



BIM Education + Your GREAT people =

**YOUR COMPETITIVE
ADVANTAGE!**



BIM TECHNOLOGY for Mechanical Contractors

...the role of technology in BIM for the Mechanical Contracting Industry

Monday, October 11 – Tuesday, October 12, 2010 – Chicago, IL

800-556-3653 • 301-869-5800 • www.mcaa.org/education



BIM TECHNOLOGY for Mechanical Contractors

Two Days of Education: Monday, October 11 – Tuesday, October 12, 2010

*Previous attendance at an introductory-level BIM course is **not** required to register for BIM TECHNOLOGY for Mechanical Contractors, but a basic understanding of terms and technology is assumed for this course.*

In today's highly competitive, budget-sensitive construction market, it is increasingly necessary to work in a *collaborative environment* if we are to consistently complete projects on time, on budget, and with zero claims. The tools and processes of BIM offer just such a collaborative approach.

BIM TECHNOLOGY for Mechanical Contractors is an intensive and interactive two-day course specifically designed for construction professionals who want to establish solid and reliable processes for selecting BIM tools. The course will allow participants to investigate the profound impact models have on estimating, scheduling, and coordinating projects.

The goals of the BIM TECHNOLOGY for Mechanical Contractors course are:

1. Show how mechanical contractors can use BIM to build more efficiently and profitably.
2. Demonstrate that technological prowess in BIM, particularly in information creation and management, can be a competitive advantage and can be marketed as such.

BIM TECHNOLOGY for Mechanical Contractors – How You Will Benefit

- Find out who the major market players are
- Determine the best products to support particular project phases
- Explore how BIM processes for QTO, shop drawing and fabrication, and construction scheduling can help complete projects on time and budget
- Track how models are maintained, the implications of team member roles, file format requirements, interoperability, and technology limitations
- Determine how visualizing the construction sequencing of a project at any time can improve efficiency
- Gain an understanding of the power of digital visualization for effectively coordinating onsite activities

About the Instructor

BIM TECHNOLOGY for Mechanical Contractors will take place under the expert guidance of David Morris, director of Virtual Construction for EMCOR Group. Mr. Morris has more than 30 years of experience performing and directing all phases of piping and mechanical systems for commercial, hospitality, industrial, and power generation construction. His current duties include improving BIM processes and sharing best detailing and virtual design practices across the 80 EMCOR Group companies.

PLUS! Get free, personalized product demos during a reception on Monday evening, October 11.

On Monday evening, after a day of learning the ins and outs of BIM, join us for refreshments and a chance to “test drive” some of the newest BIM software available. Leading technology vendors will be on hand to provide you with a personalized demonstration of their latest products in action...and you can ask them any questions that may have popped up during the morning session.

*Special thanks to Technical Sales International and QuickPen – a Trimble Company
for being the official sponsors of MCAA's BIM TECHNOLOGY for Mechanical Contractors conference.*



Maximize your Investment! Plan to be there when the course begins at 7:30 a.m. on Monday, October 11, and stay until the end of course activities at 3:30 p.m. on Tuesday, October 12.

REGISTRATION INCLUDES: COURSE TEXT • CONTINENTAL BREAKFASTS • LUNCHES • MONDAY PM RECEPTION

BIM TECHNOLOGY for Mechanical Contractors – Learning Objectives

Session 1—BIM Technology, Capabilities, Process, and Tools

Module 1: Technology

- Identify five BIM benefits
- Explain what parametric modeling means
- Distinguish between a traditional and BIM approach
- Associate tool classes and phases
- Match BIM tools and functions
- Determine if tools support the BIM process

Module 2: Capabilities

- Define the federated model process and describe the characteristics
- Differentiate at least five BIM tools by function and file format
- Identify at least one developer source for preliminary design and authoring tools

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Module 3: Process

- Describe two functions of BIM analysis tools
- Explain goals, needs, how to's, & results for five analysis tools
- Explain a process for creating and using a shop drawing and fabrication model
- Outline a process for estimating and scheduling using a QTO tool
- Contrast two approaches for construction scheduling

Module 4: Tools

- Develop questions for selecting file sharing tools
- Describe strategies for specifying with BIM
- Explain a process for selecting BIM software
- Create a checklist for selecting BIM hardware

Session 2—Estimating/QTO, Scheduling, and Coordination

Module 1: Conceptual Estimating and QTO

- Identify the cost drivers and major characteristics of a good model
- Describe what should and should not be modeled
- Identify five coordination points of a modeling process
- Outline processes for exporting and importing quantity information

Module 2: Scheduling

- Differentiate construction planning and scheduling activities
- Map out how 4D models analyze and evaluate schedules
- Explain how to identify what project components should be modeled
- List six uses of 4D Technology

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Module 3: Coordination and Interoperability

- Map a sequence for coordinating the creation of models
- Explain a five step coordinating process
- List three characteristics of best practice coordination that account for the status of model information
- Develop the basis for a BIM Execution Plan for design and shop drawing levels of coordination that include:
 - BIM application tools
 - Interoperability and file formats
 - Model content responsibility
 - Time schedule
 - Naming conventions for files and attributes in models
 - Methods of file sharing, collaboration and coordination
 - Technical considerations

BIM TECHNOLOGY for Mechanical Contractors

Monday & Tuesday, October 11–12, 2010 ■ Chicago, IL
Sheraton Gateway Suites ■ O'Hare in Rosemont, IL



Attendee Information

Name _____ Badge Name _____
Company Name _____ Title _____
Street Address _____
City _____ State _____ Zip _____
Registrant's Email _____ Work Phone _____ Fax _____
Email address to send confirmation: _____

Registration Fee—Registration open to MCAA Members. The registration fee for this course is **\$895**.

MCAA Cancellation & Refund Policy

If it becomes necessary to cancel your participation in one or both courses, please send **written** notification to MCAA as soon as possible. Please note the following refund information:

- Substitutions are always accepted.
- You will receive a full registration refund if you cancel by **October 1, 2010**.

Check (payable to MCAA) **AMEX** **MC** **VISA**

Account Number _____ Expiration _____
Cardholder Name _____ Billing Zip Code _____
Signature _____

Hotel Registration—Sheraton Gateway Suites, O'Hare in Rosemont, IL

Room Type	Room Rate	King Bed	2 Beds
Standard Single/Double	\$ 119		

Arrival Date _____ Departure Date _____
Total Number of People in Room _____ Sharing with _____
Do you have any special hotel requirements? _____

Please contact MCAA Convention Department at 1-800-556-3653 if you require special accommodations to fully participate in this event.

Rooms at the Group Rate Are Subject to Availability

Reservations are made on a first come, first served, space available basis upon payment of meeting registration fee. A deposit in the amount of the **one night's** daily rate is necessary to confirm each reservation. **Cancellations within 24 hours of arrival** may result in forfeiture of deposit. Hotel rates are subject to state and local taxes. The credit card provided below will be used solely to guarantee your reservation.

Check (payable to the Sheraton) **AMEX** **MC** **VISA**

Account Number _____ Expiration _____
Cardholder Name _____ Billing Zip Code _____
Signature _____

Fax your completed registration form to: (301) 869-3520.

If you have questions, please contact the MCAA Meetings Department:

- By phone: (301) 869-5800
- By e-mail: eventregistration@mcaa.org
- By fax: (301) 869-3520
- By mail: Meeting Dept., 1385 Piccard Drive, Rockville, MD 20850

Our business hours are 9:00 am–5:00 pm Eastern Time Monday through Friday.

For Office Use

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