

INSTRUCTOR REQUIREMENTS AGC BIM EDUCATION PROGRAM

UNIT 1: BIM 101—AN INTRODUCTION TO BUILDING INFORMATION MODELING

BIM Education Program Overview

The BIM Education Program was developed in conjunction with leading BIM practitioners, technology firms and educators. The program is designed to successfully educate construction professionals at all experience levels on a range of topics they would encounter implementing and using a BIM.

The resources that make up the BIM Education Program have all been released. The components and release dates of the curriculum are:

- Unit 1: BIM 101—An Introduction to Building Information Modeling
 - Released April 2009
- Unit 2: BIM Technology
 - Released January 2010
- Unit 3: Contract Negotiation and Risk Allocation
 - Released November 2010
- Unit 4: Process, Adoption, and Integration
 - Released December 2010

Overview of BIM 101

BIM 101—An Introduction to Building Information Modeling is an eight-hour, instructor-led course that discusses how BIM provides contractors with the benefit of improved visualization of a construction project through the use of a 3D virtual model, establishes a base of knowledge of BIM terminology and looks at the benefits of BIM and case studies showing implementation before encouraging participants to study how they could implement BIM.

The course provides the foundation for a participatory, team-exercise environment that balances discussion and team assignments within an instructor-led format. The course consists of four sessions:

- Session 1: What is BIM?
- Session 2: BIM Visualization Uses and Spatial Coordination
- Session 3: BIM Scheduling, Estimating and Facility Management
- Session 4: Getting Started with BIM

AGC of America relies on qualified instructors with knowledge of the industry, BIM, contract documents, construction law, and the course materials to help fulfill the overall learning objectives of the course which include:

Course Learning Objectives

Following successful completion of this course, participants will be able to:

- Recognize the importance of BIM
- Define common BIM terminology
- Discuss how BIM can be used as a communication and collaboration tool

- Explain the benefits of BIM
- Compare examples of successful BIM usage
- Discuss issues associated with starting BIM
- Create a BIM Action Plan

Session Learning Objectives

Following successful completion of Session 1, participants will be able to:

- Describe the evolution of BIM, past, present, and future
- Recognize the current definitions and terminology of BIM and BIM-related components
- Identify the needs of BIM and reasons why
- Identify who are the driving forces in BIM
- Discuss the benefits of BIM to everyone involved

Following successful completion of this Session 2, participants will be able to:

- Recognize the basics of the modeling process and modeling management protocol
- Recognize BIM uses in visualization, value analysis, and scope clarification
- Explain the advantages of BIM in regards to spatial coordination

Following successful completion of Session 3, participants will be able to:

- Recognize the advantages of BIM in scheduling (4D BIM) and estimating (5D BIM)
- Recognize how companies are using BIM in facility management
- Discuss the benefits to and lessons learned from companies using BIM

Following successful completion of Session 4, participants will be able to:

- Identify challenges for getting started with BIM
- Demonstrate a basic understanding of BIM tools
- Develop a BIM Action Plan
- Use BIM resources provided to further understanding of more advanced BIM concepts and practice

Minimum Instructor Qualifications

AGC of America has established the following minimum BIM and construction-related experience requirements for primary instructors. Please check the boxes indicated below to note that you have complied with each requirement.

Foundation of BIM

- BIM implementation experience on several projects as a construction professional.
- An understanding of BIM concepts and terminology including roles and responsibilities of project team members and the benefits of BIM for the construction industry.
- An understanding of BIM visualization uses and the mechanics of spatial coordination.
- Knowledge of BIM use in scheduling, estimating and facility management.
- Experience initiating BIM within a construction firm, as course participants will likely be faced with this challenge.

Teaching and Facilitation Skills

In addition, excellent communication and listening skills with individuals from varied backgrounds are required, including the ability to paraphrase and summarize lessons and participant discussions. Facilitators must:

- Be skilled with leading class activities and ensuring that learners actively engage with course content and activities.
- Encourage everyone's participation in the discussions keeping the group focused and on track without dominating discussion and group processes.
- Expect to spend between 16 to 24 hours preparing and familiarizing themselves with the materials and teaching approach.
- Maintain a positive attitude and professional approach to the presentation of course material representing the industry.

Proficiency with Course Materials

Please check the boxes indicated below to note that you have complied with each requirement.

- AGC of America offers several resources to instructors in order to help enhance training results. The *BIM 101* Instructor's Guide and accompanying CD contains guide sheets for the instructor, PowerPoint slides and notes, video examples of models and a copy of the Participant's Manual. **Instructors must purchase/receive and review a copy of the Instructor's Guide for the course prior to being approved to facilitate the course.**
- Each participant must have a copy of the *BIM 101* Participant's Manual during the course.
- Instructors should be well-versed in the contents of the course materials, knowledgeable of the course format and committed to helping the attendees achieve the learning objectives for the course. The course materials provide a minimum of information for the instructor to deliver. AGC of America welcomes and encourages instructors to add personal experience, case studies, examples, exercises and visual aids to the course delivery.
- Instructors should be familiar with the subjects covered in all BIM Education Program courses to avoid unnecessary repetition of the course material. This can be achieved by attending the programs as a participant, facilitating them, or purchasing course materials for self-study.
 - To familiarize myself with *BIM 101* I:
 - Attended a *BIM 101* course
 - Facilitated *BIM 101*
 - Purchased and reviewed the Instructor's Guide (containing the Participant's Manual)
 - To familiarize myself with *BIM Technology I*:
 - Attended a *BIM Technology* course
 - Facilitated *BIM Technology*
 - Purchased and reviewed the Instructor's Guide
 - Purchased and reviewed the Participant's Manual
 - To familiarize myself with *BIM Contract Negotiation and Risk Allocation I*:
 - Attended a *BIM Contract Negotiation and Risk Allocation* course
 - Facilitated *BIM Contract Negotiation and Risk Allocation*
 - Purchased and reviewed the Instructor's Guide
 - Purchased and reviewed the Participant's Manual
 - To familiarize myself with *BIM Process, Adoption and Integration I*:
 - Attended a *BIM Process, Adoption and Integration* course
 - Facilitated *BIM Process, Adoption and Integration*
 - Purchased and reviewed the Instructor's Guide
 - Purchased and reviewed the Participant's Manual
- The AGC of America curriculum staff can hold individual conference calls with instructors to provide additional insight and direction, as needed, to ensure consistent and quality delivery of the course.

