

THE FINAL WORD IN OPPORTUNITY

Only one event offers the new equipment, innovations, training and networking opportunities that empower you to construct a stronger, more profitable business. Discover why World of Concrete is the largest, most important annual international event for concrete and masonry professionals across the globe!

See why World of Concrete is the industry authority —
REGISTER TODAY worldofconcrete.com



2020 SHOW SCHEDULE

EXHIBIT HALL HOURS

Tuesday, Feb. 4 9:30 am – 5:00 pm
Wednesday, Feb. 5 9:30 am – 5:00 pm
Thursday, Feb. 6 9:30 am – 5:00 pm
Friday, Feb. 7 9:00 am – 12:00 pm

EDUCATION PROGRAM HOURS

Monday, Feb. 3 (All-Day Pre-Show Education)

WOC 3-Hour Seminars:
8:00 am – 11:00 am • 1:00 pm – 4:00 pm
WOC 4-Hour Certification Seminars:
8:00 am – 12:00 pm • 1:00 pm – 5:00 pm
WOC 90-Minute Seminars:
8:30 am – 10:00 am • 10:30 am – 12:00 pm
1:30 pm – 3:00 pm • 3:30 pm – 5:00 pm

Tuesday, Feb. 4 - Thursday, Feb. 6

WOC 3-Hour Seminars:
8:00 am – 11:00 am
WOC 4-Hour Certification Seminars:
8:00 am – 12:00 pm • 12:00 pm – 4:00 pm
1:00 pm – 5:00 pm
WOC 90-Minute Seminars:
8:30 am – 10:00 am • 1:30 pm – 3:00 pm

Friday, Feb. 7

WOC 3-Hour Seminars:
8:00 am – 11:00 am
WOC 90-Minute Seminars:
8:30 am – 10:00 am

ONE OF THE BEST VALUES around compared to similar industry events!
Exhibits-only registration is just **\$80** before 12/11; **\$95** after* **Some restrictions may apply*

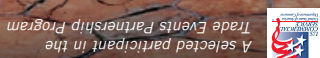
Use this source code
when registering online:

WHEN IT
COMES TO CONCRETE



WE ARE THE AUTHORITY

LAS VEGAS, NV, USA
 LAS VEGAS CONVENTION CENTER
 EDUCATION: FEBRUARY 3-7
 FEBRUARY 4-7, 2020



THE FINAL WORD
IN CONCRETE

World of Concrete is the commercial construction industry's first, largest and most important annual international event for concrete and masonry professionals across the globe — in short, WOC is the authority on all things concrete. Join more than 60,000 of your colleagues at the one event that offers all of the equipment, new products, resources and information you need to stay ahead of the latest industry trends and grow your business.



If it has to do with concrete, it's here — make sure you are, too.
REGISTER TODAY worldofconcrete.com



FEBRUARY 4-7, 2020
 EDUCATION: FEBRUARY 3-7
 LAS VEGAS CONVENTION CENTER
 LAS VEGAS, NV, USA

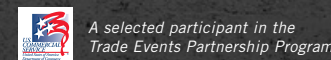


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90-Minute Seminars	15-19

MAKE A SOLID INVESTMENT IN YOUR BUSINESS

Boost your efficiency — and your bottom line — with access to the full spectrum of tools, insights and networking opportunities in one convenient location.



700,000

net square feet of exhibit space with indoor and outdoor exhibits covering every facet of the industry.



1,500+

leading manufacturers and suppliers showcasing innovative solutions designed for the entire concrete and masonry industries.



170+

education sessions covering a wide range of topics from construction fundamentals and worksite safety to project management and innovative technologies; offering in-depth seminars, interactive workshops, industry certifications and unique training courses.



60,000+

concrete and masonry professionals from across the globe make World of Concrete the best place to connect and build relationships with your peers.



150,000

net square feet of outdoor action where you can get hands-on with the newest tools, machinery, and enjoy watching the masters compete for championship titles.

Cement your place at the leading industry event.

REGISTER TODAY worldofconcrete.com



DISCOVER A WORLD OF OPPORTUNITIES AND SOLUTIONS

Compare options side-by-side. Gain knowledge you can use right now. Make informed decisions that lead to real, positive results. At World of Concrete, you'll find exactly what you need to do it all, right on the show floor.

The Producer Center • North Hall

A comprehensive marketplace of materials, equipment, demos and education sessions designed for concrete producers.

Technology for Construction • North Hall

Discover the newest products and tools for the commercial construction industry from top information technology and systems providers.

Precast • North Hall

The hub of new products and technologies in the precast/prestressed sector.

Concrete Masonry • North Hall

Explore a comprehensive collection of reinforcement technologies, ranging from bending and fabricating machinery to glass fiber and galvanized bar.

World of Masonry • Central Hall

Stay on the cutting edge of masonry with the latest products, tools, information and emerging technologies.

Material Handling • Central Hall

Find new and trusted material handling solutions — ranging from material delivery trucks to distribution, concrete placement and earth moving equipment.

Concrete Repair & Demolition • South Hall

View the latest surface preparation equipment, including a display of scarifying, grinding and sawing equipment, along with other demolition products.

Concrete Surfaces & Decorative • South Hall

See the latest ways that decorative concrete is being used for both commercial and residential applications.

Outdoor Exhibits • Silver Lots 1 & 2, front of Central Hall; Silver Lot 3, front of South Hall

Get hands-on with heavy equipment, decorative concrete and solutions from the industry's leading suppliers.

Outdoor Events & Exhibits • Bronze Lot, next to South Hall Tues, February 4 - Thurs, February 6

Get in on the action with exciting championships, skill challenges and creative demos.

UNITING THE ENTIRE INDUSTRY

World of Concrete brings forward-thinking professionals from every part of the industry and across the globe together. As the leading event for commercial construction trades, many of our co-sponsoring associations hold their committee and board meetings here. We greatly value the support of these leading associations and supporting organizations:



American Concrete Institute



American Concrete Pavement Association



American Concrete Pumping Association



American Shotcrete Association



American Society of Concrete Contractors



Associated Construction Distributors International



Basement Health Association



Canadian Ready Mixed Concrete Association



Concrete Foundations Association



Concrete Reinforcing Steel Institute



Concrete Sawing™ & Drilling Association



International Concrete Repair Institute



International Grooving & Grinding Association



Portland Cement Association



Post-Tensioning Institute



Precast/Prestressed Concrete Institute



Tilt-up Concrete Association



Wire Reinforcement Institute

SUPPORTING ORGANIZATIONS:



Expanded Shale, Clay & Slate Institute



Fiber Reinforced Concrete Association

AN UNBEATABLE EXPERIENCE, FROM START TO FINISH

BRONZE LOT EVENTS

2020 SPEC MIX BRICKLAYER 500® World Championship

Wednesday, February 5 • 12:00 pm – 3:00 pm



Who is the World's Best Bricklayer? Find out here! Known as the "Super Bowl of Masonry," this bricklayer battle puts 28 teams of bricklayers and mason tenders from around the world to the test. With a total purse of over \$125,000 on the line, the duo who constructs a 26-foot long wall in 60-minutes by putting down the most brick with the highest level of craftsmanship wins \$75,000 in cash and prizes including the keys to a new Ford F-250 XLT 4x4 truck!

MASONRY LIVING—Beyond the Wall

Tuesday – Thursday, February 4 – 6 • WOC show hours



Masonry is not only the best form of construction, it's a way of life! In this new demonstration area WOC attendees will see amazing, real-life masonry structures designed by architects and constructed by world-class masons that are both functional and exceptional for everyday living. From outdoor stone fireplaces and surrounds for your backyard, to brick & block bar entertainment features for your patio, you can speak with the designers and craftsman who have the vision and skills that make it happen.

NEW! Beat the Bricklayer Challenge



Do you have what it takes to be World Champion bricklayer? Go to Masonry Living for your chance to prove it and win \$500 in cash! On Wednesday during Masonry Madness® Day in the Masonry Living area WOC attendees are invited to compete in the Beat the Bricklayer Challenge. It's the most intense, and lucrative, 5-minutes of bricklaying action you don't want to miss!

NEW! WorldSkills Bricklaying—Shanghai 2021



Every two years, WorldSkills hosts the world championship competition for 63 countries and over 50 different trade skills, one of which is masonry. In 2019 Kelby Thornton competed in Kazan, Russia to represent the U.S. Masonry Industry—now the SkillsUSA organization is preparing for the 2021 competition in Shanghai, China. The Masonry Living area will showcase a live demonstration of masonry skills, training and process to prepare the U.S. Masonry Team going to Shanghai.

MCAA's Masonry Skills Challenge

Wednesday, February 5 • 9:00 am – 12:00 pm



The industry's finest young masons (first through third-year skill levels) must complete projects that are revealed onsite! Watch them showcase their skills and compete for top honors here!

SPEC MIX TOUGHEST TENDER®

Wednesday, February 5 • 10:45 am – 11:30 am



Watch the world's top mason tenders compete for the fastest time as they set up their SPEC MIX BRICKLAYER 500®.

MCAA'S Fastest Trowel on the Block

Wednesday, February 5 • 11:30 am – 12:00 pm

This contest, presented by the Mason Contractors Association of America, proves how important teamwork is in accomplishing a final product. Invited competitors complete as much of a 30-foot long wall as possible in a 20-minute heat, promoting the craftsmanship, speed and versatility of masonry systems and the masonry workforce in the process.

John Deere Operator Challenge

Tuesday, February 4 – Thursday, February 6 • during show hours



Experience John Deere machines firsthand while showcasing your skills and competing for top honors. Perform the assigned tasks quickly and you could be the daily winner!

Mahindra ROXOR Mission: Ready Challenge

Tuesday, February 4 – Thursday, February 6 • during show hours



This Challenge allows contestants to demonstrate how contractors can achieve productivity by combining the qualities of the Roxor off-road vehicle and tools to complete common construction tasks. These tasks may include: driving on-off road vehicle on a short track that will include a stop at demonstration point at which a simple construction task will take place. The task could be: drilling an anchor hole, scanning a piece of rebar, breaking concrete. Are you up for the challenge?

Western Star Trucks Get Tough Challenge

Tuesday, February 4 – Thursday, February 6 • during show hours



If you have a current CDL, register to compete in Western Star Trucks' ninth annual ride-and-drive event. Not only can you take the truck of your choice out on the course, but you'll take home a special prize, too!

SPECIAL EVENTS / TOURS

CIM Silent & Live Auction

Wednesday, February 5

Silent Auction: 11:00 am – 12:45 pm • Live Auction: 1:00 pm – 2:00 pm



Support your industry by bidding on a wide variety of auction items, ranging from equipment and supplies to vacation packages, computers, TVs and more! These auctions are a major funding source for Concrete Industry Management programs at several public universities. Learn more at concretedegree.com

Decorative Concrete LIVE!

Tuesday, February 4 – Friday, February 7 • during show hours



Discover the most current trends in decorative concrete construction by interacting with artisans, product experts and designers. This year's event concentrates on crafting colorful cityscapes and will feature opportunities to learn designs, techniques and materials that will enable you to transform outdoor urban spaces into colorful, vibrant community assets.

Hoover Dam & Bypass Bridge Tours

Sunday, February 2 & Friday, February 7 • 12:00 pm – 5:00 pm

Fee: \$120; \$140 after 12/11/19



Now's your chance to visit two of the world's most famous concrete structures, the Hoover Dam and the Mike O'Callaghan–Pat Tillman Memorial Bridge. During the tour, you'll hear experts discuss engineering challenges, crane work, concrete mix designs and how contractors created these special projects.

NEW! Robotics LIVE!



Located in the North Hall of the Las Vegas Convention Center, will showcase the newest technologies that are transforming the concrete construction industry. These applications will demonstrate how mechanical innovations are used in adapt manufacturing and in field rebar installation.

CENTRAL HALL EVENTS

Stucco LIVE!

Tuesday, February 4 – Friday, February 7 • during show hours



Learn about the modern world of stucco from instructors, product experts and designers who will walk you through best practices for flashing, lathing, and cement plaster applications for residential and commercial installations.

NEW! Zero Emission LIVE!

Tuesday, February 4 – Thursday, February 7 • during show hours



Featuring equipment where contractors can perform common construction tasks in a safe, quiet and emission-free zone. See demonstrations of products and techniques with safety and productivity in mind.

FEATURED EDUCATION SESSIONS

NEW! [CPMMO] Advanced Concrete Plants: Raising the Bar

Monday, February 3 • 1:30 pm – 4:30 pm

Fee: \$75; \$95 after 12/11/19

Presented by

Join concrete producers and peers to hear industry experts discuss quality control, efficiency practices and safety monitoring for today's top concrete plants.

[ECCMO] Self-Consolidating Concrete: Placement Issues & Applications

Monday, February 3 • 2:00 pm – 4:00 pm

Fee: \$110; \$140 after 12/11/19

Presented by

This popular Industry Training course covers variables that affect SCC placement, aspects of mix design, and finish & placement conditions.

NEW! [SSSTU] Waterproofing: The Next Generation of Solutions

Tuesday, February 4 • 1:00 pm – 3:30 pm

Fee: \$115; \$135 after 12/11/19

Presented by

Explore state of the art waterproofing throughout the building envelope - elastomeric joint sealants, liquid traffic coatings, liquid below grade waterproofing plus air barrier and roofing applications.

NEW! [ECCTH] Design & Construct Enhanced Concrete Floors: Utility, Durability & Service Life

Thursday, February 6 • 11:00 am – 12:30 pm

Fee: \$85

Presented by

For engineers and contractors, this course will address mix designs, reinforcement, codes, floor placement, dry shakes and topical sealers.

BREAKFASTS, LUNCHEONS & FORUMS

Breakfast with the Experts at World of Concrete

Tuesday, February 4 – Thursday, February 6

6:45 am – 7:45 am or 8:15 am – 9:15 am

Fee: \$45; \$55 after 12/11/19 • 3-Day Package: \$115; \$135 after 12/11/19

Presented by

Share challenges and get expert advice on solutions that affect production, construction, repair and maintenance of concrete structures. Choose from two different start times.

Polished Concrete Luncheon & Forum

Polishing with Power Trowels—Can it Replace Planetary Grinding Equipment?

Tuesday, February 4 • 11:30 am – 1:30 pm

Fee: \$95; \$125 after 12/11/19

Presented by

Join us for lunch and hear experts discuss the impeding issues and questions surrounding polishing projects where power trowels are being considered and used.

Quality in Concrete Slabs Luncheon & Forum

Alternative Concrete Curing Methods: Hard-troweled Versus Decorative

Wednesday, February 5 • 11:30 am – 1:30 pm

Fee: \$95; \$125 after 12/11/19

Presented by Sponsored by

At this luncheon, concrete floor and decorative concrete experts will compare and contrast the current curing methods and products for hard-troweled floors with those used for decorative concrete.

Don't miss these Live Demos from our Featured Exhibitors!

(See website for daily schedules)

MB Crusher America, Inc. - Booth O30230

MB Crusher America Inc. will be demonstrating two crusher buckets at work: A BF model crusher, suitable for excavators and an MB-L model crusher, designed for skid steers and backhoes.

OZTEC Industries - Booth N2237

Want to cut your vibrating cost and time? Oztec will demonstrate how their patented Rebar Shaker® will solve a variety of concrete consolidation problems.

FORD Commercial Vehicles - Booth C6413

Ford Commercial Vehicles will be presenting the benefits and features of the highest-rated Ford Super Duty®. Whatever job you have, big or small, Ford has a full line of trucks that can't be beat for power and capability and designed with maximum productivity in mind.

GET TO KNOW your hotel provider

Specialized benefits are available to ease your planning and reduce the impact on your budget.



WORLD OF CONCRETE HOTEL PERKS



Hotel Rewards Points

Get credit for your hotel loyalty program.



Deep Discounts

Exclusive savings at choice hotels.



Flexible Policies

Make adjustments without penalty in case your plans change.



Group Bookings

Fully manage your group booking, large or small, with robust tools.

GETTING AROUND

Shuttle Bus Service

FREE when booking your hotel through onPeak, the ONLY official hotel provider to World of Concrete. If not booking your hotel through the official hotel provider, you need to purchase a non-refundable shuttle bus pass to use this service at the show. Passes are available online through registration. Shuttle service is only available to hotels that are not within walking distance to the convention center.

Las Vegas Monorail

Get to the convention center in minutes! Exclusive discounts available at: worldofconcrete.com/en/hotel-travel

BOOK YOUR HOTEL WITH ONPEAK

Reservation Deadline: January 14, 2020



onPeak is our ONLY official hotel provider. Be sure to look for the onPeak logo when securing your hotel reservations for Las Vegas.



onpeak.com/woc20



woc@onpeak.com



(855) 992-3353 Toll-free

MAKE CONCRETE CONNECTIONS

SOCIAL MEDIA

Our social communities are full of advice, inspiration and information! Connect with us and gain access to the latest show news, insider tips, feature highlights, informative videos and conversations with other pros.



twitter.com/worldofconcrete



facebook.com/worldofconcreteshow



linkedin.com/company/world-of-concrete



youtube.com/worldofconcreteshow



instagram.com/worldofconcreteshow **NEW!**

WOC MOBILE APP

Keep all of the show info you need right at your fingertips with our FREE mobile app, available December 2019. Features:

- **Interactive Map.** Navigate the exhibit hall quickly and easily.
- **Exhibitor Profiles/Products.** Maximize time at the show by exploring exhibitor listings and saving your favorites.
- **Show Information.** Get need-to-know info like education schedules, speaker profiles, event listings, transportation details and more.
- **Your Calendar.** Keep yourself on track by scheduling education sessions and making appointments with exhibitors in advance.
- **Show Alerts.** Keep up on the latest developments with real-time updates.
- **New Product Zone.** See all the newest products making their debut at WOC 2020, in this easy-to-navigate app feature.
- **Network & Share.** Join conversations about important topics through your favorite social media channels.



2020 MCAA CONVENTION SCHEDULE

Monday, February 3

1:00 pm - 3:30 pm MCAA Committee Meetings
3:30 pm - 5:00 pm MCAA Annual Meeting
5:30 pm - 6:30 pm MAC PAC Reception

Tuesday, February 4

9:00 am - 3:00 pm Silica Train-the-Trainer Course
9:30 am - 5:00 pm Exhibits Open
6:00 pm - 7:30 pm South of 40 Party at Drai's After Hours

Wednesday, February 5

9:00 am - 3:00 pm MASONRY MADNESS™
9:00 am - 12:00 pm MCAA's Masonry Skills Challenge
9:30 am - 5:00 pm Exhibits Open
10:45 am - 11:30 am SPEC MIX TOUGHEST TENDER™
11:30 am - 12:00 pm MCAA's Fastest Trowel on the Block
12:00 pm - 3:00 pm SPEC MIX BRICKLAYER 500™

Thursday, February 6

9:00 am - 12:00 pm Masonry Wall Bracing Program
9:30 am - 5:00 pm Exhibits Open
10:00 am - 12:00 pm Networking Roundtables
1:00 pm - 3:30 pm Silica Train-the-Trainer Renewal
6:00 pm - 9:00 pm Closing Banquet at Vdara

Friday, February 7

9:00 am - 12:00 pm Exhibits Open

Visit the MCAA at Booth C3305 or stop by the MCAA Tent during MASONRY MADNESS™ on Wednesday, February 5, in the Bronze Lot.

Schedule subject to change. Visit masoncontractors.org/convention for the most complete and up-to-date information.

WOC OFFICIAL MERCHANDISE



Take home commemorative hats, T-shirts and more — for yourself and your crew! Purchase your Official WOC Merchandise throughout the Convention Center at these locations:

Main Location – Inside the Grand Concourse by Lucky's Restaurant

Outdoor location – Front of Central Hall, near Shuttle Bus Area

WOC 2020 EDUCATION PROGRAM HIGHLIGHTS

170+ Education sessions covering technical applications, training & certifications; safety regulations & best practices; leadership & business management skills; innovative project management and more.

135+ Industry professionals, speakers & trainers sharing their concrete/masonry experiences, skills & areas of expertise.

50+ Industry Training courses & events presented by concrete/masonry associations, exhibitors and media groups; offering industry-specific courses, breakfast/luncheon forums and historical tours. See page 11, Program-at-a-Glance.

46 90-Minute WOC Seminars with 60% **NEW** presentations for WOC 2020 attendees – decorative, masonry, floors & slabs, engineering, technical, and safety topics plus business best practices. See pages 15-19 for details.

35 WOC Education Partners contributing knowledge and expertise to offer WOC attendees a wide variety of industry-specific education, certifications and training.

23 3-Hour WOC Seminars for field personnel and leaders with 5 designated tracks focusing on concrete applications and business management plus 9 **NEW** presentations for 2020. See pages 13-14 for details.

15 WOC Hands-On Training opportunities to enhance technical skills in surveying, mix design/testing, placing/finishing slabs and concrete stamping. See page 12 for schedule & fees.

12 WOC Interactive Workshops focusing on Estimating Strategies, Field Planning & Communications, Laser Scanning, Safety Train-the-Trainers, and four decorative workshops demonstrating applications for countertops, decorative overlays, acid staining & vertical concrete. See pages 15, 17 & 19 for details.

10 4-Hour WOC Certification Seminars with 14 written & performance examinations required to earn industry-recognized credentials – offered by ACI, ACPA, CFA, ICRI and TCA. See page 12 for schedule & fees.

WOC SEMINAR PROGRAM PRICING:

3-Hour Seminars: \$160; \$190 after 12/11/19
 90-Minute Seminars: \$115; \$145 after 12/11/19
 4-Hour Certification Seminars: \$210; \$245 after 12/11/19

Prices vary for examinations, workshops, hands-on training, tours, luncheons and industry sessions.

STUDENTS AND MILITARY*:

Receive discounts on WOC 90-minute and 3-hour seminars plus complimentary Exhibits-Only admission (\$105 value) with seminar purchase.

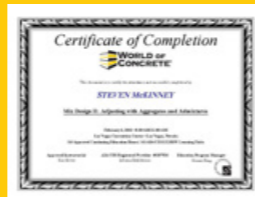
*Application required to verify eligibility. Email seminars@worldofconcrete.com for details.

SESSION DESCRIPTIONS & DETAILS:

For a comprehensive listing of all education offerings including dates/times, fees and detailed descriptions, visit worldofconcrete.com; click on Education tab; select Session Descriptions & Details link; click on session titles for details.

QUESTIONS about education offerings? Email us at seminars@worldofconcrete.com

CONTINUING EDUCATION & CERTIFICATES:



WOC Education Program seminars (3-hr, 90-min, & 4-hr cert) plus interactive workshops and hands-on training are approved for continuing education. Look for acronyms below in session descriptions for continuing education approvals:

AIA/CES: American Institute of Architects Continuing Education Systems

PDH: Professional Development Hours

MCAA: Mason Contractors Association of America

TCA: Tilt-Up Technician Recertification

Individual WOC Certificates of Completion will be available online 7-8 weeks post show.

MASTER CERTIFICATES & SUPER PASS PACKAGES:



SUPER PASS PACKAGES (12 Seminar Hours)—Save up to 40% on 90-Minute and 3-Hour seminars. Each Super Pass includes complimentary Exhibits-Only (\$95 value).

[SP1 – total 5 seminars]: three seminars from one WOC 3-Hour Track plus two seminars from any 90-Minute Track
\$500; \$625 after 12/11/19

[SP2 – total 4 seminars]: three seminars from one WOC 3-Hour Track plus one seminar from any 3-Hour Track
\$500; \$625 after 12/11/19

[SP3 – total 4-8 seminars]: total of 12 seminar hours from any WOC 3-Hour Track or 90-Minute Track
\$600; \$725 after 12/11/19

[SPR – Residential]: total of 13 seminar hours – 9 hours from any WOC 3-Hour or 90-Minute Track plus 4-Hour CFA Residential Foundation Certification seminar TH409.
\$600; \$725 after 12/11/19

Note: Super Passes exclude Workshops, Hands-On Training, 4-Hour Certification Seminars/Exams and Industry Training.

Education program content is subject to change. Visit worldofconcrete.com and click on Education tab for the most up-to-date information and a full listing of education opportunities including dates/times, fees and descriptions.

WOC is not responsible or liable for any costs incurred due to cancellations or delays of any type including travel and/or weather that may affect purchased events, including seminars, training courses, tours, certifications, luncheons and forums.

3-HOUR SEMINARS

CONCRETE FUNDAMENTALS

NEW! MO01

Monday, February 3 • 8:00 am - 11:00 am

Concrete Basics I: Concrete Materials, Mixtures & Fresh Properties

Jeff Groom, PE, CTL Thompson, Inc.
 Rich Szecsy, PhD, PE, FACI, Charley's Concrete

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Raw materials used in concrete
2. Commonly measured & fresh concrete properties
3. Concrete mixture proportions, terminology & format
4. Differences & goals for concrete design specifications

See Part II, MO02 & Part III, TU03.

NOTE: This series is intended to introduce the basics of good concrete practice to individuals who are new to the concrete industry.

See Mix Design & Testing Labs **Hands-on Training:**
 Tues – Wed, 8:00 am - 11:30 am; 10:00 am - 1:30 pm & 1:00 pm - 4:30 pm

NEW! MO02

Monday, February 3 • 1:00 pm - 4:00 pm

Concrete Basics II: Ordering, Producing, Placing & Finishing Concrete

Jeff Groom, PE, CTL Thompson, Inc.
 Rich Szecsy, PhD, PE, FACI, Charley's Concrete

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Codes & contractor requirements when ordering concrete
2. How concrete is manufactured & problems that arise during manufacturing
3. Various techniques & equipment for placing concrete
4. Common steps to finishing all concrete

See Part I, MO01 & Part III, TU03.

NOTE: This series is intended to introduce the basics of good concrete practice to individuals who are new to the concrete industry.

See Place & Finish **Hands-on Training:**
 Wed, 1:00 pm - 5:00 pm; Thurs, 8:00 am - 12:00 pm or 1:00 pm - 5:00 pm

NEW! TU03

Tuesday, February 4 • 8:00 am - 11:00 am

Concrete Basics III: Troubleshooting Typical Problems, Tips & Marketplace Trends

Jeff Groom, PE, CTL Thompson, Inc.
 Rich Szecsy, PhD, PE, FACI, Charley's Concrete

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Measure concrete strength, permeability & density
2. Common problems with hardened concrete & corrective measures
3. Frequent causes of concrete durability issues
4. Application trends for the concrete industry

See Part I, MO01 & Part II, MO02.

NOTE: This series is intended to introduce the basics of good concrete practice to individuals who are new to the concrete industry.

WE04

Wednesday, February 5 • 8:00 am - 11:00 am

Design & Control of Concrete Mixtures: Applications, Methods & Materials

Michelle Wilson, FACI, Portland Cement Association

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Desired fresh properties of concrete mixtures
2. Issues concerning desired hardened properties of concrete
3. Design methods and how they control relative concrete properties
4. Related industry standards

Presented by Portland Cement Association.

NEW! TH05

Thursday, February 6 • 8:00 am - 11:00 am

Practical Concrete Specifications for Contractors, Suppliers, and Design Professionals

Tyler Ley, PhD, PE, FACI, Oklahoma State University

3.0 hours AIA/CES, LU|HSW, PDH, TCA

1. Specifications & achievements
2. Why specifications exist
3. How specifications impact construction
4. Goals of concrete specifications

CONCRETE POLISHING

MO06

Monday, February 3 • 8:00 am - 11:00 am

Expectations and Maintenance of Polished Concrete Slabs

Jessica Ledger-Kalen, MBA, Royale Concrete

3.0 hours AIA/CES LU, PDH, TCA

1. Specifying concrete to be polished & choices that affect the job
2. Terms & standards used in polished concrete specifications
3. Specifications that require changes to normal processes
4. Change orders importances: how to request & issue

NEW! MO07

Monday, February 3 • 1:00 pm - 4:00 pm

Retail & Industrial Slabs: Polishing Processes, Productivity & Profit

Bob Harris, Structural Services Inc.

3.0 hours AIA/CES LU, PDH

1. Anatomy of a polished concrete floor
2. Designs, practices & techniques that impact the polished product
3. Grinding, polishing & burnishing fundamentals
4. Gloss, protection, maintenance & rejuvenation of polished floors



WE08

Wednesday, February 5 • 8:00 am - 11:00 am

Polished Concrete Overlays: Creating a Successful Installation

Joe Zingale, CTS Cement | Rapid Set

3.0 hours AIA/CES LU, PDH, TCA

1. Concrete floor's suitability for polished concrete overlay
2. Surface preparation plan for base
3. Products for intended use, traffic & appearance
4. Polishing process for overlay compared to standard concrete floor

NEW! TH09

Thursday, February 6 • 8:00 am - 11:00 am

From Bid to Contract: Preparing for Successful Concrete Polishing

Bill Bencker, David Allen Co.

3.0 hours AIA/CES LU, PDH

1. Checklists for repeatable project success
2. Pre-construction communication with other trades
3. Effect of trades' work on polished concrete floor
4. Responses to on-site project interruptions

CONCRETE PRODUCTION

MO10

Monday, February 3 • 8:00 am - 11:00 am

Effective Use of Chemical Admixtures

Charles Nmai, PhD, PE, M.ASCE, FACI, BASF Corporation

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Advanced knowledge of current admixture technologies
2. Admixtures to improve concrete construction
3. Issues & undesired effects in concrete
4. Efficiencies achieved through use of chemical admixtures

TU11

Tuesday, February 4 • 8:00 am - 11:00 am

What is Wrong With My Concrete? Troubleshooting Concrete Quality

Tyler Ley, PhD, PE, FACI, Oklahoma State University

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Variables contributing to concrete quality
2. Test methods & procedures for evaluating variables
3. Best practices for developing mix designs
4. Available curing options

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WORLD OF CONCRETE 2020 EDUCATION PROGRAM Program-at-a-Glance

WOC 3-HOUR SEMINARS

	MONDAY, February 3	TUESDAY, February 4	WEDNESDAY, February 5	THURSDAY, February 6	FRIDAY, February 7
3-Hour Tracks	8:00 am - 11:00 am	8:00 am - 11:00 am	8:00 am - 11:00 am	8:00 am - 11:00 am	8:00 am - 11:00 am
CONCRETE FUNDAMENTALS	NEW! MO01 Concrete Materials, Mixtures & Fresh Properties J. Groom, R. Sney <i>Hands-On Air Density Labs</i>	NEW! TU03 Troubleshooting Typical Problems, Tips & Marketplace Trends J. Groom, R. Sney	WE04 Detailed Control of Concrete Mixtures: Applications, Methods & Materials M. Wilson	NEW! TH05 Detailed Concrete Specifications for Contractors, Suppliers & Design Professionals T. Ley	
CONCRETE POLISHING	NEW! MO07 Real & Industrial Slabs: Polishing Processes, Productivity & Profit B. Harris	TU01 What is Wrong With My Concrete? Troubleshooting Concrete Quality T. Ley	WE08 Polished Concrete Overlays: Creating a Successful Installation J. Zingale	NEW! TH09 From Bid to Contract: Preparing for Successful Concrete Polishing Bill Bricker	
CONCRETE PRODUCTION	MO10 Effective Use of Chemical Admixtures G. Gray	TU05 What is Wrong With My Concrete? Troubleshooting Concrete Quality T. Ley	WE12 Mix Design I: Evaluation of Mixtures K. Hoover	TH13 Mix Design II: Adjusting with Aggregates K. Hoover	
CONCRETE REPAIR	MO14 Troubleshooting Concrete Cracks: Understand and Minimize Cracking K. Bostrom	TU06 Repair I: Surface Prep, Repair, Repack & Corrosion Prevention P. Emmons, C. Alvarin	WE17 Advanced Repair: Structural Distress, Assessment & Strengthening Solutions J. Thomas	FR18 Repairing Concrete Cracks: Evaluation and Selection of Repair Methods K. Bostrom	
BUSINESS & PROJECT MANAGEMENT	NEW! MO19 Field & Project Management Systems that Work G. Heffley	TU07 Repair II: Waterproofing, General Protection & Corrosion Prevention P. Emmons, C. Alvarin	WE21 WOC Inefficiency into Profitability B. Humphrey	FR19 Establish Teamwork on Every Crew & Job J. Stokes	

WOC 4-HOUR CERTIFICATION SEMINARS & EXAMS

	MONDAY, February 3	TUESDAY, February 4	WEDNESDAY, February 5	THURSDAY, February 6
ACI	MO403 Wood/Specialty/Composites Concrete Flatwork Finisher/Technician J. Holland, B. Smorell Mon, 8:00 am - 12:00 pm	TU05 ACI Concrete Pump Operator Safety L. Almyerth Tue, 8:00 am - 12:00 pm	WE407 ACI Concrete Slab Moisture Testing Technician P. Craig, S. Iyer Wed, 8:00 am - 12:00 pm	TH408 Residential Foundation Technician J. Baby Thurs, 8:00 am - 12:00 pm
cfa	TUAW Inspector Written Exam Mon, 8:00 am - 11:30 am	TU06 ACI Concrete Field Testing Technician - Grade I M. Engelstad Tue, 8:00 am - 12:00 pm	WE408 ACI Concrete Field Testing Technician - Grade II M. Engelstad Wed, 8:00 am - 12:00 pm	TH410 ACI/CCA Tilt-Up Technician/Supervisor S. Hickley Thurs, 8:00 am - 12:00 pm
ICRI	MO402 Concrete Installer Mon, 8:00 am - 12:00 pm	WE17 Field Testing Written Exam Tue, 8:00 am - 12:00 pm	WE409 Associate & Advanced Finisher J. Holland, B. Smorell Wed, 8:00 am - 12:00 pm	TH411 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
TCA	TU406 ACI Concrete Field Testing Technician - Grade I M. Engelstad Tue, 8:00 am - 12:00 pm	WE18 ACI Concrete Field Testing Technician - Grade II M. Engelstad Wed, 8:00 am - 12:00 pm	TH412 ACI Concrete Field Testing Technician - Grade III M. Engelstad Thurs, 8:00 am - 12:00 pm	FR13 ACI Concrete Field Testing Technician - Grade III M. Engelstad Fri, 8:00 am - 12:00 pm

WOC HANDS-ON TRAINING

	MONDAY, February 3	TUESDAY, February 4	WEDNESDAY, February 5	THURSDAY, February 6
SPECIAL APPRECIATION	MO101 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU05 Surveying with Total Stations Tue, 8:00 am - 12:00 pm	WE407 ACI Concrete Slab Moisture Testing Technician Wed, 8:00 am - 12:00 pm	TH408 Residential Foundation Technician Thurs, 8:00 am - 12:00 pm
to WOC Exhibitors	MO102 Time Budgeting Mon, 1:00 pm - 5:00 pm	TU06 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE408 ACI Concrete Field Testing Technician - Grade I Wed, 1:00 pm - 5:00 pm	TH409 ACI Concrete Field Testing Technician - Grade II Thurs, 1:00 pm - 5:00 pm
contributing equipment and materials used for hands-on training and decorative and workshops with live demonstrations.	MO103 Aerial Work Platform Mon, 1:00 pm - 5:00 pm	TU07 Mix Design & Testing Labs Tue, 8:00 am - 11:30 am	WE409 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH410 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm

WOC INTERACTIVE WORKSHOPS & LIVE DEMONSTRATIONS

	MONDAY, February 3	TUESDAY, February 4	WEDNESDAY, February 5	THURSDAY, February 6
NEW! MO101 Effective Field Communications Mon, 8:00 am - 12:00 pm	MO101 Creating a Smarter Field Team Mon, 8:00 am - 12:00 pm	TU05 Estimating Strategies & Risk Management Tue, 8:00 am - 12:00 pm	WE407 ACI Concrete Slab Moisture Testing Technician Wed, 8:00 am - 12:00 pm	TH408 Residential Foundation Technician Thurs, 8:00 am - 12:00 pm
NEW! MO102 Time Budgeting Mon, 1:00 pm - 5:00 pm	TU06 Stamped Concrete Tue, 1:00 pm - 5:00 pm	TU06 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE408 ACI Concrete Field Testing Technician - Grade I Wed, 1:00 pm - 5:00 pm	TH409 ACI Concrete Field Testing Technician - Grade II Thurs, 1:00 pm - 5:00 pm
MOGCT Train-the-Trainer: Construction Forklift Mon, 8:00 am - 12:00 pm	TU07 Train-the-Trainer: Fall Protection End User Tue, 8:00 am - 12:00 pm	TU07 Train-the-Trainer: Rigging & Signaling for Cranes Tue, 8:00 am - 12:00 pm	WE409 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH410 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm

90-Min Tracks

BUSINESS LEADERSHIP & MANAGEMENT	NEW! MO102 Time Budgeting Mon, 8:00 am - 12:00 pm	TU06 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE408 ACI Concrete Field Testing Technician - Grade I Wed, 1:00 pm - 5:00 pm	TH409 ACI Concrete Field Testing Technician - Grade II Thurs, 1:00 pm - 5:00 pm
FINANCIAL MANAGEMENT & PROFITABILITY	NEW! MO103 Aerial Work Platform Mon, 8:00 am - 12:00 pm	TU07 Train-the-Trainer: Fall Protection End User Tue, 8:00 am - 12:00 pm	WE409 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH410 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm
GENERAL BUSINESS Technology	NEW! MO104 Creating a Smarter Field Team Mon, 8:00 am - 12:00 pm	TU08 Estimating Strategies & Risk Management Tue, 8:00 am - 12:00 pm	WE410 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH411 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ADVANCED TECHNICAL for experienced personnel & upper management	NEW! MO105 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU09 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE411 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH412 ACI Concrete Field Testing Technician - Grade III Thurs, 1:00 pm - 5:00 pm
CONCRETE 101 for entry level personnel or those with less than 3 years experience	NEW! MO106 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU10 Troubleshooting Typical Problems, Tips & Marketplace Trends Tue, 8:00 am - 12:00 pm	WE412 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH413 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
CONCRETE FLOORS & SLABS	NEW! MO107 Concrete Polishing Processes, Productivity & Profit Mon, 8:00 am - 12:00 pm	TU11 What is Wrong With My Concrete? Troubleshooting Concrete Quality Tue, 8:00 am - 12:00 pm	WE413 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH414 ACI Concrete Field Testing Technician - Grade III Thurs, 1:00 pm - 5:00 pm
DECORATIVE CONCRETE (See Decorative Workshops, pg 1)	NEW! MO108 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU12 Repair I: Surface Prep, Repair, Repack & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE414 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH415 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ENGINEERING	NEW! MO109 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU13 Repair II: Waterproofing, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE415 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH416 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
MASONRY	NEW! MO110 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU14 Repair III: Masonry, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE416 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH417 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
SAFETY & RISK MANAGEMENT	NEW! MO111 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU15 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE417 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH418 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm

EDUCATION, FORUMS & NETWORKING for INDUSTRY-SPECIFIC APPLICATIONS

AMH	MO101 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU05 Surveying with Total Stations Tue, 8:00 am - 12:00 pm	WE407 ACI Concrete Slab Moisture Testing Technician Wed, 8:00 am - 12:00 pm	TH408 Residential Foundation Technician Thurs, 8:00 am - 12:00 pm
ASCA	MO102 Time Budgeting Mon, 1:00 pm - 5:00 pm	TU06 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE408 ACI Concrete Field Testing Technician - Grade I Wed, 1:00 pm - 5:00 pm	TH409 ACI Concrete Field Testing Technician - Grade II Thurs, 1:00 pm - 5:00 pm
AMERIPOLISH	MO103 Aerial Work Platform Mon, 8:00 am - 12:00 pm	TU07 Train-the-Trainer: Fall Protection End User Tue, 8:00 am - 12:00 pm	WE409 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH410 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm
D-BASF	MO104 Creating a Smarter Field Team Mon, 8:00 am - 12:00 pm	TU08 Estimating Strategies & Risk Management Tue, 8:00 am - 12:00 pm	WE410 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH411 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
PAI	MO105 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU09 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE411 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH412 ACI Concrete Field Testing Technician - Grade III Thurs, 1:00 pm - 5:00 pm
CONCRETE	MO106 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU10 Troubleshooting Typical Problems, Tips & Marketplace Trends Tue, 8:00 am - 12:00 pm	WE412 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH413 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
CPWR	MO107 Concrete Polishing Processes, Productivity & Profit Mon, 8:00 am - 12:00 pm	TU11 What is Wrong With My Concrete? Troubleshooting Concrete Quality Tue, 8:00 am - 12:00 pm	WE413 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH414 ACI Concrete Field Testing Technician - Grade III Thurs, 1:00 pm - 5:00 pm
CSGda	MO108 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU12 Repair I: Surface Prep, Repair, Repack & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE414 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH415 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
CIS	MO109 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU13 Repair II: Waterproofing, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE415 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH416 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
FWESTAL	MO110 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU14 Repair III: Masonry, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE416 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH417 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
GIATEC	MO111 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU15 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE417 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH418 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICFMA	MO112 Time Budgeting Mon, 1:00 pm - 5:00 pm	TU16 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE418 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH419 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO113 Aerial Work Platform Mon, 8:00 am - 12:00 pm	TU17 Train-the-Trainer: Fall Protection End User Tue, 8:00 am - 12:00 pm	WE419 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH420 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm
ICRI	MO114 Creating a Smarter Field Team Mon, 8:00 am - 12:00 pm	TU18 Estimating Strategies & Risk Management Tue, 8:00 am - 12:00 pm	WE420 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH421 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO115 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU19 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE421 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH422 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO116 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU20 Troubleshooting Typical Problems, Tips & Marketplace Trends Tue, 8:00 am - 12:00 pm	WE422 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH423 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO117 Concrete Polishing Processes, Productivity & Profit Mon, 8:00 am - 12:00 pm	TU21 What is Wrong With My Concrete? Troubleshooting Concrete Quality Tue, 8:00 am - 12:00 pm	WE423 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH424 ACI Concrete Field Testing Technician - Grade III Thurs, 1:00 pm - 5:00 pm
ICRI	MO118 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU22 Repair I: Surface Prep, Repair, Repack & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE424 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH425 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO119 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU23 Repair II: Waterproofing, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE425 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH426 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO120 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU24 Repair III: Masonry, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE426 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH427 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO121 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU25 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE427 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH428 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO122 Time Budgeting Mon, 1:00 pm - 5:00 pm	TU26 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE428 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH429 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO123 Aerial Work Platform Mon, 8:00 am - 12:00 pm	TU27 Train-the-Trainer: Fall Protection End User Tue, 8:00 am - 12:00 pm	WE429 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH430 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm
ICRI	MO124 Creating a Smarter Field Team Mon, 8:00 am - 12:00 pm	TU28 Estimating Strategies & Risk Management Tue, 8:00 am - 12:00 pm	WE430 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH431 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO125 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU29 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE431 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH432 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO126 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU30 Troubleshooting Typical Problems, Tips & Marketplace Trends Tue, 8:00 am - 12:00 pm	WE432 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH433 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO127 Concrete Polishing Processes, Productivity & Profit Mon, 8:00 am - 12:00 pm	TU31 What is Wrong With My Concrete? Troubleshooting Concrete Quality Tue, 8:00 am - 12:00 pm	WE433 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH434 ACI Concrete Field Testing Technician - Grade III Thurs, 1:00 pm - 5:00 pm
ICRI	MO128 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU32 Repair I: Surface Prep, Repair, Repack & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE434 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH435 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO129 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU33 Repair II: Waterproofing, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE435 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH436 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO130 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU34 Repair III: Masonry, General Protection & Corrosion Prevention Tue, 8:00 am - 12:00 pm	WE436 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH437 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO131 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU35 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE437 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH438 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO132 Time Budgeting Mon, 1:00 pm - 5:00 pm	TU36 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE438 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH439 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO133 Aerial Work Platform Mon, 8:00 am - 12:00 pm	TU37 Train-the-Trainer: Fall Protection End User Tue, 8:00 am - 12:00 pm	WE439 ACI Concrete Field Testing Technician - Grade II Wed, 1:00 pm - 5:00 pm	TH440 ACI/CCA Tilt-Up Technician/Supervisor Thurs, 1:00 pm - 5:00 pm
ICRI	MO134 Creating a Smarter Field Team Mon, 8:00 am - 12:00 pm	TU38 Estimating Strategies & Risk Management Tue, 8:00 am - 12:00 pm	WE440 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH441 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO135 Effective Field Communications Mon, 8:00 am - 12:00 pm	TU39 Stamped Concrete Tue, 1:00 pm - 5:00 pm	WE441 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH442 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO136 Concrete Materials, Mixtures & Fresh Properties Mon, 8:00 am - 12:00 pm	TU40 Troubleshooting Typical Problems, Tips & Marketplace Trends Tue, 8:00 am - 12:00 pm	WE442 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH443 Tilt-Up Written Exam Thurs, 8:00 am - 12:00 pm
ICRI	MO137 Concrete Polishing Processes, Productivity & Profit Mon, 8:00 am - 12:00 pm	TU41 What is Wrong With My Concrete? Troubleshooting Concrete Quality Tue, 8:00 am - 12:00 pm	WE443 ACI Concrete Field Testing Technician - Grade III Wed, 1:00 pm - 5:00 pm	TH444</

3-HOUR SEMINARS

WE12

Wednesday, February 5 • 8:00 am - 11:00 am

Mix Design I: Evaluation of Mixtures

Ken Hover, PhD, PE, Cornell University

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Cement, water & aggregate interactions in concrete mix
2. Mix design, proportioning, submittal & evaluation process
3. Review for yield, expected strength & durability; shrinkage, workability & cost
4. Building code requirements & available quality-control testing

NOTE: Attendance at Mix Design II, TH13, recommended for maximum benefit from this seminar.

See Mix Design & Testing Labs **Hands-on Training:**

Tues - Wed, 8:30 am - 11:30 am; 10:00 am - 1:30 pm & 1:00 pm - 4:30 pm

TH13

Thursday, February 6 • 8:00 am - 11:00 am

Mix Design II: Adjusting with Aggregates and Admixtures

Ken Hover, PhD, PE, Cornell University

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Effects of concrete properties: aggregates, water reducers, superplasticizers, fly ash, microsilica & slag
2. Proper aggregate moisture corrections
3. QC provisions in AIC codes & specifications
4. Analyze proposed mixture

NOTE: Attendance at Mix Design I, WE12, recommended for maximum benefit from this seminar.

CONCRETE REPAIR

MO14

Monday, February 3 • 8:00 am - 11:00 am

Troubleshooting Concrete Cracks: Understand and Minimize Cracking

Kim Basham, PhD, PE, FACI, KB Engineering LLC

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Structural cracks: mapping & measuring
2. Nonstructural cracks that occur before hardening
3. Nonstructural cracks after hardening
4. Minimize various crack types

See FR18 - Repairing Concrete Cracks.

MO15

Monday, February 3 • 1:00 pm - 4:00 pm

Concrete Repair Fundamentals I: Surface Preparation, Reinforcement Repair, Material Selection & Placement

Peter Emmons, Structural Technologies

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Specific repair materials & ingredients
2. Equipment handling, preparation & placement of repair materials
3. Repair material compatibility to improve performance of repairs
4. Bonding agents and how to perform bond & shoring plan tests

See TU16 - Concrete Repair Fundamentals II.

TU16

Tuesday, February 4 • 8:00 am - 11:00 am

Concrete Repair Fundamentals II: Waterproofing, General Protection & Corrosion Prevention

Peter Emmons, Structural Technologies

Eyad Alhariri, Structural Technologies

3.0 hours AIA/CES LU|HSW, PDH

1. Protecting concrete from effects of corrosive environments
2. Cathodic protection strategies to prevent embedded steel corrosion
3. Systems to protect against chemical environments
4. Stopping water leakage through cracks

See MO15 - Concrete Repair Fundamentals I.

WE17

Wednesday, February 5 • 8:00 am - 11:00 am

Advanced Concrete Repair: Structural Distress, Assessment & Strengthening Solutions

Jay Thomas, Structural Technologies

3.0 hours AIA/CES LU|HSW, PDH

1. Strengthening techniques & structural assessment tools
2. Balance between engineering, constructability & cost
3. Strengthening technologies & techniques
4. Technique for teaching technologies

FR18

Friday, February 7 • 8:00 am - 11:00 am

Repairing Concrete Cracks: Evaluation and Selection of Repair Methods

Kim Basham, PhD, PE, FACI, KB Engineering LLC

3.0 hours AIA/CES LU|HSW, PDH, TCA

1. Best repair procedures for active & dormant cracks
2. Repair techniques for routing & sealing cracks
3. Repair methods based on unique criteria
4. Stitching, grouting, dry packing, gravity filling, epoxy injection & surface treatments

See MO14 - Troubleshooting Concrete Cracks.

BUSINESS & PROJECT MANAGEMENT

NEW! MO19

Monday, February 3 • 8:00 am - 11:00 am

Construction Field & Project Management Systems that Work

George Hedley, CSP, LPBC, Hardhat Presentations

3.0 hours AIA/CES LU, PDH, MCAA, TCA

1. Field and project management systems, procedures and structure
2. Project systems and organization
3. Scorecards, checklists and standards for daily operations
4. Accountable and responsible project teams

NEW! MO20

Monday, February 3 • 1:00 pm - 4:00 pm

Effective Communication Skills to Increase Your Personal Influence

Randy Anderson, CSP, E3 Professional Trainers

3.0 hours AIA/CES LU, PDH, MCAA, TCA

1. Present ideas and perspectives clearly and concisely
2. Become more compelling, persuasive and memorable
3. Five-piece strategy for becoming a better listener
4. Reduce frustrations from lack of communication, misinterpretation, or other breakdowns

WE21

Wednesday, February 5 • 8:00 am - 11:00 am

How to Turn Inefficiency into Profitability

Brad Humphrey, Pavecon

3.0 hours AIA/CES LU, PDH, MCAA, TCA

1. Pre-start strategies: scope of work, roles & responsibilities, tools & equipment
2. Goals for every project and how to monitor & measure
3. Communication responsibilities for every project member
4. Pre-close strategies that profits contractor

NEW! TH22

Thursday, February 6 • 8:00 am - 11:00 am

Improving Scheduling Practices: Understand the Impacts of Jobsite Productivity

Kristy Wolfe, Bradley University

Rocky Geans, Rocky Geans LLC

3.0 hours AIA/CES LU, PDH, MCAA, TCA

1. How productivity directly impacts the construction schedule
2. Methods to track and analyze productivity
3. Strategic plan to increase jobsite productivity and reduce the schedule
4. Key areas for productivity improvement

FR23

Friday, February 7 • 8:00 am - 11:00 am

How to Establish Teamwork on Every Crew & Job

Jeff Stokes, Next Level Contractor

3 hours AIA/CES LU, PDH, MCAA, TCA

1. Why "teamwork" is so important to today's workers and jobs
2. Build and motivate a team environment
3. Skills to lead in a team-based environment
4. Steps for crew and project to become a team

QUESTIONS

about the
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90-MINUTE SEMINARS

BUSINESS LEADERSHIP & MANAGEMENT

MO101

Monday, February 3 • 8:30 am - 10:00 am

The 25 Hour Day: Time Management & Time Budgeting Strategies

Randy Anderson, CSP, E3 Professional Trainers

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Organization ideas for efficiency and saving time
2. Allocate time proactively
3. Areas that should be systemized or delegated
4. Strategies to overcome productivity loss

NEW! MO102

Monday, February 3 • 10:30 am - 12:00 pm

Building Trust to Build Your Team

Randy Anderson, CSP, E3 Professional Trainers

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Cost and value of trust in the workplace
2. Five motivators to multiply employee engagement through trust
3. Time it takes to repair damaged trust
4. Three things that build or destroy trust

MO103

Monday, February 3 • 3:30 pm - 5:00 pm

How to Develop & Multiply Effective Leaders

George Hedley, CSP, LPBC, Hardhat Presentations

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Key leadership traits for assessment of others
2. Development process for building leaders
3. Mentor process that enhances learning
4. Learning and development culture to build leaders

TU104

Tuesday, February 4 • 8:30 am - 10:00 am

Foremen Who Influence The General Contractor Superintendent & Project Manager

Brad Humphrey, Pavecon

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. General contractor superintendents and project managers expectations
2. Techniques to handle difficult superintendents
3. Respectful communication with superintendent or project manager
4. Jobsite interactions with superintendents and project managers

TU105

Tuesday, February 4 • 1:30 pm - 3:00 pm

Find, Hire, Train and Retain Self-Motivated Workers

Brad Humphrey, Pavecon

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Look in "all the right places" to find your future workforce
2. Skills and tools that help by securing right workers
3. Techniques to keep new generation of workers working longer
4. Find-Hire-Retain template to suit your construction company

TH106

Thursday, February 6 • 1:30 pm - 3:00 pm

Small Company Survival Skills to Reach the Next Level of Success

Jeff Stokes, Next Level Contractor

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Stages every company progresses through
2. Best practices for each stage of growth
3. Assessment of company against best practices
4. Action plan to grow and reach next level

FINANCIAL MANAGEMENT & PROFITABILITY

NEW! MO107

Monday, February 3 • 1:30 pm - 3:00 pm

Job Costing and Overhead Recovery Costs

Rocky Geans, Rocky Geans LLC

Tommy Ruttura, Ruttura & Sons Construction Co. Inc.

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Job cost structure that fits your company and type of work
2. Identify your costs by type of work
3. Apply results of your job costing to estimating
4. Calculate & apply overhead burden into estimates

NEW! WE108

Wednesday, February 5 • 1:30 pm - 3:00 pm

Steps to a Successful Change Order: Tips & Techniques to Get Paid

Rocky Geans, Rocky Geans LLC

Tommy Ruttura, Ruttura & Sons Construction Co. Inc.

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Process of a successful Change Order
2. Documentation for justification of a change order
3. Follow up methods, verification of work completed and invoice tracking
4. Ways to avoid future change orders

NEW! TH109

Thursday, February 6 • 1:30 pm - 3:00 pm

Crash Course: Financial Management for Construction Owners and Managers

Leslie Shiner, MBA, The ShinerGroup

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Key construction financial management terms and principles
2. Business components that are and are not profitable
3. Financial management applied to your business
4. Key performance indicators (KPI's)

FR110

Friday, February 7 • 8:30 am - 10:00 am

Growing Your Business Without Growing Out of Business: Steps & Margins

Leslie Shiner, MBA, The ShinerGroup

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Theory behind cause of growth plateau
2. Stages of small business growth
3. Breakeven analysis to manage growth
4. How to break through growth barriers



INTERACTIVE WORKSHOPS FOR INDUSTRY LEADERS

Addressing business & project management challenges, World of Concrete is pleased to offer **FOUR NEW** workshops tailored for management-level professionals.

[MOLW1] Leadership Workshop: Effective Field Communications

Mon, 8:00 am - 12:00 pm

Field Leaders walk away with the tools to more effectively communicate with their team on the jobsite and in the office while providing resolutions in a clear and professional manner. \$250; \$305 after 12/11/19

[MOLW2] Leadership Workshop: Field Planning & Execution

Mon, 1:00 pm - 5:00 pm

Field leaders will sharpen their planning, organization and execution skills to lead their team effectively and complete jobs proficiently and on time. \$250; \$305 after 12/11/19

[TUCEW] Estimators Workshop: Estimating Strategies & Risk Management

Tues, 8:00 am - 12:00 pm

Customized workshop to improve accuracy & quality of construction estimates; tips, tools, checklists & templates to help estimators with project selection, estimating & bidding, and job costing. \$250; \$305 after 12/11/19

[THLSW] Laser Scanning Workshop: Fundamentals of Utilizing Laser Scanners

Thurs, 8:00 am - 12:00 pm

Learn the basics of operating laser scanners to be more effective on the jobsite and provide accurate data for clients. \$250; \$305 after 12/11/19

For detailed descriptions & continuing education approvals, go to worldofconcrete.com and click on **Interactive Workshops** on the WOC Education webpage.

90-MINUTE SEMINARS

GENERAL BUSINESS

NEW! MO111

Monday, February 3 • 8:30 am - 10:00 am

Creating a Smarter Jobsite: Connecting the Field and Office

Troy Guevara, Digitek Solutions

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Current state of technology in construction
2. How to close gulf between office and job site
3. Ways technology can be implemented in your business
4. How to close gulf between office and job site



NEW! TU112

Tuesday, February 4 • 1:30 pm - 3:00 pm

Managing a Multigenerational Workforce from Millennials to Baby Boomers

Kristy Wolfe, Bradley University

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Different generations in the workforce
2. What influences generational behavior
3. How different generations communicate and why
4. Working with other generations

NEW! WE113

Wednesday, February 5 • 8:30 am - 10:00 am

Overcoming the Challenges of a Family Construction Business

Todd Scharich, Decorative Concrete Resources

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Culture and structure that fits your values
2. Roles that ensure each family member stays in their lane
3. How to compose a conflict resolution plan
4. Succession preparation

NEW! WE114

Wednesday, February 5 • 1:30 pm - 3:00 pm

LEAN Construction: Practical Applications, Concepts and Benefits

Kristy Wolfe, Bradley University

Chris Plue, LEED AP, Webcor Concrete

1.5 hours AIA/CES LU, PDH, MCAA, TCA

1. Outline benefits of LEAN
2. Define LEAN principles
3. Tools and techniques to integrate LEAN
4. When and where to implement LEAN

ADVANCED TECHNICAL

NEW! MO115

Monday, February 3 • 3:30 pm - 5:00 pm

Shotcrete Technology for Diverse & Cost-Saving Projects

Frank Townsend, Superior Gunitite

Marcus von der Hofen, Coastal Gunitite Construction Company

1.5 hours AIA/CES LU|HSW, PDH

1. Cost savings of shotcrete to general contractors & owners
2. Shotcrete challenges: weather conditions & proper mix design
3. Placement techniques for layered monolithic concrete sections
4. Project profiles of structural and architectural shotcrete

Presented by American Shotcrete Association.

NEW! TU116

Tuesday, February 4 • 8:30 am - 10:00 am

What to Do When Your Concrete Stops Working

Tim Cost, V.T. Cost Consulting, LLC

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Abnormal concrete behavior & normal hydration influences
2. Materials, combinations & conditions influencing concrete behavior
3. Mix adjustment to resolve incompatibility issues
4. Strategies for avoiding abnormal concrete behavior

NEW! TU117

Tuesday, February 4 • 1:30 pm - 3:00 pm

Slab Repair Techniques for Parking Lots, Roadways and Airfields

Michael Ayers, PhD, Global Pavement Consultants

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Common types of slabs-on-grade distresses
2. Repair techniques for each distress type
3. Plans, specifications & basics of rehabilitation projects
4. Best practices in constructing repairs

TH118

Thursday, February 6 • 8:30 am - 10:00 am

Post-Tensioning: Concepts, Repairs, Modifications & Evaluation of Existing Structures

Jay Thomas, Structural Technologies

1.5 hours AIA/CES LU|HSW, PDH

1. Basics of post-tension concrete
2. Repair strategies for solving common problems
3. Penetrations & openings in post-tension elements
4. Post-tension concrete assessment process & tools

CONCRETE 101

NEW! MO119

Monday, February 3 • 3:30 pm - 5:00 pm

Addressing Hardened Concrete Problems After Concrete Placement

Michelle Wilson, FCI, Portland Cement Association

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Common problems in maintaining hardened concrete properties
2. Issues concerning low strength
3. Concrete surface defects & possible sources
4. Practical solutions for correcting existing problems

Presented by Portland Cement Association.

TU120

Tuesday, February 4 • 1:30 pm - 3:00 pm

Introduction to Placing and Finishing Concrete Slabs: Best Practices

Jeff Groom, PE, CTL Thompson, Inc.

Chad White, Chad White Consulting

Stevie Ray Lloyd, Lloyd Concrete Services, Inc.

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Steps to install a steel-troweled floor
2. When & how to use finishing tools, including a "bump cutter"
3. Read concrete & know correct timing for each step
4. Walk-behind power trowel-operating safely and efficiently

See Place & Finish Floors **Hands-on Training:**

Wed, 1:00 pm - 5:00 pm & Thurs, 8:00 am - 12:00 pm & 1:00 pm - 5:00 pm

NEW! WE121

Wednesday, February 5 • 8:30 am - 10:00 am

Curing Concrete: Why We Do It and Why We Care

Tyler Ley, PhD, PE, FCI, Oklahoma State University

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Importance of curing & impact of not curing properly
2. Curing between setting & opening to traffic
3. Curing plan for different exposure conditions
4. Effect of poor curing practices

TH122

Thursday, February 6 • 8:30 am - 10:00 am

Hot Weather: Dealing with Concrete in Hot, Dry & Windy Conditions

Kim Basham, PhD, PE, FCI, KB Engineering LLC

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Hot weather conditions affecting workability, setting, finishability, strength & cracking
2. Mix designs & ordering concrete to address problems
3. Minimize problems - slump loss to rain showers
4. Hot weather placement plan to avoid problems & costly repairs

See TH123 - Concrete in Cold Weather Conditions.

TH123

Thursday, February 6 • 1:30 pm - 3:00 pm

Cold Weather: Managing Concrete in Winter Conditions

Kim Basham, PhD, PE, FCI, KB Engineering LLC

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Cold weather conditions affecting fresh & hardened concrete properties
2. Mix designs & concrete adjustments to minimize problems
3. Delayed setting, concrete hardening, finishability & strength gain
4. Cold weather placement plan to avoid problems & costly repairs

See TH122 - Concrete in Hot Weather Conditions.

CONCRETE FLOORS & SLABS

NEW! MO124

Monday, February 3 • 10:30 am - 12:00 pm

Becoming Sealer Savvy: Long-Term Concrete Protection & Maintenance

Jennifer Crisman, The Euclid Chemical Company

1.5 hours AIA/CES LU, PDH

1. Sealing concrete for long-term durability
2. Sealer types & correct choice for projects
3. Common concrete sealer problems & fixes
4. Innovations in concrete sealers

NEW! TU125

Tuesday, February 4 • 8:30 am - 10:00 am

Moisture in Concrete Floor Slabs: Benefits & Challenges

Peter Craig, FCI, FICRI, CCSMTT, Concrete Constructives

Scott Tarr, PE, FCI, CCSMTT, North S.Tarr Concrete Consulting

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Why excess water in concrete is necessary
2. Handle curled slabs & prevent reverse curls
3. Ways to test moisture levels in concrete
4. Moisture problems for floor covering & coating installations

NEW! WE126

Wednesday, February 5 • 1:30 pm - 3:00 pm

Slump-Loss, Setting & Shrinkage: Concrete Won't Wait!

Ken Hover, PhD, PE, Cornell University

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Slump-loss, setting, shrinkage & strength gain
2. How temperature influences placing, finishing, saw-cutting & strength gain
3. Mix design & admixtures that change placing & finishing time
4. Tests to determine speed of concrete setting & hardening

TH127

Thursday, February 6 • 8:30 am - 10:00 am

Industrial & High-End Floors: Leading-Edge Finishing Techniques

Bryan Birdwell, Structural Services Inc.

Bob Simonelli, Structural Services Inc.

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Techniques to plan, place, finish & test high quality floors
2. Challenges in placing & finishing high-end floors
3. Correct formwork & equipment for a given application
4. Building a process that exceeds expectations

NEW! TH128

Thursday, February 6 • 1:30 pm - 3:00 pm

Crash Course in Floor Flatness & Levelness: What You Need to Know

Bryan Birdwell, Structural Services Inc.

1.5 hours AIA/CES LU|HSW, PDH, TCA

1. Common tolerance misconceptions
2. Floor tolerances: pre-slab, mix designs, grading, placing, finishing & testing
3. Correct tolerances for the application: formwork, placing/finishing & testing
4. How tolerances are met & how to remedy if they aren't

DECORATIVE CONCRETE

NEW! MO129

Monday, February 3 • 1:30 pm - 3:00 pm

GFRC Concrete Countertops: Step-by-Step Process

Jeff Girard, PE, The Concrete Countertop Institute

1.5 hours AIA/CES LU, PDH

1. GFRC differences from cast in place and precast methods
2. How ingredients in GFRC work
3. Instructions for making GFRC
4. GFRC mix design for countertops

See Concrete Countertops **Live Demonstration:**

WECCD Wed, 12:30 pm - 4:30 pm

NEW! TU130

Tuesday, February 4 • 8:30 am - 10:00 am

Stamped Concrete: Advanced Techniques and Cutting-Edge Products

Todd Scharich, Decorative Concrete Resources

1.5 hours AIA/CES LU, PDH, TCA

1. Return on investment from upgrading your traditional stamps
2. Admixtures and chemicals to finish quicker
3. Identify crew member's role to create a consistency and efficiency
4. Incorporate new sealer technology

See Stamped Concrete **Hands-on Training:**

Tues, 1:00 pm - 5:00 pm & Wed-Thurs, 8:00 am - 12:00 pm



DECORATIVE INTERACTIVE WORKSHOPS & LIVE DEMONSTRATIONS

Watch decorative concrete industry experts in action as they demonstrate multiple trending decorative concrete applications & projects.

Choose from 4 exciting opportunities – Fee per session: \$325; \$375 after 12/11/19

[TUDOD] Decorative Overlays

Tues, 1:00 pm - 5:00 pm

Observe various decorative concrete overlay systems with cutting edge & trending finishes: specialty spray textures, hand troweled finishes, integrally colored & polishable with inlaid logos.

[WECCD] Concrete Countertops

Wed, 12:30 pm - 4:30 pm

Watch a countertop & sink come to life from mold with raw ingredients to polished & colored concrete with exposed aggregate.

[WEVCD] Vertical Concrete

Wed, 1:00 pm - 5:00 pm

Interact with industry experts as they demonstrate decorative vertical projects: foam core construction, hand-carved boulder and limestone, wood textures, 3-D micro finishes.

[THASD] Acid Stain Applications

Thurs, 1:00 pm - 5:00 pm

See start-to-finish processes using complex designs & templates; scoring & masking; applying & manipulating color; etching logo design; applying protective coatings.

For detailed descriptions, special savings, and continuing education approvals, go to worldofconcrete.com, click on **Interactive Workshops** on the WOC Education webpage.

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90-MINUTE SEMINARS



NEW! TU131
Tuesday, February 4 • 1:30 pm - 3:00 pm
Troubleshooting Acid Staining Problems: What to Do When Things Go Wrong

Federico Jasso, PE, SERVICIOS PROCONSA, SA DE CV

- 1.5 hours AIA/CES LU, PDH, TCA
1. Most common failure causes
 2. Probable failure causes for acid stain
 3. What goes wrong and why
 4. Alternatives to repair different problems

See *Acid Staining Live Demonstration: THASD Thurs, 1:00 pm - 5:00 pm*

WE132
Wednesday, February 5 • 1:30 pm - 3:00 pm
Architectural Concrete Finishes: Color & Controlled Aggregate Exposure

Rich Cofoid, The Euclid Chemical Company

- 1.5 hours AIA/CES LU, PDH, TCA
1. Exposed aggregate surfaces installation
 2. Differences and advantages of integral color
 3. Levels of "etch" to achieve best results
 4. Marketing and sales techniques for exposed aggregate finishes

NEW! TH133
Thursday, February 6 • 1:30 pm - 3:00 pm
Troubleshooting Common Issues with Decorative Concrete Applications and Finishes

Chris Sullivan, ChemSystems Inc.

- 1.5 hours AIA/CES LU, PDH, TCA
1. Four key factors affecting color in concrete
 2. Surface issues with stamped concrete
 3. Common application errors
 4. Causes of sealer failure on a decorative project

See *Decorative Overlays Live Demonstration: TUDOD Tues, 1:00 pm - 5:00 pm*

See *Vertical Concrete Live Demonstration: WEVCD Wed, 1:00 pm - 5:00 pm*

ENGINEERING

TU134
Tuesday, February 4 • 1:30 pm - 3:00 pm
Performance-Based Design & Specification of Fiber-Reinforced Concrete

Charles Nmai, PhD, PE, M.ASCE, F.ACI, BASF Corporation
Mark Rached, PhD, PE, BASF Corporation

- 1.5 hours AIA/CES LU|HSW, PDH, TCA
1. Applications of fibers as steel reinforcement alternative
 2. Performance-based test methods & specifications
 3. Industry-accepted design methodologies
 4. Steel-reinforced designs conversions to fiber

NEW! WE135
Wednesday, February 5 • 8:30 am - 10:00 am
Concrete Compressive Strength Failures: Causes, Evaluation & Resolution

Jacob Borgerson, PhD, PE, Wiss, Janney, Elstner Associates, Inc.
Jeff Groom, PE, CTL Thompson, Inc.

- 1.5 hours AIA/CES LU|HSW, PDH, TCA
1. Concrete compressive strength testing
 2. Evidence of low strength concrete
 3. Importance of a "low strength" concrete meeting
 4. In-place concrete strength evaluation techniques

NEW! WE136
Wednesday, February 5 • 1:30 pm - 3:00 pm
Reinforced Concrete: Suspended & Slabs-on-Ground Design + Practical Applications

Jerry Holland, PE, F.ACI, Structural Services Inc.
Tyler Ley, PhD, PE, F.ACI, Oklahoma State University

- 1.5 hours AIA/CES, LU|HSW, PDH, TCA
1. Reinforcing steel uses in reinforced concrete
 2. Differences between suspended & slabs-on-ground construction
 3. How design practices impact constructability
 4. Reinforced concrete design for different applications

NEW! TH137
Thursday, February 6 • 8:30 am - 10:00 am
ACI 563 Concrete Repair Specifications: What Contractors & Engineers Need to Know

John Lund, PE, Martin/Martin, Inc.
Tracy Marcotte, PhD, PE, F.ACI, CVM Engineers

- 1.5 hours AIA/CES LU|HSW, PDH, TCA
1. ACI 563 Repair Specifications purpose from contractor & engineer perspectives
 2. Specifications used for a typical repair project
 3. Key provisions in repair specifications
 4. Project-specific information for specifications

FR138
Friday, February 7 • 8:30 am - 10:00 am
Design & Construction of Slabs-on-Ground + Slab on Metal Deck

Jerry Holland, PE, F.ACI, Structural Services Inc.
Bryan Birdwell, Structural Services Inc.

- 1.5 hours AIA/CES LU|HSW, PDH, TCA
1. How slabs are supposed to work vs. how they work
 2. Procedures for contractors to check bad designs
 3. Common problems in design & construction of systems
 4. Avoiding problems with proper solutions



MASONRY

TU139
Tuesday, February 4 • 8:30 am - 10:00 am
Mortar & Grout Best Practices: Materials, Processes & Inspections

John Chrysler, PE, Masonry Institute of America

- 1.5 hours AIA/CES LU|HSW, PDH, MCAA
1. Material standards & specifications
 2. Impact on performance of masonry assemblies
 3. Proper testing & inspection procedures
 4. Code requirements & best practices
- Presented by *Masonry Institute of America.*

NEW! TU140
Tuesday, February 4 • 1:30 pm - 3:00 pm
Historic Masonry Repair & Restoration Techniques

John Speweik, Speweik Preservation Consultants, Inc.

- 1.5 hours AIA/CES LU|HSW, PDH, MCAA
1. When historic walls need repairs
 2. Mortar's role in repair & restoration
 3. Repair methods & when to use
 4. How to avoid recurring problems

WE141
Wednesday, February 5 • 8:30 am - 10:00 am
Troubleshooting Masonry: Cracks, Moisture & Efflorescence

Michael Schuller, PE, Atkinson-Noland & Associates Inc.

- 1.5 hours AIA/CES LU|HSW, PDH, MCAA
1. Types & causes of cracks in masonry walls
 2. Moisture penetration resistance & crack repair
 3. Masonry water repellents & sealers
 4. Main types of masonry efflorescence & causes

NEW! TH142
Thursday, February 6 • 1:30 pm - 3:00 pm
Fundamentals of Masonry Cleaning: Methods & Materials

Ed Nagel, Nagel and Associates

- 1.5 hours AIA/CES, PDH, MCAA
1. Importance of masonry construction clean down
 2. When & why clean down must occur
 2. Types & causes of stains in masonry cleaning
 3. Steps for safe & effective cleaning



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SAFETY & RISK MANAGEMENT

NEW! MO143
Monday, February 3 • 1:30 pm - 3:00 pm
Creating a Safety Excellence Culture: 14 Elements of Safety Leadership

David Crouch, Caterpillar Safety Services

- 1.5 hours AIA/CES LU, PDH, MCAA, TCA
1. How to create a strong safety accountability system
 2. Personal credibility with employees
 3. Levels of trust in business relationships
 4. Action plan to improve safety leadership capability

NEW! WE144
Wednesday, February 5 • 1:30 pm - 3:00 pm
Fall Protection: Means and Methods for Preventing Falls

Mike Hayslip, PE, CSP, Esq, NESTI

- 1.5 hours AIA/CES LU, PDH, MCAA, TCA
1. Commonly used conventional means for fall protection
 2. Controls for fall protection
 3. OSHA standards, ANSI Z359 and ANSI A10 requirements
 4. Significance between a hole, unprotected side, leading edge and excavation

NEW! TH145
Thursday, February 6 • 8:30 am - 10:00 am
OSHA's Silica Safety Standard: What You Need to Know to be Fully Compliant

Mike Hayslip, PE, CSP, Esq, NESTI

- 1.5 hours AIA/CES LU, PDH, MCAA, TCA
1. OSHA safety standards for control of silica exposure
 2. Risks and health hazards associated with silica
 3. Personal protective equipment for silica
 4. Federal housekeeping and medical surveillance mandates

TH146
Thursday, February 6 • 1:30 pm - 3:00 pm
Safety and OSHA Violations: The Good, The Bad & The Ugly

Matt Murphy, Safety Environmental Engineering, Inc.

- 1.5 hours AIA/CES LU, PDH, MCAA, TCA
1. OSHA violations examples
 2. How to research, review and understand OSHA violations
 3. Abatement of OSHA violations
 4. Commonly overlooked OSHA standards



TRAIN-THE TRAINER WORKSHOPS FOR SAFETY PROFESSIONALS

In-House Trainer Courses that meet State and Federal safety requirements:

Participants will receive a custom training kit containing a Trainer's Manual, PowerPoint slides & script, practice quizzes with grading keys, practical evaluation forms and student workbooks.

[MOCFT] Construction Forklift
Mon, 8:00 am - 12:00 pm
\$695; \$775 after 12/11/19

[MOAWP] NEW! Aerial Work Platform
Mon, 1:00 pm - 5:00 pm
\$695; \$775 after 12/11/19

[TUFPT] Fall Protection End User
Tues, 8:00 am - 12:00 pm
\$845; \$945 after 12/11/19

[TURRS] Rigging & Signaling for Cranes
Tues, 1:00 pm - 5:00 pm
\$845; \$945 after 12/11/19

For detailed descriptions & continuing education approvals, go to worldofconcrete.com, click on **Interactive Workshops** on the **WOC Education** webpage.

QUESTIONS

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