Agenda

Cold Climate Residential Building Science Basics, Materials and Assemblies — *M. Goetinck*

Thermal performance is a function of:

1. Heat transfer
   - Conduction
   - Convection
   - Radiation
   - Air leakage
2. Materials
   - Insulation
   - Air barriers
3. Installation

Cold Climate Structural Design — *M. Woods*

International Residential Code Structural (IRC) structural provisions
Other standards and guidelines
Dead loads
Live loads
Combined loads
Wind loads
Ice and snow loads
Flood loads

Cold Climate Foundation Design — *M. Mousavi*

Examining site soils and characteristics
Choosing a foundation type: footings, piles, basements, slabs
Drainage and waterproofing

HVAC Systems for Cold Climate Homes — *J. Begley*

Heat pumps
Conventional HVAC-systems
Space heating and cooling
Ventilation
HVAC control systems

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Cold Climate Residential Design
Live, Interactive Webinar - Wednesday, March 20, 2024

HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278

Learning Objectives

You'll be able to:

Explore the science of thermal performance of building materials and structures.

Comply with International Residential Code (IRC) requirements for cold climate structural design.

Design homes to manage ice, snow and wind loads.

Design foundations to withstand the freeze/thaw cycle.

Discuss HVAC options to handle cold-weather heating loads.

HalfMoon Education Live Webinars

Cold Climate Residential Design

Live, Interactive Webinar - Wednesday, March 20, 2024

Learn about the science of thermal performance of building materials and structures

Discuss International Residential Code (IRC) requirements for cold climate structural design

Design for snow, ice and wind loads

Design foundations for cold climates

Explore HVAC system design

Continuing Education Credits

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6.0 PDHs

Architects
6.0 HSW CE Hours
6.0 AIA LU|HSW

International Code Council
.6 CEUs (Building)

AIA Continuing Education Provider

ICC PREFERRED EDUCATION PROVIDER

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Webinar Information

Log into Webinar
8:30 - 9:00 am CDT

Break
12:30 - 1:00 pm CDT

Morning Session
9:00 am - 12:30 pm CDT

Afternoon Session
1:00 - 4:00 pm CDT

Tuition

$319 for individual registration.
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Faculty

Michael Goetinck *Snowdog Construction, LTD.*
Mr. Goetinck is the principal of Snowdog Construction based in Norwich, Vermont. The company specializes in high-performance retrofits and new construction. He has been a Building Performance Institute Building Analyst and Envelope Professional since 2008, teaching classes on building science and high-performance construction. Mr. Goetinck and offers consulting services to homeowners, builders, designers and architects, and nonprofit organizations that work with low-income homeowners.

Marcus E. Woods, PE, MSc & LEED AP
Principal, Woods Residential Engineering & Inspection, LLC
After working in engineering and design management with award-winning structural and construction firms for nearly 10 years, Mr. Woods founded his own firm, Woods Residential Engineering & Inspection. Mr. Woods is a licensed professional engineer in multiple states, holds bachelor's and master's degrees in Civil Engineering (with a focus on structures) from Washington University in St. Louis. He has earned "Accredited Professional" status from the U.S. Green Building Council. Mr. Woods is a member of: The Woods Educational Enrichment Foundation, the National Society of Black Engineers (NSBE) (Director of Programs for the Chicago professional chapter), the American Society of Civil Engineers, and the Structural Engineers Association of Illinois.

Masoud Mousavi, Ph.D., PE *Geocomp Inc.*
Dr. Mousavi specializes in geotechnical engineering, earthquake engineering, transportation geotechnics, unsaturated soil mechanics, and in-situ and advanced laboratory soil testing. With a professional career spanning over 10 years, he has successfully contributed to a wide range of projects across multiple states, as well as in Eastern Europe, the Middle East, and Southeast Asia. He is well versed in applied research and design and evaluation of geotechnical systems as well as assessment and mitigation of construction defects, geotechnical failures, and natural hazards. His extensive experience extends to the design and evaluation of ground improvement systems, deep and shallow foundations, drilled shafts and driven piles, slopes, retaining walls, storage tanks, flexible and rigid pavements, geometric design of roadways, static and seismic-induced liquefaction, liquefaction mitigation techniques, wind farms, earthquake-induced settlement, site-specific response analysis, laterally loaded piles, soil heave and settlement and mitigation techniques, soft clay and peat, dewatering systems, earth-fill dams, differing site conditions, and defective specifications.

Jeremy Begley *HVAC Designer*
Mr. Begley specializes in high-performance HVAC design for both single-family and multifamily buildings. Starting his journey in 2009 with Cincinnati Energy Solutions, he transitioned to the National Heating and Air Conditioning Company in 2013. Here, he expanded his skill set, balancing digital strategies and whole-home performance. By 2015, drawing from his experience in whole home performance and commercial test and balance, Mr. Begley co-founded HVAC Design Partners. As a shareholder, he contributes to HVAC design, commissioning, and business development, aiming for sustainability and compliance in projects. Educated at Cincinnati State Technical and Community College and holding several industry certifications, his experience in HVAC design ensures that interactions with him are informative and grounded.

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. 24GP00000700) 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 program for 6.0 HSW learning units (Sponsor No. J885). This course has been submitted for AIA CES approval and is currently pending. 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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6.0 HSW LUs (AIA)

Additional Learning

2021 International Residential Code: Energy Conservation
- Tuesday, February 20, 2024 | 12:00 - 4:30 pm CST

Universal and Accessible Residential Design
- Thursday, February 22, 2024 | 9:00 am-12:30 pm CST
- Friday, February 23, 2024 | 9:00 am-12:30 pm CST

International Residential Code 2021
- Friday, March 1, 2024 | 8:30 am - 5:00 pm CST

2021 International Residential Code: Mechanical Systems
- Tuesday, March 5, 2024 | 12:00 - 4:30 pm CST

Residential Energy Efficiency Code Compliance and Stretch Code Requirements
- Thursday, March 7, 2024 | 8:30 am - 4:30 pm CST

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