Construction Delay Analysis 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

Construction Delay Analysis Training Course is designed to equip project managers, planning engineers, quantity surveyors, claims consultants, contract administrators, and construction professionals with advanced knowledge of delay investigation, forensic schedule analysis, claims management, and dispute resolution. In today's competitive construction industry, effective time impact analysis (TIA), extension of time (EOT) assessment, critical path method (CPM), earned value management (EVM), and schedule risk analysis are essential skills for minimizing project delays and improving project delivery performance. This course provides practical expertise in identifying delay causes, evaluating contractual entitlements, preparing defensible delay claims, and applying global best practices aligned with FIDIC, NEC, AACE International, and forensic delay analysis standards.

The course focuses on real-world applications of construction project controls, digital scheduling tools, delay quantification techniques, and advanced claims strategies through industry-based examples and case studies. Participants will learn how to analyze complex delay events such as design changes, variations, procurement issues, contractor delays, unforeseen conditions, acceleration, disruption, and force majeure events. With increasing demand for data-driven project management, AI-enabled construction analytics, BIM integration, and proactive risk mitigation, this training empowers professionals to develop accurate delay assessments, strengthen contractual positions, and successfully manage time-related disputes in major infrastructure and building projects.

Programme Curriculum

Construction Delay Analysis Training Course

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Course Objectives

1. Understand the fundamentals of construction delay analysis and forensic schedule investigation.
2. Apply advanced Critical Path Method (CPM) techniques for delay identification.
3. Develop expertise in Extension of Time (EOT) claims preparation and evaluation.
4. Perform Time Impact Analysis (TIA) using industry-approved methodologies.
5. Analyze project delays using Windows Analysis, As-Planned vs As-Built Analysis, and Impacted As-Planned methods.
6. Identify delay responsibility through contractual risk allocation and entitlement assessment.
7. Prepare professional delay reports, claim narratives, and expert documentation.
8. Improve project performance through schedule risk management and predictive analytics.
9. Utilize advanced Primavera P6 and Microsoft Project delay analysis techniques.
10. Understand the role of AI, digital twins, BIM, and automation in delay prediction.
11. Manage construction disputes through effective claims management and negotiation strategies.
12. Apply global standards including AACE Recommended Practices and FIDIC contract principles.
13. Develop skills for forensic delay analysis, arbitration support, and construction dispute resolution.

Target Audience

1. Construction Project Managers
2. Planning and Scheduling Engineers
3. Project Controls Professionals
4. Quantity Surveyors and Cost Engineers
5. Contract Administrators
6. Claims Consultants and Delay Analysts
7. Civil Engineers and Construction Managers
8. Legal Professionals involved in Construction Disputes

Course Modules

Module 1: Fundamentals of Construction Delay Analysis

- Introduction to construction delays, disruption, and acceleration claims
- Types of delays-excusable, compensable, concurrent, and critical delays
- Delay causes in building, infrastructure, and engineering projects
- Principles of forensic delay analysis and project controls
- Industry standards
- Case Study: Analysis of delay causes in a high-rise commercial building project affected by design changes and approval delays.

Module 2: Construction Scheduling and Critical Path Analysis

- Developing effective baseline schedules and CPM networks
- Identifying critical activities and float management
- Schedule quality assessment and delay detection
- Progress measurement and update analysis
- Practical use of Primavera P6 and Microsoft Project
- Case Study: Evaluation of critical path movement in a highway construction project experiencing contractor productivity issues.

Module 3: Extension of Time (EOT) Claims Management

- Principles of EOT entitlement assessment
- Contractual requirements for delay notifications
- Preparation of EOT submissions and supporting evidence
- Delay event documentation and claim substantiation
- Managing employer and contractor responsibilities
- **Case Study:** Preparation of an EOT claim for a hospital project delayed due to late design information.

Module 4: Advanced Delay Analysis Techniques

- Time Impact Analysis (TIA) methodology
- Windows Analysis approach
- As-Planned vs As-Built comparison
- Impacted As-Planned and Collapsed As-Built techniques
- Choosing appropriate forensic analysis methods
- **Case Study:** Forensic review of a delayed airport terminal project using Windows Analysis.

Module 5: Delay Claims, Contracts, and Dispute Resolution

- Understanding FIDIC and NEC delay provisions
- Contract interpretation and risk allocation
- Delay damages and liquidated damages analysis
- Preparing expert delay reports
- Arbitration and dispute board support
- **Case Study:** Analysis of a construction dispute involving contractor delay damages and employer responsibility.

Module 6: Project Controls, Risk Management, and Delay Prevention

- Integrating risk management with schedule control
- Schedule risk analysis and Monte Carlo simulation

- Early warning systems and predictive delay monitoring
- Earned Value Management (EVM) integration
- Developing proactive delay mitigation strategies
- **Case Study:** Risk-based delay forecasting for a large infrastructure development project.

Module 7: Digital Transformation in Delay Analysis

- BIM-based schedule visualization and 4D construction planning
- AI and machine learning applications in delay prediction
- Digital twins for project monitoring
- Data analytics dashboards for project controls
- Automation of schedule review processes
- **Case Study:** Using BIM 4D simulation to identify construction sequencing conflicts in a residential development.

Module 8: Practical Delay Analysis Workshop and Final Case Study

- Complete delay investigation workflow
- Reviewing project records and schedule data
- Preparing professional delay analysis reports
- Presenting findings for claims negotiations
- Practical industry simulation exercise
- **Case Study:** End-to-end forensic delay analysis of a delayed mega construction project involving multiple delay events.

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:

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