BIM and Digital Construction Training Course

Professional Development Training Course Outline

Category	Construction Institute	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

BIM and Digital Construction Training Course is designed to equip engineers, architects, project managers, contractors, quantity surveyors, facility managers, and construction professionals with cutting-edge skills to enable collaboration and implantation of BIM workflows. The course aligns with international BIM standards including ISO 19650, enabling participants to efficiently manage design coordination, project delivery, construction planning, lifecycle asset management, and digital transformation initiatives across infrastructure and building projects.

As the global construction industry rapidly adopts Industry 4.0 technologies, organizations increasingly require professionals skilled in Digital Project Delivery, Virtual Design & Construction (VDC), BIM Coordination, GIS Integration, Reality Capture, Laser Scanning, IoT-enabled Construction, Digital Twins, Smart Cities, and Construction Analytics. This training provides practical experience through real-world case studies, collaborative workshops, software demonstrations, and project-based learning that empowers participants to improve productivity, reduce project risks, enhance collaboration, optimize costs, and successfully implement BIM workflows across the complete project lifecycle.

Programme Curriculum

BIM and Digital Construction Training Course

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Course Duration

5 days

Course Objectives

Upon completion of this course, participants will be able to:

1. Understand Building Information Modeling (BIM) principles and digital transformation strategies.
2. Implement ISO 19650 BIM Standards for information management.
3. Develop integrated Digital Construction Workflows across project phases.
4. Create intelligent BIM models for multidisciplinary collaboration.
5. Apply 4D BIM Scheduling for construction planning and sequencing.
6. Implement 5D BIM Cost Estimation and quantity management.
7. Utilize Digital Twin Technology for asset lifecycle management.
8. Integrate Artificial Intelligence (AI) into construction planning and decision-making.
9. Implement Cloud-Based BIM Collaboration using Common Data Environments (CDE).
10. Apply Laser Scanning, Reality Capture, and Scan-to-BIM technologies.
11. Perform BIM coordination and clash detection to improve project quality.
12. Implement sustainable construction practices using Green BIM and digital analytics.
13. Develop BIM execution plans (BEP) and digital project delivery strategies for smart construction.

Target Audience

1. Architects
2. Civil Engineers
3. Structural Engineers
4. MEP Engineers
5. Project Managers
6. Quantity Surveyors
7. Construction Managers
8. Facility Managers and BIM Professionals

Course Modules

Module 1: Introduction to BIM & Digital Construction

- Fundamentals of BIM
- Digital Construction Ecosystem
- BIM Dimensions (3D–7D)
- Industry 4.0 in Construction
- International BIM Standards (ISO 19650)
- **Case Study:** Digital transformation implementation in a high-rise commercial development.

Module 2: BIM Modeling & Information Management

- BIM Authoring Concepts
- Object-Based Modeling
- BIM Data Standards
- Model Development Levels (LOD)
- Information Exchange Processes
- **Case Study:** BIM implementation for a hospital construction project.

Module 3: BIM Collaboration & Common Data Environment (CDE)

- Collaborative BIM Workflow
- Common Data Environment (CDE)
- BIM Execution Plan (BEP)
- Design Coordination
- Document Management
- **Case Study:** Multi-disciplinary BIM collaboration for an airport expansion project.

Module 4: 4D BIM Planning & Construction Scheduling

- Construction Sequencing
- Time-Based BIM Simulation
- Project Scheduling Integration
- Resource Planning
- Construction Monitoring
- **Case Study:** 4D BIM implementation for a metro rail construction project.

Module 5: 5D BIM Cost Management

- Quantity Take-Off
- Cost Estimation
- Budget Planning
- Cost Control
- Financial Reporting
- **Case Study:** Cost optimization using 5D BIM in a residential township project.

Module 6: Digital Twin, AI & Smart Construction

- Digital Twin Concepts
- Artificial Intelligence Applications
- IoT in Construction
- Predictive Maintenance
- Smart Asset Management
- **Case Study:** Digital Twin implementation for a smart city infrastructure project.

Module 7: Reality Capture & Advanced Digital Technologies

- Laser Scanning
- Drone Surveying
- Reality Capture
- Scan-to-BIM Workflow
- GIS and BIM Integration

- **Case Study:** Heritage building restoration using laser scanning and Scan-to-BIM.

Module 8: BIM Project Implementation & Future Trends

- BIM Implementation Strategy
- Organizational BIM Adoption
- Digital Project Delivery
- Sustainability and Green BIM
- Emerging Technologies in Construction
- **Case Study:** Enterprise-wide BIM implementation for a multinational construction company.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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