



BUILDING INFORMATION MODELING

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The highly interactive Building Information Modeling (BIM) Education Program provides 32 hours of instruction and training to get construction industry professionals at all levels ready to take advantage of the benefits of BIM.

Unit 1 | An Introduction to Building Information Modeling

An Introduction to Building Information Modeling is the first of four units that comprise AGC's Building Information Modeling Education Program. This facilitator-led unit provides a complete overview of BIM concepts, terminology, and practice and an introduction to important uses and concepts to help you understand how BIM is changing the construction process. This 8-hour unit is divided into four sessions:

Session 1 focuses on explaining common terms and answering the question, "What is BIM?" This session also addresses why BIM should be used on construction projects and describes the potential benefits that can be realized by designers, contractors, subcontractors, vendors, and owners when BIM is used.

Session 2 examines a company's process of incorporating BIM into its business practices. This session looks at how technology is helping to facilitate the elimination of work silos, describes the advantages of the BIM process, and shares some of the workflow processes associated with BIM.

Session 3 introduces some of the more advanced uses of BIM, following the typical progression a company goes through in its BIM implementation plan. This session examines case studies of 4D and 5D BIM and describes new topics impacting BIM today.

Session 4 is where all the BIM concepts come together, and you start thinking about the next steps. This session describes the four options for BIM implementation. Attendees will develop a BIM assessment survey they can take back to their organization.

Course Learning Objectives

Following this unit, 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.
- Explain the federated model process.
- Compare examples of successful BIM usage.
- Discuss issues associated with starting BIM.
- Create a company BIM assessment.

Unit 2 | BIM Technology

BIM Technology is the second of four units that comprise AGC's Building Information Modeling Education Program. This facilitator-led unit provides a great deal of information about the types of BIM tools and their functions to enable you to make better purchasing decisions. The course is divided into four sessions:

Session 1 focuses on giving participants an overview of BIM technologies and the definitions used throughout the course. It looks at tool classes and functions, which are instrumental in understanding the primary use for any application.

Session 2 takes a comprehensive look at a range of products organized in a logical workflow for a BIM project. This is the core of the course, and there is much ground to cover. The focus is that tools need to fit the process, not the other way around.

Session 3 defines a four-step process of software selection that participants can use as they start purchasing BIM software applications.

Session 4 explores some of the more granular details of BIM. The session briefly explores the topic of file formats from the perspective of open versus proprietary, then from the perspective of interoperability.

Course Learning Objectives

Following this course, participants will be able to:

- Explain the phased structure of a BIM project.
- Describe the classes of BIM tools.
- List common BIM applications.
- Describe how the use of BIM tools needs to be planned and organized.
- Explain the need to embed tools into the process.
- Develop a process for selecting relevant BIM tools

Unit 3 | BIM Project Execution Planning

BIM Project Execution Planning is the third of four units that comprise AGC's Building Information Modeling Education Program. This facilitator-led course is designed as a mix of lectures, facilitated discussion, and activities. Use cases to provide examples to help you understand session concepts. The unit is divided into four sessions:

Session 1 introduces participants to teaming dynamics that are most desired, if not required, for a successful project. During this session, you will learn what qualities are necessary for a successful project team and the importance of establishing an environment of shared vision and accountability for each team member, to each other. We will also look at the impact of different size groups and how to adapt without compromising the project goals.

Session 2 examines some of the more basic BIM-related legal concepts. We will focus on providing a fairly high-level perspective on various legal topics that attendees should know. These are general concepts that are evolving, along with BIM. We'll look at risk, intellectual property, and standard of care. These are good examples of real-world concerns for everyone on the project. We will also examine the different delivery methods for construction projects, with time to discuss trends and benefits of particular models.

Session 3 is about gaining a solid understanding of the BIM Project Execution Plan (BIM PXP). We will examine the fundamental questions of what it is, why it is necessary, and how you can use the plan for any size project(s). We will spend much time understanding why this is an important ingredient for a successful project. We will also look at some of the plans that are currently in use today.

Session 4 is your time to participate in a BIM project team activity. You will be part of a team with a defined role and apply what you have learned in the course. The day will end with this activity with the goal that it will reinforce the information that was shared with you during the previous three sessions.

Course Learning Objectives

Following this course, participants will be able to:

- Identify the key attributes of a successful team.
- Explain contract liability and model usage.
- Identify BIM delivery methods.
- Understand the meaning and usage of the Level of Development (LOD).
- Explain the key components of a BIM Project Execution Plan.
- Understand and explain the benefits of a synchronized project workflow.

Unit 4 | BIM Adoption, Implementation and ROI

BIM adoption, Implementation, and ROI are the final of the four units that comprise AGC's Building Information Modeling Education Program. This facilitator-led course includes lectures, facilitated discussions, activities, and case studies. This 8-hour unit reviews several real-world case studies to analyze decision-making' cost, benefits, and impacts.

Session 1 of this unit introduces the overall course structure and describes why this unit is so relevant today. This session defines key terms and sets the stage for the rest of the course, reinforcing the practical takeaways you will learn along the way.

Session 2 examines basic BIM implementation at the project level. This session focuses on establishing and executing the BIM process, facilitating its adoption, and achieving integration on a single project.

Session 3 explores how companies (whether single- or multi-office) can successfully execute the BIM process on multiple projects simultaneously. We will also explore differences in the adoption or integration of the process in this broader context.

Course Learning Objectives

Following this course, participants will be able to:

- Define adoption, implementation, and return on investment.
- Describe why BIM is a disruptive practice today.
- Identify reactive and proactive BIM outcomes.
- Evaluate and select process adoption options.
- Describe the roles and responsibilities of practitioners.
- Identify consistent factors influencing BIM ROI.
- Communicate the BIM process.
- Outline a process for BIM adoption and implementation