

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



COLLEGE OF ARCHITECTURE
AND URBAN STUDIES
VIRGINIA TECH.

presents:

STRUCTURAL TECHNOLOGY

for Practicing and Intern Architects

Part One: August 29, and 30

Part Two: September 5, 2020

ON-LINE EVENT

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 the fundamentals of the structural technology topics that every architect should be aware of. It also helps intern architects prepare for the structural portions of the Architect Registration Examination (ARE5.0) 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) emphasizes the effects of lateral forces on buildings and structural framing layout. These classes meet on Saturday August 29, Sunday August 30, and Saturday September 5, 2020.

Who Should Attend

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

Intern Architects: This course prepares participants for successful completion of the structural sections of the Project Planning and Design (PPD) and Project Development and Documentation (PDD) divisions of the ARE.

Benefits

- A copy of STRUCTURAL SYSTEMS Second Edition book.
- Up to 32 LU hours approved by the American Institute of Architects for Parts One and Two.
- 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.

Selected previous evaluations of this course:

"That was a wonderful, enlightening and informative session you had last weekend. You were excellent!!"

"[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."

Class Agenda

Part One: General Structures

Saturday, August 29, 8:00 am – 7:00 pm
Sunday, August 30, 8:00 am – 6:00 pm

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

Part Two: Lateral Forces/Structural Framing Layout

Saturday, September 5, 8:00 am – 8:00 pm

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

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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 \(2015\)](#), [STRUCTURAL SYSTEMS - Second Edition \(2017\)](#), and [CONCRETE STRUCTURES, Second Edition \(2017\)](#), published by Springer International Publishing Company.

How to Register

The fees for the seminars includes course materials, 32 hours of instruction, a copy of the STRUCTURAL SYSTEMS - Second Edition (2017) [\$89.00 on Amazon.com]. Part One (General Structures) of the program consists of 20 hours of instruction. Part Two (Lateral Forces/Structural Framing Layout) consists of 12 hours of instruction. All participants will receive a certificate of completion upon request. This two-part seminar is eligible for a total of 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, August 21, 2020. **To benefit the early registration discount, registration must be completed by the end of August 14, 2020.**

Registration

Structural Technology for Interns and Practicing Architects

Part One: August 29, 30
Part Two: September 5, 2020
On-Line

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)

- Part One : \$350
(Before August 14: \$300)
- Part Two : \$190
(Before August 14: \$165)
- Parts One + Two : \$500
(Before August 14: \$450)

For Payment,
[Deadline: August 21, 2020]
[CLICK HERE.](#)

Return the registration form by August 21, 2020 (mail or email attachment only) To:

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