Automation in Project Execution Training Course

Professional Development Training Course Outline

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

Course Introduction

In today’s fast-evolving construction and project management landscape, Automation in Project Execution has become a critical driver of efficiency, accuracy, and cost optimization. Organizations are rapidly adopting AI-powered project management tools, RPA (Robotic Process Automation), BIM integration, and data-driven scheduling systems to streamline workflows and eliminate manual inefficiencies. Automation in Project Execution Training Course is designed to equip professionals with cutting-edge knowledge and practical skills in digital project execution, intelligent automation, and smart project controls, enabling them to deliver projects faster, safer, and with higher precision.

The course focuses on transforming traditional project execution methods into fully automated, data-centric, and predictive management systems. Participants will learn how to leverage Primavera P6, Microsoft Project automation, BIM 360, Power BI dashboards, digital twins, and workflow automation tools to improve decision-making and project outcomes. By integrating AI, machine learning insights, cloud collaboration, and real-time analytics, professionals will be empowered to lead next-generation projects across construction, engineering, IT, and infrastructure domains.

Programme Curriculum

Automation in Project Execution Training Course

Introduction

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Course Duration

5 days

Course Objectives

1. Master AI-driven project execution automation frameworks
2. Implement RPA (Robotic Process Automation) in project workflows
3. Optimize scheduling using Primavera P6 automation techniques
4. Integrate BIM (Building Information Modeling) in execution lifecycle
5. Develop real-time project tracking dashboards using Power BI
6. Apply predictive analytics for project risk management
7. Enhance productivity through workflow automation tools
8. Utilize digital twin technology for project simulation
9. Automate reporting using cloud-based project management systems
10. Improve resource allocation using AI optimization models
11. Streamline communication with collaborative digital platforms
12. Reduce delays using intelligent critical path automation
13. Enable data-driven decision-making in project execution

Target Audience

1. Project Managers & Construction Managers
2. Planning & Scheduling Engineers
3. Civil & Infrastructure Engineers
4. PMO (Project Management Office) Professionals
5. BIM Coordinators & Designers
6. IT & Digital Transformation Specialists
7. Consultants in Project Controls
8. Government & Infrastructure Development Officers

Course Modules

Module 1: Fundamentals of Project Automation

- Introduction to project automation concepts
- Evolution from manual to digital execution systems
- Key technologies: AI, RPA, BIM, IoT
- Benefits of automation in project lifecycle
- Automation maturity models

- **Case Study:** Transition of a traditional construction firm into a fully automated project execution system reducing delays by 35%.

Module 2: AI & Machine Learning in Project Management

- AI applications in project forecasting
- Machine learning for schedule prediction
- Automated decision-support systems
- Risk intelligence modeling
- AI-based productivity optimization
- **Case Study:** Infrastructure project using AI forecasting to prevent cost overruns by 20%.

Module 3: RPA in Project Workflows

- Introduction to Robotic Process Automation
- Automating documentation and approvals
- Workflow bots in project reporting
- Integration with ERP systems
- Error reduction through automation
- **Case Study:** RPA implementation in a large EPC company reducing reporting time by 60%.

Module 4: BIM Integration in Execution

- BIM lifecycle in project execution
- 4D & 5D BIM automation
- Clash detection and resolution automation
- Cloud-based BIM collaboration
- Integration with scheduling tools
- **Case Study:** High-rise building project achieving zero rework using BIM-based automation.

Module 5: Smart Scheduling with Primavera & MS Project

- Automated scheduling techniques
- Critical path automation
- Resource leveling optimization
- Integration with real-time data
- Delay prediction models
- **Case Study:** Road construction project improved delivery time by 25% using Primavera automation.

Module 6: Data Analytics & Dashboards

- Power BI for project visualization
- KPI automation in dashboards
- Real-time progress tracking
- Data integration from multiple tools
- Predictive analytics models
- **Case Study:** Mega infrastructure project using dashboards to improve stakeholder transparency.

Module 7: Digital Twins in Project Execution

- Concept of digital twin technology
- Simulation of project environments

- Real-time monitoring systems
- Performance optimization through twins
- Integration with IoT sensors
- **Case Study:** Smart city project using digital twin reducing operational inefficiencies by 40%.

Module 8: Cloud Collaboration & Workflow Automation

- Cloud-based project ecosystems
- Automated task assignment systems
- Collaboration tools integration
- Document control automation
- Mobile project management systems
- **Case Study:** Multinational project team improving collaboration efficiency by 50% using cloud automation.

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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