Robotic Process Automation (RPA) 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

Robotic Process Automation (RPA) in Manufacturing is a transformative digital solution that leverages AI-powered automation, intelligent bots, workflow orchestration, and Industry 4.0 integration to streamline production processes, reduce operational costs, and eliminate repetitive manual tasks. As global manufacturing shifts toward smart factories, digital twins, predictive maintenance, and hyperautomation, RPA plays a critical role in enhancing efficiency, accuracy, and scalability across supply chain, production planning, inventory control, and quality assurance systems.

Robotic Process Automation (RPA) in Manufacturing Training Course provides a comprehensive, hands-on understanding of how RPA technologies such as UiPath, Automation Anywhere, and Blue Prism are deployed in manufacturing environments. Participants will learn how to design, develop, and implement automation workflows that integrate seamlessly with ERP systems like SAP and Oracle. The program emphasizes real-world applications including order processing automation, production scheduling, compliance reporting, and machine data integration, enabling organizations to achieve operational excellence and next-generation smart manufacturing capabilities.

Programme Curriculum

Robotic Process Automation (RPA) in Manufacturing Training Course

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Course Duration

10 days

Course Objectives

1. Understand fundamentals of Robotic Process Automation (RPA) in smart manufacturing
2. Explore Industry 4.0 automation frameworks and digital transformation strategies
3. Learn intelligent workflow automation for production systems
4. Implement AI-powered process optimization in manufacturing operations
5. Design bots for ERP integration (SAP, Oracle automation)
6. Apply RPA in supply chain automation and logistics optimization
7. Automate inventory management and warehouse operations
8. Develop solutions for predictive maintenance and machine monitoring
9. Use RPA for quality control and defect tracking automation
10. Enable real-time production reporting and analytics dashboards
11. Integrate RPA with IoT-enabled smart factory systems
12. Build scalable hyperautomation architectures
13. Master deployment of enterprise-grade RPA solutions

Target Audience

- Manufacturing Engineers & Process Engineers
- Automation and Control Engineers
- IT Professionals in Industrial Automation
- Supply Chain & Logistics Managers
- ERP/SAP Functional Consultants
- Quality Assurance & Compliance Officers
- Data Analysts in Manufacturing Sector
- Digital Transformation Leaders

Course Modules

Module 1: Introduction to RPA in Manufacturing

- Basics of RPA technology
- Evolution of smart factories
- Role of automation in Industry 4.0
- Benefits of RPA in production systems
- RPA architecture overview
- **Case Study:** Automotive plant reducing manual reporting time by 60% using RPA bots

Module 2: RPA Tools & Platforms

- UiPath, Blue Prism, Automation Anywhere overview
- Tool selection criteria
- Licensing and deployment models
- Bot development environment setup
- Comparative analysis
- **Case Study:** Electronics manufacturer selecting UiPath for scalable automation

Module 3: Manufacturing Process Mapping

- Process identification techniques
- Value stream mapping
- Bottleneck analysis
- Automation feasibility study
- Process documentation standards
- **Case Study:** Textile industry optimizing production flow using process mapping

Module 4: ERP Integration with RPA

- SAP automation fundamentals
- Oracle ERP integration
- Data synchronization methods
- API-based automation
- Middleware usage
- **Case Study:** FMCG company automating SAP-based purchase orders

Module 5: Supply Chain Automation

- Procurement automation
- Vendor management systems
- Logistics workflow automation
- Demand forecasting automation
- Shipment tracking bots
- **Case Study:** Retail manufacturing firm reducing delays in supply chain by 45%

Module 6: Inventory Management Automation

- Stock monitoring systems
- Automated reorder triggers
- Warehouse bot systems
- Barcode/RFID integration
- Real-time inventory updates
- **Case Study:** Pharmaceutical manufacturer eliminating stockouts using RPA

Module 7: Production Planning Automation

- Scheduling optimization
- Capacity planning bots
- Resource allocation automation
- Shift planning systems
- Production forecasting

- **Case Study:** Food processing plant improving production efficiency by 30%

Module 8: Quality Assurance Automation

- Defect detection systems
- Automated inspection logs
- Compliance tracking
- Reporting automation
- Quality dashboards
- **Case Study:** Automotive QA system reducing inspection time by half

Module 9: Predictive Maintenance with RPA

- IoT data integration
- Machine monitoring bots
- Failure prediction models
- Maintenance scheduling automation
- Alert systems
- **Case Study:** Heavy machinery plant avoiding downtime using predictive bots

Module 10: Finance & Accounting Automation

- Invoice processing bots
- Expense management automation
- Payroll automation
- Financial reconciliation
- Compliance reporting
- **Case Study:** Manufacturing firm reducing invoice processing errors by 80%

Module 11: HR Process Automation

- Employee onboarding workflows
- Attendance tracking automation
- Payroll processing bots
- Performance management systems
- Recruitment automation
- **Case Study:** Factory HR department reducing onboarding time by 70%

Module 12: Data Analytics & Reporting

- Automated reporting systems
- KPI dashboards
- Real-time analytics
- Data extraction bots
- Visualization tools integration
- **Case Study:** Chemical plant improving decision-making speed with dashboards

Module 13: IoT and Smart Factory Integration

- Sensor data automation
- Machine-to-bot communication
- Edge computing basics

- Real-time monitoring systems
- Smart factory architecture
- **Case Study:** Smart factory reducing energy consumption using IoT-RPA integration

Module 14: Advanced Hyperautomation

- AI + RPA convergence
- Process mining tools
- Cognitive automation
- End-to-end automation design
- Scalable architectures
- **Case Study:** Global manufacturer achieving end-to-end automation in supply chain

Module 15: RPA Deployment & Governance

- Bot deployment strategies
- Security frameworks
- Compliance and audit control
- Lifecycle management
- Performance optimization
- **Case Study:** Enterprise manufacturing company implementing secure RPA governance model

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

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