

Agenda

This seminar covers seismic design approaches, current building code theory, seismic design principles and behavior, and more. The seminar will be based on provisions in ASCE 7-10.

Seismology and Earthquake Actions

- Earthquake characteristics
- Effects of soil conditions
- Western, central, and eastern U.S. seismicity

Structural Dynamics & Response

- Ground motions and structural response
- Response spectra
- Damping
- Modal superposition analysis

Modern Philosophy of Seismic Design

- Seismic design objectives
- Inelastic response and ductility
- Proportioning

U.S. Seismic Codes

- History
- Performance objectives
- Hazard levels

ASCE 7 Seismic Design

- Mapped spectral response
- Design response spectrum
- Seismic design category and design factors
- Seismic force resisting systems
- Estimating period
- Structural irregularities
- Equivalent lateral force procedure
- Load combinations, overstrength, redundancy
- Diaphragms and shear walls
- Deflection limitations

Material-Specific Seismic Force Resisting Systems

- International Building Code (IBC) provisions
- American Institute of Steel Construction (AISC 341) provisions
- American Concrete Institute for Structural Concrete (ACI 318) provisions
- American Concrete Institute for Masonry Structures (ACI 530) provisions

Seismic Design and Construction

Oklahoma City, OK - Wednesday, January 29, 2020



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

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Learning Objectives

You'll be able to:

Describe earthquake characteristics, their effect on soils, and structural responses to ground motion.

Explain the principles of the modern philosophy of seismic design.

Discuss the performance objectives of U.S. seismic codes that are designed to allow structures to better sustain seismic events.

Understand seismic design provisions contained in ASCE 7-10 and ASCE 7-16.

Identify material-specific seismic force resisting system provisions of the International Building Code, the American Institute of Steel Construction (AISC 341), the American Concrete Institute for Structural Concrete (ACI 318), and the American Concrete Institute for Masonry Structures (ACI 530).



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Seismic Design and Construction

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Study seismology, earthquake actions, structural dynamics, and response spectra

Explore seismic design objectives and U.S. seismic codes

Review seismic design provisions in ASCE 7-10 and ASCE 7-16

Examine load combinations, overstrength and redundancy

Review design criteria for wood, steel, concrete and masonry buildings

Continuing Education Credits

Professional Engineers

7.5 PDHs

International Code Council

.75 CEUs (Building)

Architects*

7.5 HSW CEUs

7.5 AIA LU|HSW

Contractors

Non-Credit Continuing Ed.

*Oklahoma rules require course providers to verify the identity of architects and prohibit course participants from earning partial credit. Please provide photo identification at the seminar.



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Faculty

Jon F. Sfura, Ph.D., P.E., S.E. *Senior Associate at Wiss, Janney, Elstner Associates, Inc. in Northbrook, Illinois*
Dr. Sfura is a senior associate at Wiss, Janney, Elstner Associates, Inc. in Northbrook, Illinois. His experience includes the assessment of structural distress and serviceability problems, the investigation of structural failures, peer review, and the rehabilitation of structures. He has published and lectured on seismic design and performance, and on the assessment and rehabilitation of structures.

Dr. Sfura received his B.S. degree in Civil Engineering from Purdue University, and his M.S. and Ph.D. degrees in Civil Engineering from the University of Illinois. He studied the nonlinear seismic response of asymmetric steel structures to earthquake ground motions as a doctoral candidate. He is a licensed structural engineer in Illinois, civil engineer in California, and professional engineer in Florida and Michigan. He is a member of the Building Seismic Safety Council (BSSC), the Earthquake Engineering Research Institute (EERI), and the Structural Engineers Association of Illinois (SEAOI).

Wiss, Janney, Elstner Associates, Inc., is an employee-owned interdisciplinary firm with 19 offices across the United States. Its team of structural engineers, architects, and material scientists use problem solving and a hands-on technical approach to construction challenges, with virtually every construction material, structural system, and architectural component.

Here’s what past attendees had to say about the program and presenter Jon Sfura:

- “Best seminar I have ever paid for.” — *Architect/Land Planner*
“Best lecturer, presenter, professor type I have ever had.” — *Professional Engineer*
“Dr. Sfura’s presentation was excellent.” — *Structural Engineer*

Seminar Information

Ambassador Hotel Oklahoma City
1200 North Walker Avenue
Oklahoma City, OK 73103
(405) 600-6200

Tuition
\$289 for individual registration
\$269 for three or more registrations.

Included with your registration:
Complimentary continental breakfast and printed seminar manual. Registration does not include a copy of ASCE 7-10.

Receive a reduced tuition rate of \$101 by registering to be our on-site coordinator for the day. For availability and job description, please visit www.halfmoonseminars.org.

How to Register

- Visit us online at www.halfmoonseminars.org
- Mail-in or fax the attached form to 715-835-6066
- Call customer service at 715-835-5900

Cancellations: Cancel at least 48 hours before the start of the seminar, and receive a full tuition refund, minus a \$39 service charge for each registrant. Cancellations within 48 hours will receive a credit toward another seminar or the self-study package. You may also send another person to take your place.

Attendance will be monitored, and attendance certificates will be available after the seminar for most individuals who complete the entire event. Attendance certificates not available at the seminar will be mailed to participants within fifteen business days.

Continuing Education Credit Information

This seminar is open to the public and offers 7.5 PDHs to professional engineers and 7.5 HSW CEUs/continuing education hours to architects* in all states. Educators and courses are not subject to pre-approval in Oklahoma.

This seminar is approved by the American Institute of Architects Continuing Education System for 7.5 LU|HSW (Sponsor No. J885). Only full attendance is reportable to the AIA/CES. Visit www.halfmoonseminars.org for complete AIA/CES information under this course listing.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida, Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700), North Carolina, and North Dakota. HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects.

The International Code Council has approved this event for .75 CEUs in the specialty area of Building (Preferred Provider No. 1232)

This course also offers a non-credit continuing education opportunity to construction contractors.

* Oklahoma rules require course providers to verify the identity of architects and prohibit course participants from earning partial credit. Please provide photo identification at the seminar.

Additional Learning

- Webinar Series**
- Pumping and Piping Systems**
- **Introduction to Pumps: Operation, Principles and Calculations**
Thurs., Feb. 6, 2020, 11:00 AM - 1:00 PM CST
 - **Pumping and Piping Design Standards and Codes**
Thurs., Feb. 6, 2020, 1:30 - 2:30 PM CST
 - **Piping System Components, Materials and Calculations**
Fri., Feb. 7, 2020, 11:00 AM - 1:00 PM CST
 - **Handling Pump and Piping System Problems**
Fri., Feb. 7, 2020 , 1:30 - 2:30 PM CST

- Pavement Design**
- **Principles of Pavement Design**
Wed., Feb. 12, 2020, 11:00 AM - 12:00 PM CST
 - **Flexible Pavement Design**
Wed., Feb. 12, 2020, 12:30 - 2:30 PM CST
 - **Rigid Pavement Design**
Thurs., Feb. 13, 2020, 11:00 AM - 1:00 PM CST
 - **Maintenance, Rehabilitation and Sustainability of Pavements**
Thurs., Feb. 13, 2020, 1:30 - 3:30 PM CST

- Foundations in Cold Regions**
- **Introduction to Foundations in Cold Regions**
Thurs., Feb. 20, 2020, 11:00 AM - 12:30 PM CST
 - **Shallow Foundation Design in Cold Regions**
Thurs., Feb. 20, 2020, 1:00 - 2:30 PM CST
 - **Deep Foundation Design in Cold Regions**
Fri., Feb. 21, 2020, 11:00 AM - 12:30 PM CST
 - **Foundation Construction in Cold Regions**
Fri., Feb. 21, 2020, 1:00 - 2:00 PM CST

For more information and other online learning opportunities visit:
www.halfmoonseminars.org/webinars/

Can’t Attend? Order the Manual and Audio from the Live Seminar as a Self-Study Package!
Audio recordings of this seminar are available for purchase starting at \$279. See registration panel 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.

Registration

Seismic Design and Construction

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How to Register		Registrant Information
Online: www.halfmoonseminars.org		Name: _____
		Company/Firm: _____
		Address: _____
		City:_____State: _____ Zip_____
Phone: 715-835-5900		Occupation: _____
		Email: _____
		Phone: _____
Fax: 715-835-6066		Additional Registrants:
Code:		Name: _____
		Occupation: _____
		Email: _____
		Phone: _____
Mail: HalfMoon Education Inc., PO Box 278, Altoona, WI 54720-0278		
Complete the entire form. Attach duplicates if necessary.		Email address is required for credit card receipt, program changes, and notification of upcoming seminars and products. Your email will not be sold or transferred.
		() I need special accommodations. Please contact me.

Tuition

() **I will be attending the live seminar.** Single Registrant - **\$289.00**. Three or more registrants from the same company registering at the same time - **\$269.00** each.

() **I am not attending.** Please send me the self-study package:

☐ Downloadable MP3 Audio/PDF Manual for **\$269.00**.

☐ CD/Manual Package for **\$289.00**. ☐ USB/Manual Package **\$289.00**. (S&H included. Please allow five weeks from seminar date for delivery)

Checks: Make payable to HalfMoon Education Inc.

Credit Card: *Mastercard, Visa, American Express, or Discover*

Credit Card Number: _____

Expiration Date: _____ CVV2 Code: _____

Cardholder Name: _____

Billing Address: _____

City:_____ State:_____ Zip: _____

Signature: _____

Email: _____