

Unit 2: BIM TECHNOLOGY

An AGC Construction Learning Tool

Your Resource for Successful BIM Implementation

Building Information Modeling (BIM) is one of the most exciting developments in the construction industry and is changing the way projects are built.

BIM Technology *Now Available*

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

Session 2: Estimating/QTO, Scheduling, and Coordination

Date: April 1-2, 2010
Location/Time: Concord, Ca 8:00am - 4:00pm
Price: Members \$350 - Non Members \$495

For more information
www.agc.org/BIMEP
email | famularor@agc-ca.org

BIM Technology

BIM Technology is a two-day course designed specifically for construction professionals who want to establish a solid process for selecting BIM tools and investigate the significant impact models have for improving estimating, scheduling, and coordinating. The goal of the *BIM Technology* course is to help participants become BIM champions within their organizations.

Participants will benefit in the following ways:

- ☑ 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 bring projects in on time and on budget.
- ☑ Track how models are maintained, the implications of team member roles, file format requirements, interoperability, and technology limitations.
- ☑ Determine how visualizing 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.

Become a BIM Champion...

Those who will benefit include contractors, building developers, owners, managers, supervisors, architects, engineers, and construction product manufacturers. Students in the architecture, engineering, and construction industry will also greatly benefit from this training.



Note: This is the second course in the AGC BIM Education Program. *Unit 1: BIM 101--An Introduction to Building Information Modeling* is a recommended prerequisite for this course.



About AGC | The Associated General Contractors of America (AGC) is the leading national construction trade association representing all facets of commercial construction for both public and private entities including building, heavy, highway, and municipal projects. AGC is the largest and oldest national construction trade association, representing more than 33,000 firms, including 7,500 of America's leading general contractors, and over 12,500 specialty-contracting firms through a nationwide network of chapters. Visit the AGC Web site at www.agc.org.

BIM Technology 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

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
- Define bi-directional linking and identify tools with this functionality
- Define how 3D models are maintained with current information

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

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Breakfast and lunch will be included both days