Credit Information

Passive House: Planning, Design and Construction

This webinar offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects licensed in all states.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), 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 course for 6.5 LU|HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .65 CEUs in the specialty area of Sustainability (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to prompts and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

International Existing Building Code 2021

This webinar offers 7.0 PDHs to professional engineers and 7.0 HSW continuing education hours to architects licensed in all states.

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The American Institute of Architects Continuing Education System has approved this course for 7.0 LU|HSW (Sponsor No. J885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .7 CEUs in the specialty area of Building (Preferred Provider No. 1232).

Completion certificates will be awarded to participants who complete this event, respond to prompts and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

Can't Attend? Order the Webinar as a Self-Study Package!
Recordings of each webinar are available for purchase. See course listing online for more information and please refer to specific state licensing rules or certification requirements to determine if this learning method is eligible for continuing education credit. Self-study packages do not qualify for AIA credit.

Live, Interactive Webinars
- Passive House: Planning, Design and Construction
- International Existing Building Code 2021

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Live, Interactive Webinars

Passive House:
Planning, Design and Construction
- Wednesday, October 27, 2021 | 8:30 am - 4:30 pm CDT

International Existing Building Code 2021
- Friday, October 29, 2021 | 7:30 am - 3:20 pm CDT

To register, view detailed presenter biographies, and see other learning opportunities, please visit:

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Passive House:
Planning, Design and Construction

Wednesday, October 27, 2021 | 8:30 am - 4:30 pm CDT (incl. a 60-min break)

Tuition: $289 per registrant, $239 per registrant for three or more

Credits: Professional Engineers: 6.5 PDHs Architects: 6.5 HSW CE Hours
AIA: 6.5 LU|HSW International Code Council: .65 CEUs (Sustainability)

Agenda

Understanding the Energy Efficiency of Conventional Construction
- Facts and figures on residential energy use
- History of energy-conserving residential construction
- Energy language primer, and introduction to thermal bridging
- Building code requirements, energy efficiency incentives

Passive House Standard: Purpose, Principles and Development
- History of certifying agencies in US: PHI and PHIUS
- Passive House Standard: energy, IAQ, comfort, durability
- Energy calculations: how and when to perform them
- Energy calculation tools: introduction and functionality
- Passive House certification process
- Assembling and managing a project team
- Design features of single and multifamily Passive Houses
- Critical factors for floor-planning, windows and ventilation

Architectural Elements of Passive Houses
- Siting, sizing, insulation, shading and orientation
- Super-insulated envelope with minimized thermal bridging
- Critical elements – windows, ventilation, dehumidification
- Ultra-efficient lights, fixtures and appliances
- Multifamily design considerations
- Winter solar gain and heat retention strategies
- Integrating renewable energy – single and multifamily

Mechanical Systems in Passive Houses
- Optimizing heat gains
  - Passive solar heating, with actual data from 3 buildings
  - Indoor environmental heat gains
- Heat and energy recovery ventilation systems
- Supplemental heating systems
- Energy-efficient appliances
- Multifamily mechanical systems considerations

Evaluating Passive House Case Studies
- Adapting Passive House for your location
- Case studies: single and multifamily projects
- Discussion

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International
Existing Building Code 2021

Friday, October 29, 2021 | 7:30 am - 3:20 pm CDT (incl. a 30-min break)

Tuition: $289 per registrant, $239 per registrant for three or more

Credits: Professional Engineers: 7.0 PDHs Architects: 7.0 HSW CE Hours
AIA: 7.0 LU|HSW International Code Council: .7 CEUs (Building)

Agenda

Effectively using the Existing Building
- Purpose and scope
- Chapters
- Performance
- Relationship with “current” family of codes building code
- Provisions for all performance methods
- Composition
- Prescriptive

Provisions for all Compliance Methods - Chapter 3
- General provisions
- Accessibility
- Evaluation of existing loads

Work Area - Chapters 7, 8, 9
- Level 1 alterations
- Level 2 alterations
- Level 3 alterations
- Exercise

Performance Based Chapter 13, Exercise
- General
- Exercise
- Understanding the sections
- Resources

Prescriptive Compliance Method - Chapter 5
- Additions and alterations
- Historic buildings
- Change of occupancy
- Exercise

Change of Occupancy - Chapter 10
- Occupancy classifications
- Exercise
- Hazard categories

Relocated Buildings, Construction Safeguards
- Protection of pedestrians
- Temporary use of public property
- Protection of adjoining property

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Faculty

Passive House: Planning, Design and Construction

Michael Duclos *Principal and Founder of THE DEAP Energy Group, LLC*

Mr. Duclos is a principal and founder of THE DEAP Energy Group, LLC, a consultancy providing a wide variety of deep energy retrofit, zero net energy and Passive House-related consulting services. He is a founder, on the board of directors, and director of education of Energy Raters of Massachusetts, Inc., a RESNET-certified HERS Provider specifically catering to independent HERS Raters in New England. Mr. Duclos also founded Energy Efficiency Associates, LLC, to provide conventional home HERS, energy audit, Stretch Code, tax certification and associated verification and consulting services.

Mr. Duclos was an energy consultant on the Transformations, Inc., Massachusetts Zero Energy Challenge entry, which was awarded the second prize of $15K. He has worked on a variety of Zero Net Energy, DER and Passive House projects, including two National Grid DER projects which qualified for the ACI Thousand Homes Challenge, Option B, both of which have certified with a year of energy consumption data to use less energy than specified by THC Option B. Mr. Duclos conducted a feasibility study of a retrofit to the Passive House new home performance standard. He assisted with the design and preparation of the PHPP for the first EnerPHIT certified home in the US.

Mr. Duclos also worked on the design and certification of the first National Grid DER project to successfully qualify for the Zero Net Energy incentive, which completed a year of use with a surplus of 500 KWHR. He served on the NESEA Zero Energy Task force which analyzed utility bill data from applicants for the annual $10K award for the best zero net energy home. Mr. Duclos is a founding member and was on the board of directors of Passive House New England, Inc., a non-profit promoting high performance building, including Passive House. He is a member of the Northeast HERS Alliance Technical Committee and was on the MassSave New Construction Program HERS Rater Panel.

Mr. Duclos monitors the delivered performance of his projects using a variety of real time electricity monitors, as well as temperature, RH and CO2 loggers and correlates this data to the expected performance predicted by his energy models. The actual data, and the stories behind the data are made available to the public in speaking engagements in a variety of public venues, and in publications like *Home Energy Magazine*.

Mr. Duclos is an ITC-certified building science infrared thermographer, and he is the certified Passive House consultant responsible for the design and certification of the second Passive House in Massachusetts. He holds a B.S. degree in Electrical Engineering from UMass Lowell, and two patents. Mr. Duclos consulted on the first multifamily Passive House certified in New Hampshire, a 24-unit affordable senior housing facility near Laconia, New Hampshire.

International Existing Building Code 2021

Mark Matheny *Chief Building Official, City of Asheville, North Carolina*

Mr. Matheny has been a building safety official for 20 years and was previously a certified general contractor. He is an adjunct instructor at Asheville Buncombe Community College and certified through the state of North Carolina to teach standard certification courses and continuing education. Mr. Matheny holds North Carolina certifications as a code official in building, mechanical, electric, and plumbing. He holds International Code Council (ICC) certifications in building. Mr. Matheny has been providing training throughout North Carolina, South Carolina and Tennessee, since 2008. He Is the current president of ICC Region 8, and immediate past president of the North Carolina Building Inspectors Association and the North Carolina Council of Code Officials. Mr. Matheny is currently a governing member of ICC Building Membership Council, and he is chair of the Community Building Best Practices and Innovation Subcommittee.