BIM Coordination & Clash Detection Training Course

Professional Development Training Course Outline

Category	Architectural Engineering	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Building Information Modeling (BIM) Coordination & Clash Detection has become a mission-critical discipline in modern construction, architecture, and engineering workflows. With the rapid shift toward digital transformation, smart construction, and data-driven project delivery, BIM enables stakeholders to collaborate in a centralized 3D/4D/5D environment, ensuring accuracy, efficiency, and cost optimization. Clash detection, a core BIM function, helps identify and resolve design conflicts, spatial interferences, and constructability issues before they reach the site saving time, reducing rework, and improving project outcomes. BIM Coordination & Clash Detection Training Course professionals with cutting-edge tools, real-time coordination strategies, and industry best practices to deliver high-performance projects.

This comprehensive training program focuses on advanced BIM coordination workflows, multidisciplinary collaboration, Navisworks-based clash detection, model integration, and automation techniques. Participants will gain hands-on experience with federated models, issue tracking, BIM standards, and digital construction technologies, aligning with global standards such as ISO 19650. By integrating AI-driven BIM workflows, cloud collaboration platforms, and digital twins, this course prepares learners to thrive in the future of construction technology, making them highly competitive in a rapidly evolving industry.

Programme Curriculum

BIM Coordination & Clash Detection Training Course

Introduction

Building Information Modeling (BIM) Coordination & Clash Detection has become a mission-critical discipline in modern construction, architecture, and engineering workflows. With the rapid shift toward digital transformation, smart construction, and data-driven project delivery, BIM enables stakeholders to collaborate in a centralized

3D/4D/5D environment, ensuring accuracy, efficiency, and cost optimization. Clash detection, a core BIM function, helps identify and resolve design conflicts, spatial interferences, and constructability issues before they reach the site saving time, reducing rework, and improving project outcomes. BIM Coordination & Clash Detection Training Course provide professionals with cutting-edge tools, real-time coordination strategies, and industry best practices to deliver high-performance projects.

This comprehensive training program focuses on advanced BIM coordination workflows, multidisciplinary collaboration, Navisworks-based clash detection, model integration, and automation techniques. Participants will gain hands-on experience with federated models, issue tracking, BIM standards, and digital construction technologies, aligning with global standards such as ISO 19650. By integrating AI-driven BIM workflows, cloud collaboration platforms, and digital twins, this course prepares learners to thrive in the future of construction technology, making them highly competitive in a rapidly evolving industry.

Course Duration

10 days

Course Objectives

1. Master BIM Coordination workflows for multidisciplinary collaboration
2. Perform Clash Detection & Resolution using advanced tools
3. Understand ISO 19650 BIM Standards & Compliance
4. Develop skills in Navisworks Manage & Model Federation
5. Implement 4D Construction Simulation & Scheduling Integration
6. Apply 5D BIM Cost Estimation & Quantity Takeoff
7. Utilize Cloud-Based BIM Collaboration Platforms
8. Learn Digital Twin Integration & Smart Infrastructure Concepts
9. Optimize Construction Project Lifecycle Management
10. Automate processes using BIM Automation & Dynamo Scripts
11. Enhance Data Interoperability & IFC Standards Knowledge
12. Manage BIM Execution Plans (BEP) & Coordination Meetings
13. Explore AI in Construction & Predictive Clash Detection

Target Audience

1. BIM Engineers & BIM Coordinators
2. Architects & Urban Designers
3. Civil & Structural Engineers
4. MEP (Mechanical, Electrical, Plumbing) Engineers
5. Construction Project Managers
6. Quantity Surveyors & Cost Engineers
7. Facility Management Professionals
8. Engineering & Architecture Students

Course Modules

Module 1: Introduction to BIM & Digital Construction

- BIM fundamentals & lifecycle
- Levels of Development (LOD)
- BIM dimensions (3D–7D)

- Industry trends & digital transformation
- **Case Study:** BIM adoption in large-scale infrastructure projects

Module 2: BIM Standards & ISO 19650

- Global BIM standards
- ISO 19650 framework
- Data management principles
- Naming conventions
- **Case Study:** Standard implementation in international projects

Module 3: BIM Coordination Fundamentals

- Coordination workflows
- Stakeholder collaboration
- Model integration basics
- Coordination meetings
- **Case Study:** Multi-disciplinary coordination success story

Module 4: Navisworks Essentials

- Interface & navigation
- Model aggregation
- File formats (NWC, NWD)
- Viewpoints & walkthroughs
- **Case Study:** Model review for commercial building

Module 5: Clash Detection Basics

- Types of clashes (hard, soft, workflow)
- Clash rules setup
- Tolerance levels
- Clash grouping
- **Case Study:** Identifying structural vs MEP conflicts

Module 6: Advanced Clash Detection

- Clash matrix creation
- Automated clash tests
- Clash prioritization
- Reporting techniques
- **Case Study:** High-rise building coordination

Module 7: Clash Resolution Strategies

- Issue tracking workflows
- Coordination communication
- Design modifications
- Resolution documentation
- **Case Study:** Reducing rework through early detection

Module 8: 4D BIM Scheduling

- Time integration with models
- Construction sequencing
- Simulation tools
- Timeline analysis
- **Case Study:** Infrastructure project scheduling

Module 9: 5D BIM Cost Management

- Quantity takeoff
- Cost estimation integration
- Budget tracking
- Cost optimization
- **Case Study:** Cost savings using BIM

Module 10: BIM Collaboration Tools

- Cloud platforms (BIM 360, ACC)
- Real-time collaboration
- Version control
- Issue tracking
- **Case Study:** Remote team coordination

Module 11: Data Interoperability & IFC

- Open BIM concepts
- IFC file structure
- Data exchange challenges
- Software integration
- **Case Study:** Cross-platform BIM coordination

Module 12: BIM Automation & Dynamo

- Automation basics
- Dynamo scripting
- Workflow optimization
- Data extraction
- **Case Study:** Automating clash reports

Module 13: Digital Twins & Smart Construction

- Digital twin concepts
- IoT integration
- Real-time monitoring
- Smart city applications
- **Case Study:** Smart building lifecycle management

Module 14: BIM Execution Plan (BEP)

- BEP structure
- Roles & responsibilities
- Deliverables planning
- Quality control

- **Case Study:** BEP for mega projects

Module 15: Capstone Project

- End-to-end BIM coordination
- Clash detection & reporting
- Presentation of results
- Peer review
- **Case Study:** Real-world project simulation

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	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

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

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com