Aircraft Parts Inventory Management Training Course

Professional Development Training Course Outline

Category	Aviation and Airport Management	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In the highly regulated and fast-paced aviation industry, Aircraft Parts Inventory Management is critical to ensuring operational efficiency, cost optimization, and regulatory compliance. Aircraft Parts Inventory Management Training Course equips aviation professionals, maintenance managers, and supply chain specialists with cutting-edge inventory control strategies, predictive maintenance forecasting, and real-time tracking solutions. Participants will learn how to minimize aircraft downtime, prevent stock shortages, and optimize parts lifecycle management while adhering to FAA, EASA, and other international aviation standards.
Through interactive learning, practical exercises, and real-world case studies, this course delivers the skills necessary to streamline MRO (Maintenance, Repair, and Overhaul) operations, reduce carrying costs, and enhance supply chain visibility. Whether you are looking to implement digital asset tracking, improve parts turnover rates, or ensure compliance with airworthiness directives, this program offers the tools and knowledge to make informed decisions that keep fleets airworthy and profitable.

Programme Curriculum

Aircraft Parts Inventory Management Training Course

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Course Objectives

1. Master aircraft parts classification and traceability requirements.
2. Implement lean inventory management techniques in aviation.
3. Apply demand forecasting to reduce parts shortages and excess stock.
4. Utilize predictive analytics for maintenance scheduling.
5. Optimize warehouse operations for aerospace parts.
6. Ensure regulatory compliance with aviation authorities.
7. Enhance supplier relationship management for timely parts delivery.
8. Apply barcode/RFID technology for real-time parts tracking.
9. Reduce inventory carrying costs without compromising safety.
10. Improve parts lifecycle management from procurement to disposal.
11. Develop emergency procurement strategies to avoid downtime.
12. Analyze cost-benefit impacts of inventory decisions.
13. Integrate ERP systems for seamless aviation inventory control.

Target Audience

1. Aircraft Maintenance Engineers
2. MRO Operations Managers
3. Aviation Supply Chain Specialists
4. Warehouse & Logistics Coordinators
5. Airline Procurement Officers
6. Aviation Compliance Officers
7. ERP System Administrators in Aviation
8. Aviation Business Owners & Entrepreneurs

Course Duration: 5 days

Course Modules

Module 1: Fundamentals of Aircraft Parts Inventory

- Understanding parts classification and ATA codes
- Regulatory compliance: FAA & EASA guidelines
- Critical vs. non-critical parts management
- Documentation and traceability requirements
- Common challenges in aviation inventory
- **Case Study:** Boeing 737 fleet inventory overhaul

Module 2: Demand Forecasting & Planning

- Forecasting methods for aviation parts
- Using historical consumption data
- Seasonal and operational demand factors
- Safety stock calculations

- Avoiding overstock and stockouts
- **Case Study:** Airbus A320 spare parts demand analysis

Module 3: Lean Inventory Techniques

- Just-in-time inventory for aviation
- Reducing waste in MRO supply chains
- Improving turnover rates
- Vendor-managed inventory (VMI)
- Kanban system for parts replenishment
- **Case Study:** Lean transformation in a regional airline

Module 4: Technology in Parts Management

- ERP system integration for inventory control
- RFID/barcode tracking solutions
- Cloud-based inventory systems
- Data analytics for inventory optimization
- Predictive maintenance tools
- **Case Study:** RFID adoption in a major airline?ÇÖs parts warehouse

Module 5: Warehouse & Logistics Optimization

- Warehouse layout design for aircraft parts
- Handling sensitive and hazardous materials
- Packaging and transportation standards
- Inventory auditing procedures
- Cost control in logistics
- **Case Study:** Logistics redesign in a global MRO provider

Module 6: Supplier & Vendor Management

- Selecting aviation-approved suppliers
- Contract negotiation strategies
- Building long-term supplier relationships
- Evaluating supplier performance
- Managing global supply chain risks
- **Case Study:** Supplier consolidation for fleet maintenance

Module 7: Regulatory & Compliance Management

- Understanding airworthiness directives (ADs)
- Compliance audits for inventory processes
- Managing documentation for inspections
- International regulations and cross-border parts movement
- Avoiding counterfeit parts in supply chains
- **Case Study:** Compliance gap analysis in a charter airline

Module 8: Cost & Performance Analysis

- Calculating carrying costs of aviation inventory
- Cost-benefit analysis for parts procurement

- Budgeting for MRO operations
- Measuring inventory KPIs
- ROI assessment for inventory technology
- **Case Study:** Cost reduction through ERP system integration

Training Methodology

- Interactive lectures with industry-specific examples
- Hands-on ERP and RFID technology demonstrations
- Group discussions on aviation best practices
- Real-world case study analysis and problem-solving
- Practical exercises simulating inventory management scenarios

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
21 Sep 2026	25 Sep 2026	Online	$1,000
21 Sep 2026	25 Sep 2026	Physical	$1,500
21 Sep 2026	25 Sep 2026	Physical	$0

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21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0
21 Sep 2026	25 Sep 2026	Physical	$0

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

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