Advanced Logistics Analytics in Manufacturing Training Course

Professional Development Training Course Outline

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

Course Introduction

Advanced Logistics Analytics in Manufacturing is a high-impact training program designed to transform supply chain and production operations through data-driven intelligence. In today's Industry 4.0 ecosystem, manufacturers must leverage predictive analytics, real-time logistics optimization, AI-powered forecasting, and digital supply chain visibility to stay competitive. Advanced Logistics Analytics in Manufacturing Training Course equips professionals with advanced tools and methodologies to enhance operational efficiency, reduce logistics costs, and improve end-to-end manufacturing performance using cutting-edge analytics platforms.

With the rapid adoption of smart factories, IoT-enabled logistics systems, and cloud-based supply chain management, organizations are increasingly relying on advanced logistics analytics to optimize inventory flow, demand planning, warehouse automation, and transportation efficiency. This training empowers participants to harness big data, machine learning, and KPI-driven dashboards to build resilient, agile, and future-ready manufacturing logistics networks.

Programme Curriculum

Advanced Logistics Analytics in Manufacturing Training Course

Introduction

Advanced Logistics Analytics in Manufacturing is a high-impact training program designed to transform supply chain and production operations through data-driven intelligence. In today's Industry 4.0 ecosystem, manufacturers must leverage predictive analytics, real-time logistics optimization, AI-powered forecasting, and digital supply chain visibility to stay competitive. Advanced Logistics Analytics in Manufacturing Training Course equips professionals with advanced tools and methodologies to enhance operational efficiency, reduce logistics costs, and improve end-to-end manufacturing performance using cutting-edge analytics platforms.

With the rapid adoption of smart factories, IoT-enabled logistics systems, and cloud-based supply chain management, organizations are increasingly relying on advanced logistics analytics to optimize inventory flow, demand planning, warehouse automation, and transportation efficiency. This training empowers participants to harness big data, machine learning, and KPI-driven dashboards to build resilient, agile, and future-ready manufacturing logistics networks.

Course Duration

10 days

Course Objectives

1. Master Predictive Supply Chain Analytics
2. Implement AI-driven Logistics Optimization
3. Enhance Real-Time Inventory Visibility
4. Develop Demand Forecasting Models
5. Optimize Warehouse Automation Systems
6. Apply Big Data Analytics in Manufacturing
7. Improve Transportation Route Optimization
8. Build Digital Supply Chain Twins
9. Strengthen End-to-End Logistics Integration
10. Reduce costs using Lean Logistics Strategies
11. Enable IoT-based Supply Chain Monitoring
12. Improve KPI Dashboard Reporting Systems
13. Drive Smart Manufacturing Decision-Making

Target Audience

1. Supply Chain Managers
2. Logistics and Distribution Analysts
3. Manufacturing Operations Managers
4. Data Analysts in Manufacturing Sector
5. Inventory Control Specialists
6. Procurement and Planning Professionals
7. Industrial Engineers
8. ERP and SAP System Users

Course Modules

Module 1: Introduction to Logistics Analytics in Manufacturing

- Overview of logistics analytics ecosystem
- Role of data in modern manufacturing supply chains
- Key performance indicators (KPIs) in logistics
- Industry 4.0 integration overview
- Case Study: Automotive plant supply chain inefficiency analysis

Module 2: Supply Chain Data Management

- Data sources in manufacturing logistics
- Structured vs unstructured logistics data
- Data cleaning and preprocessing techniques

- ERP and SCM system integration
- Case Study: FMCG data consolidation failure resolution

Module 3: Predictive Demand Forecasting

- Time series forecasting models
- AI/ML forecasting techniques
- Seasonal demand analysis
- Error reduction strategies
- Case Study: Retail manufacturing demand spike prediction

Module 4: Inventory Optimization Analytics

- Inventory classification (ABC/XYZ analysis)
- Safety stock optimization
- Just-in-time inventory systems
- Stockout and overstock prevention
- Case Study: Electronics manufacturer inventory imbalance

Module 5: Warehouse Analytics & Automation

- Warehouse KPI tracking systems
- Layout optimization using analytics
- Robotics and automation integration
- Order fulfillment optimization
- Case Study: E-commerce warehouse efficiency transformation

Module 6: Transportation & Route Optimization

- Vehicle routing problem (VRP) basics
- Fuel and cost optimization models
- Real-time GPS tracking analytics
- Carrier performance analysis
- Case Study: Logistics company delivery delay reduction

Module 7: Big Data in Manufacturing Logistics

- Hadoop and cloud data systems overview
- Data lakes for manufacturing intelligence
- Streaming data analytics
- Scalability challenges
- Case Study: Smart factory big data integration

Module 8: IoT in Supply Chain Visibility

- IoT sensors in logistics tracking
- Real-time asset monitoring
- Condition-based tracking systems
- Predictive maintenance analytics
- Case Study: Cold chain pharmaceutical monitoring system

Module 9: KPI Dashboards & Visualization

- Power BI / Tableau dashboards
- Real-time logistics reporting
- KPI selection and tracking
- Data storytelling techniques
- Case Study: Manufacturing executive dashboard implementation

Module 10: Lean Logistics & Waste Reduction

- Lean principles in logistics
- Value stream mapping
- Waste identification techniques
- Continuous improvement cycles
- Case Study: Automotive lean logistics transformation

Module 11: ERP & SCM Analytics Integration

- SAP/Oracle SCM analytics overview
- Data synchronization challenges
- ERP reporting automation
- Workflow optimization
- Case Study: ERP-driven supply chain modernization

Module 12: Risk Management in Supply Chains

- Risk identification models
- Supply disruption analytics
- Scenario planning techniques
- Mitigation strategies
- Case Study: Global supply chain disruption handling

Module 13: Digital Twin in Manufacturing Logistics

- Concept of digital twin technology
- Simulation of supply chain systems
- Predictive scenario modeling
- Real-time synchronization
- Case Study: Smart factory digital twin deployment

Module 14: AI & Machine Learning Applications

- Machine learning in logistics forecasting
- Classification and clustering in supply chain
- Anomaly detection systems
- Automation in decision-making
- Case Study: AI-based logistics cost reduction system

Module 15: Capstone Project – End-to-End Logistics Optimization

- End-to-end supply chain analysis
- Real industry dataset project
- KPI improvement strategy design
- Cost optimization implementation

- Case Study: Complete manufacturing logistics redesign project

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

Start Date	End Date	Location	Price
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