

Agenda

Presented by Leonidas Emmenegger, Ph.D.

Reinforced Concrete Building History, Failures, and Systems

- History of concrete construction
- Concrete failures
- Systems for reinforced concrete buildings:
 - Concrete floor systems
 - Concrete framing systems
- Formwork
- Construction costs

Codes, Standards, Loads, and Analysis/Design

- Codes governing concrete construction
- Referenced standards (ACI 318 – “Building Code Requirements for Structural Concrete”)
- Loads (gravity, wind, seismic)
- Process of structural analysis and design for strength and serviceability

Reinforcement

- Steel reinforcement properties; durability
- Reinforcement details
- Embedment and development length

Designing Building Components

- Beams
- Columns
- Walls

Designing More Building Components

- Diaphragms (one-way slabs, two-way slabs)
- Foundations

Joints, Connections and Anchors

- Beam-column and slab-column joints
- Corbels/brackets
- Anchoring to concrete

Case Studies and Examples

- Construction documents and special inspections
- Applications for construction in seismic zones
- Examples of completed buildings



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Reinforced Concrete Building Design and Construction

Live, Interactive Webinar - Thursday, September 19, 2024

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PO Box 278
Altoona, WI 54720-0278



Learning Objectives

You'll be able to:

Discuss the history, failures, and systems of reinforced concrete buildings.

Design various building components, including beams, walls and foundations.

Explore additional reinforcement features, such as joints, connections and anchors.

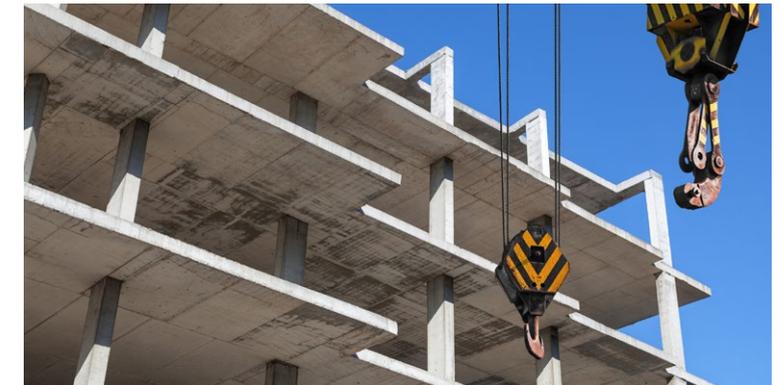
Review construction documents and special inspections for reinforced concrete buildings.

Examine applications for seismic zones, as well as examples of completed buildings.



HalfMoon Education Inc., Your LIVE Education Leader Presents Reinforced Concrete Building Design and Construction

Live, Interactive Webinar - Thursday, September 19, 2024



Explore reinforced concrete building history, failures and systems

Learn about codes, standards, loads and analysis/design

Examine steel reinforcement

Study designing building components, including beams, columns and walls

Discuss joints, connections and anchors

Explore case studies and examples

Continuing Education Credits

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7.0 PDHs

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7.0 AIA LU | HSW

International Code Council
.7 CEUs (Building)

AIA
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Webinar Information

Online - Thursday, September 19, 2024

Log into Webinar

8:00 - 8:30 am CDT

Break

11:45 am - 12:15 pm CDT

Morning Session

8:30 - 11:45 am CDT

Afternoon Session

12:15 - 4:30 pm CDT

Tuition

\$339 for individual registration.

\$309 per attendee for group registrations of two or more from the same company, at the same time, for the same program.

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Faculty

Leonidas Emmenegger, Ph.D.

Civil and Structural Engineering Associate at Exponent

Dr. Emmenegger specializes in analyzing and predicting the deterioration of civil infrastructure such as bridges, buildings, and airports from the perspective of concrete material science, corrosion engineering, and civil engineering. Since joining Exponent as a forensics consultant, Dr. Emmenegger has been involved in numerous matters including construction defect litigation, structural failure analysis, extreme event claims, codes and standards compliance research, and personal injury disputes. His experience in construction and engineering litigation support typically includes site visits to collect critical data, review and distillation of pertinent documentation, engineering and scientific analysis, and dissemination of findings through technical reports and presentations. Some notable cases he has worked on include a concrete failure and construction defect dispute at an environmental facility, the failure of a metal building under extreme weather conditions, and litigation arising from contested curing practices and quality assurance testing per FAA regulations at an airport. In addition, he also has experience with building envelope investigations (water intrusion, façade anchorage, etc.), structural foundation movement from expansive soils, and construction repair cost disputes. Prior to joining Exponent, Dr. Emmenegger was a graduate research assistant at the Georgia Institute of Technology (Georgia Tech), where he earned his Ph.D. degree with a construction infrastructure systems engineering specialization. Dr. Emmenegger is a member of American Concrete Institute (ACI) technical committees on concrete nondestructive testing and durability.

Additional Learning

National Flood Insurance Program (NFIP) Problems and Proposed Reform

- Thursday, September 5, 2024 | 9:00 - 11:00 am CDT

Applied Ecology for Landscape Architects and Related Professionals

- Friday, September 6, 2024 | 12:00 - 3:15 pm CDT

Residential and Small Commercial Roof Design and Construction

- Friday, September 6, 2024 | 9:00 am - 4:30 pm CDT

Orthometric Heights Using GNSS

- Monday, September 9, 2024 | 9:00 am - 12:00 pm CDT

Prop 12: National Implications from California's Livestock Regulations

- Monday, September 9, 2024 | 10:30 am - 1:40 pm CDT

Plumbing Basics for Non-Plumbing Professionals

- Tuesday, September 10, 2024 | 8:30 am - 3:30 pm CDT

Ethical Issues in Structural Engineering

- Tuesday, September 10, 2024 | 10:00 - 11:00 am CDT

Credit Information

This webinar is open to the public and is designed to qualify for 7.0 PDHs for professional engineers and 7.0 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 7.0 HSW LUs (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).

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:
7.0 HSW LUs (AIA)

Dark-Sky Lighting and Ordinances

- Thursday, September 12, 2024 | 1:00 - 3:00 pm CDT

GNSS Workshop: Understanding Common Problems

- Monday, September 16, 2024 | 9:00 am - 12:00 pm CDT

Retaining Wall Tieback Design

- Wednesday, September 18, 2024 | 11:00 am - 1:50 pm CDT

Mature Tree Management

- Thursday, September 19, 2024 | 1:00 - 3:00 pm CDT

Distinguishing Between Construction Defects and Failures

- Wednesday, September 25, 2024 | 1:00 - 3:00 pm CDT

Aerial Mapping for Land Surveyors and Civil Engineers

- Monday, September 30, 2024 | 9:00 am - 4:00 pm CDT

Solar Photovoltaic Covered Parking Facilities

- Monday, September 30, 2024 | 10:00 am - 12:00 pm CDT

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