

# A.R.E. Systems Seminar for ARE 4.0

Gustavo E. Mibelli, AIA

October 1 – 2, 2010

Kirksey  
6909 Portwest Drive  
Houston, TX 77024

Please arrive 15-30 minutes early for each session.

Participants need to bring basic note-taking materials (note pad, pen, and pencils.) Hand-out material will be provided before the class, and it covers all seminar topics. This material will be digital, so students may use a laptop during the seminar; it is very extensive and in color. It can be printed in B&W. Neither drafting tools nor a calculator will be needed.

Gustavo E. Mibelli AIA has taught architecture for more than 25 years. As an architectural professor, he often guided an integrated design studio that incorporated systems, materials, and structures. He was born in Caracas, Venezuela, and currently works as a Senior Project Manager in Charlotte NC. He has degrees from North Carolina State University, Universidad Central de Venezuela, and Universidad Simon Bolivar. He has taught his ARE Mechanical and Electrical / Building System seminar in Jacksonville FL, Raleigh NC, San Juan PR, San Francisco Ca, Charlotte NC, and is also scheduled to teach at Anchorage AK, and New Orleans LA.

This is the test that has the highest failing number of candidates, and it covers a very large subject matter. Because of that, the material in this seminar is organized following an approach that facilitates learning. MS PowerPoint presentations will be used to manage sequence, time, and subject matter. Great emphasis is given to photographs, charts, diagrams, drawings, as topics in this ARE section require extensive use of visual examples.

For additional information, please contact:  
Gustavo E. Mibelli AIA gmibelli@carolina.rr.com

## Objectives

- Understand approach needed to be successful taking the exam.
- Introduction and overview of material, and expected knowledge level.
- Cover some important and/or misunderstood topics in detail.
- Provide detailed references to specific information location and sources.
- Explain use of software for graphic section.

## Friday, October 1, 2010 / 8:00 AM – 5:30 PM

- **Introduction to this seminar:** objectives and approach, bibliography, the role of time and test strategies.
- **Plumbing:** system design criteria, pipes, drainage system, vents, septic systems, connections.
- **Fire:** concepts, smoke, standpipes, sprinklers, extinguishers, alarms.
- **Acoustics:** sound properties, noise, masking and reduction, absorptive materials.
- **Light:** illumination, inverse square law, light quality, daylighting and other sources, illumination systems, and zonal cavity.

## Saturday, October 2, 2010 / 8:00 AM – 5:00 PM

- **Mechanical A:** comfort and the psychrometric chart, heat gain and loss, sun path.
- **Mechanical B:** heating systems, hydronic circuits, compressive and absorptive refrigeration, local and central systems, single duct, constant air volume system, multi-duct system, air-water induction system, fan-coil system, closed-loop heat pump, selecting equipment, chiller, VAV boxes, cooling towers.
- **Electricity:** Ohm's Law, DC /AC, circuits and resistance, generation, electric motors, transmission and transformers, wiring and conduit, panels and switches.
- **Vertical Transportation:** elevators and escalators.
- **Sustainability:** Natural resources and the built environment, energy, Green Building /LEED, site planning, water efficiency, atmosphere, materials, and indoor quality
- **Vignette:** software, strategies and example.

\*\*\*Coffee, juice, water, lite breakfast, and snacks provided. One hour lunch break each day.

## Registration

Intern, AIA Associate Members \$250.00  
Intern, Non-members \$325.00

For AIA Membership Information, contact: Your local Chapter or in Houston call Membership Services at (713) 520.0155

**Registration Deadline:** Monday, September 27 @ 5pm

Name \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Telephone \_\_\_\_\_

E-mail \_\_\_\_\_

AIA Associate Member No. \_\_\_\_\_

Payment Total \_\_\_\_\_

Charge  Visa  MC  AMEX

Exp. Date \_\_\_\_\_ Vin Code: \_\_\_\_\_

Acct. No. \_\_\_\_\_

Signature \_\_\_\_\_

Check No. Enclosed \_\_\_\_\_

(Make payable to "AIA Houston")

Remit completed registration and payment to:

AIA Houston: Intern/Associate Network

E-mail: mat@aiahouston.org

Mail: 315 Capitol St., Suite 120

Houston, TX. 77002

Fax: 713-520-5134

Please allow two business days for receipt and registration confirmation. Thank you.