

ARE 4.0 Program

This program includes:

- A copy of [STRUCTURAL SYSTEMS: ARE 4.0 \(2015\)](#) book
- 9 modules of timed sample questions (total of 225 questions) to prepare for the ARE multiple-choice questions
- 32 hours of instruction on General Structures and Lateral Forces
- Complete guidelines on how to answer the Structural Layout Vignette question along with 5 complete example problems
- Summary of the materials on FEMA 454 to help answering the ARE multiple-choice questions on the seismic topics

If you take the ARE within one month of taking these seminars and will not pass it, you can re-take our next offering for **FREE**.

Please note that a minimum number of paid participants are always required to offer the program.

presents:

STRUCTURAL TECHNOLOGY

for Interns and Practicing Architects (ARE 4.0: STRUCTURAL SYSTEMS)

June 23, 24, and 25, 2017

Urban Affairs and Planning Building
1021 Prince Street,
Alexandria, VA 22314

Sponsored by

Virginia Tech's
College of Architecture and Urban Studies



An Outreach Service of Virginia Tech



About the Course

This course provides an overview of structural technology topics as related to the Architect Registration Examination (ARE4.0) offered by the National Council of Architectural Registration Boards (NCARB). **Part One** (General Structures) reviews the necessary knowledge on structural theory and behavior of different building components in steel, concrete, and wood. **Part Two** (Lateral Forces/Structural Vignette) emphasizes the effects of lateral forces on buildings and structural layout planning. These classes meet on Friday June 23 to Sunday June 25, 2017.

Who Should Attend

Intern Architects: This course prepares participants for successful completion of the structural division of the ARE.

Practicing Architects: Course provides a solid review of architectural structures to help them with more feasible designs and better communicate with the engineering team.

Benefits

- A copy of STRUCTURAL SYSTEMS: ARE 4.0 (2015) book
- A CD-ROM with sample test questions of the ARE.
- 32 LU hours approved by the American Institute of Architects.
- A complete overview of the topics on the Architect Registration Examination.
- A complete set of information on the theoretical and practical aspects of building structures.
- Detailed information on the effects of wind and earthquakes that every architect has to know.
- Terms used by structural engineers to improve communication between architect and structural engineer.

Previous evaluations of this course:

"These seminars were beyond what I could have ever learned from a book or watching a video."

"[The instructor] was conscious of our needs."

"[Focused] on the real needs of the students [in this class]"

"A most helpful review of the ARE parts."

"Excellent handouts." and "Comprehensive"

Class Agenda

Part One: General Structures

Friday, June 23, 8:00 am – 9:00 pm

Saturday, June 24, 8:00 am – 12:00 pm

- 1. Structural Theory**
 - o Geometric Properties of Areas
 - o Beam and Frame Analysis
 - o Truss Analysis
- 2. Structural Framing and Load Flow in Buildings**
 - o Gravity Load Flow
 - o Loads on Beams, Girders, & Columns
 - o Live Load Reduction
 - o Loads on Lintels
- 3. Structural Analysis and Design**
 - o Steel Structures
 - o Concrete Structures
 - o Wood Structures

Part Two: Lateral Forces/Structural Vignette

Saturday, June 24, 12:00 pm – 8:00 pm

Sunday, June 25, 8:00 am – 6:00 pm

- 1. Different Types of Lateral Loads**
 - o Hydrostatic Loading
 - o Lateral Soil Pressure
 - o Retaining Walls
 - o Wind Loading
 - o Earthquake Loading
- 2. Lateral Load Flow in Building Structures and Different Lateral Resisting Systems**
 - o Vertical Lateral Load Resisting Systems
 - o Flexible and Rigid Diaphragms
- 3. Wind Loading**
 - o Nature of Wind
 - o Code-Based Wind Loading
- 4. Earthquake Loading**
 - o Configuration Irregularities in Seismic Design
 - o Other Important Seismic Design Issues
 - o Code-Based Earthquake Loading
- 5. Structural Layout Vignette**

Virginia Tech does not discriminate against employees, students, or applicants on the basis of race, sex, handicap, age, veteran status, national origin, religion, political affiliation, or sexual orientation. Anyone having questions concerning discrimination should contact the Equal Opportunity/ Affirmative Action Office.

About the Instructor

Dr. Mehdi Setareh, P.E. is Professor of Architecture in the College of Architecture and Urban Studies at Virginia Tech. Dr. Setareh is a licensed professional engineer in the states of Virginia and Michigan and is a member of the American Society of Civil Engineers, American Concrete Institute, American Institute of Steel Construction, and the Architectural Engineering Institute. He has held the Structural Technology for Interns and Practicing Architects since 1998. He is the author of [*STRUCTURAL SYSTEMS: Architect Registration Examination 4.0 \(2015\)*](#), and [*CONCRETE STRUCTURES, Second Edition \(2016\)*](#), published by Springer International Publishing Company.

Location and Lodging

The course is held at the Virginia Tech, Urban Affairs and Planning Building, 1021 Prince Street, Alexandria, VA 22314. Lodging accommodations and costs for lodging and meals are the responsibility of the participant.

To receive directions to the Alexandria Center, please contact setareh@vt.edu.

How to Register

The fees for the seminar includes course materials, 32 hours of instruction, a copy of the STRUCTURAL SYSTEMS: ARE4.0 (2015) [\$93.00 on Amazon.com], a CD-ROM with 225 sample multiple-choice ARE test questions on structural systems [\$60 value], and certificate of completion. This two-part seminar is eligible for 32 Learning Unit (LU) hours and qualifies for 32 hours of Health, Safety, and Welfare (HSW).

To register, complete the attached form and make payment by Friday, June 16, 2017. **To benefit the early registration discount, registration must be completed by the end of June 9, 2017.**

No Refunds after registration. However, substitutions are accepted at any time. In case of cancellation of the program, registrants will be fully-refunded.

Registration

Structural Technology for Interns and Practicing Architects

June 23, 24 and 25, 2017

Urban Affairs and Planning Building

Virginia Tech

Alexandria, VA

Please print or type-complete a separate form for each participant.

Name _____
AIA Member # _____
Position/Title _____
Employer _____
Address _____
City _____
State _____ Zip _____
Office Phone _____
Fax _____
E-Mail _____

Registration Fee: (Check one)

- AIA Members: \$450 (Before June 9: \$400)
 Non-AIA Members: \$500 (Before June 9: \$450)

**For Payment,
[Deadline: June 16, 2017]
[CLICK HERE.](#)**

**Return the registration form by June 16, 2017
(mail or email attachment only) To:**

Dr. Mehdi Setareh
College of Architecture & Urban Studies
Virginia Tech
201 Cowgill Hall
Blacksburg, VA 24061-0205

Phone: (540) 231-5204
Fax: (540) 231-9938
Email: setareh@vt.edu