Class Agenda

Part One: General Structures

Friday, May 14, 8:00 am – 6:00 pm
Saturday, May 15, 8:00 am –6:00 pm

1. **Structural Theory**
   - Geometric Properties of Areas
   - Beam 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

Part Two: Lateral Forces/Structural Layout

Sunday, May 16, 8:00 am – 5:00 pm

1. **Different Types of Lateral Loads**
   - Hydrostatic Loading
   - Lateral Soil Pressure
   - Wind Loading
   - Earthquake Loading

2. **Lateral Load Flow in Building Structures and Different Lateral Resisting Systems**

3. **Wind Loading**
   - Nature of Wind
   - Wind Loading on Structures
   - Wind Load Distribution in Building Structures

4. **Earthquake Loading**
   - Nature of Earthquakes
   - Earthquake Load on Structures
   - Earthquake Load Distribution in Building Structures
   - Effects of Configuration on Building Performance during Earthquakes.

5. **Structural Layout Vignette**

About the Instructor

Dr. Mehdi Setareh, P.E. (1990, Univ. of Michigan), 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 is the author of the "Concrete Structures" published by the Prentice-Hall Book 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 fee for part one is $370 and includes course materials, 18 hours of instruction, a CD-ROM of ARE sample test questions on structural Technology ($100 value), a course binder and certificate of completion. Part One: General Structures is eligible for 18 LU hours and qualifies for 18 hours of Health, Safety, and Welfare (HSW).

The fee for part two is $160 and includes 8 hours of instruction plus CD, and course materials. Part Two: Lateral Forces is eligible for 8 LU hours and 8 hours of HSW. A post-review test will be administered to assess participant learning and assist preparation for ARE.

Combined fee is $500!

Discounts: AIA Members receive a 10% discount (AIA membership number is required). In addition, team discounts are available. Send three or more people from one organization and receive a 20% discount off each one enrollment fee. The group and AIA rates apply only to the combined fee, and cannot be applied together. Larger discounts will be negotiated for larger groups.

To register, complete the attached form and return with payment by May 7, 2010.

Requests for refunds are honored if received by May 7, 2010. **No Refunds after this date.** However, substitutions are accepted at any time.

Registration

Structural Technology for Interns and Practicing Architects
May 14, 15, and 16, 2010
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)

☐ Part One: $370 ☐ Part Two: $160
☐ Parts One and Two: $500 ☐ Group Rate: $ 400

☐ AIA Members: $ 450

Method of Payment:

☐ Check enclosed. Make checks payable to:
Treasurer , Virginia Tech

Return with Payment by May 7, 2010 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

College of Architecture and Urban Studies
Virginia Polytechnic Institute and State University
201 Cowgill Hall
Blacksburg, VA 24061-0205

STRUCTURAL TECHNOLOGY
FOR INTERN AND PRACTICING ARCHITECTS
MAY 14, 15, AND 16, 2010

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

VirginiaTech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

presents:

STRUCTURAL TECHNOLOGY

for Interns and Practicing Architects

(New Format)

May 14, 15, and 16, 2010

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

Sponsored by

Virginia Tech's
Department of Architecture,
College of Architecture and Urban Studies

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CONTINUING EDUCATION AIA

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 Layout) emphasizes the effects of lateral forces on buildings and structural layout planning. These classes meet on Friday May 14 to Sunday May 16, 2010.

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 complete overview of the topics on the Architect Registration Examination.
- Updated based on the ARE4.0 contents and format.
- 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.
- 26 LU hours approved by the American Institute of Architects.
- A CD-ROM with sample test questions of the ARE prepared at the College of Architecture & Urban Studies at Virginia Tech.

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 notebook."