- Discuss** pool location, sizing and excavation.
- Compare** concrete and reinforcement options.
- Evaluate** options for pumps, filters and heaters.
- Comply** with the Virginia Graeme Baker Pool and Spa Safety Act.



HalfMoon Education Inc.,
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Swimming Pool Design and Construction

Live, Interactive Webinar
Wednesday, August 28, 2024 | 9:00 am - 12:30 pm CDT
Thursday, August 29, 2024 | 9:00 am - 12:30 pm CDT



- Explore** types of pools, water features and related amenities
- Learn to *comply*** with codes and standards for pools and water features
- Discuss** the design of in-ground pools and water features and **learn** of permitting issues
- Consider** the construction of pool bases and **discuss** waterproofing
- Analyze** recirculation equipment, including pumps, filters and heaters
- Examine** the Virginia Graeme Baker Pool and Spa Safety Act, (VGBA) Requirements
- Examine** safe design and drain connections

Continuing Education Credits

- | | |
|---|--|
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| Architects
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6.5 AIA LU HSW | International Code Council
.65 CEUs (Building) |



Webinar Information

Day One: Wednesday, August 28, 2024
9:00 am - 12:30 pm CDT (including a 15-min. break)

Day Two: Thursday, August 29, 2024
9:00 am - 12:30 pm CDT (including a 15-min. break)
(please log into the webinar 15 - 30 minutes before start time)

Tuition
\$339 for individual registration.
\$309 for two or more registrants from the same company at the same time.
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Faculty

Melissa Zeis, PE
CEO/Principal Engineer, Aquatic Engineering Consultants
Ms. Zeis graduated in December of 2007 with a B.S. degree in Civil Engineering from North Dakota State University. She began her career in the swimming pool industry in 2008 while working for a hospitality architecture design firm. Her role was to provide the engineering to help the firm and their clients navigate the new federal laws addressing water safety and accessibility. Ms. Zeis provided guidance to several states in their development of legislation to address the Virginia Graeme Baker Act, ADA and ANSI Regulations. After leaving the architecture firm, she continued to provide consulting and design services to her clients and grew her client base to include municipalities, HOAs, resort and community pool associations. As she grew in her experience, her company has grown and provides design for everything from high-end residential projects to large water parks. In April of 2018 Ms. Zeis founded Aquatic Engineering Consultants, LLC. (AEC), where she and her staff have adopted the mantra of "Solutions. Integrity. Excellence." AEC strives to provide the best engineering solutions that meet the client's vision while providing the best user experience. Licensed in over 21 states and with 16+ years in the industry, Ms. Zeis has experience with all types of site challenges, evolving regulations, advances in equipment and related technologies.

Additional Learning

2024 International Building Code: Code Fundamentals
- Tuesday, August 13, 2024 | 12:00 - 4:30 pm CDT

Tiny House Design and Construction
- Tuesday, August 13, 2024 | 9:00 am - 5:15 pm CDT

Engineering Ethics and Engineering Code of Conduct for Professional Engineers
- Friday, August 16, 2024 | 10:00 am - 12:00 pm CDT

Basics of Structural Steel Design and Construction
- Tuesday, August 20, 2024 | 8:30 am - 4:30 pm CDT

Complying with NFPA 101 (2021): Life Safety Code
- Wednesday, August 21, 2024 | 8:30 am - 5:00 pm CDT

Credit Information

This webinar is open to the public and is designed to qualify for 6.5 PDHs for professional engineers, 6.5 HSW continuing education hours for licensed architects, and 6.5 HSW continuing education hours for landscape 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, architects and landscape architects via its registration with the American Institute of Architects Continuing Education System (AIA/CES) and the Landscape Architecture Continuing Education System (LA/CES). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.5 HSW LUs (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The Landscape Architecture Continuing Education System has approved this course for 6.5 HSW PDHs. Only full participation is reportable to the LA CES.

The International Code Council has approved this event for .65 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).

On-Demand Credits
The preceding credit information only applies to the live presentation. This course in an on-demand format is not pre-approved by any licensing boards and may not qualify for the same credits; please consult your licensing board(s) to ensure that a structured, asynchronous learning format is appropriate. The following pre-approvals may be available for the on-demand format upon request:
6.5 HSW LUs (AIA) 6.5 HSW PDHs (LA CES)

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

Flood-Resistant Design and Construction
- Monday, August 26, 2024 | 9:00 am - 4:30 pm CDT

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

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