Training Course on Safety Data Analysis and Performance Measurement

Professional Development Training Course Outline

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

Course Introduction

In today's data-driven world, effective Safety Data Analysis and Performance Measurement are critical for organizations to achieve operational excellence and regulatory compliance. Training Course on Safety Data Analysis and Performance Measurement equips professionals with advanced tools and techniques to interpret, analyze, and report safety data, enabling data-driven decisions that reduce incidents and improve organizational safety culture. Whether you're in construction, manufacturing, healthcare, or transport, understanding how to evaluate safety metrics and performance indicators is a vital step toward strategic safety management.

The course uses real-world scenarios, interactive tools, and advanced statistical techniques to provide hands-on experience. Participants will learn how to harness predictive analytics, leading and lagging indicators, root cause analysis, and performance dashboards to foster a culture of continuous safety improvement. By the end of the training, participants will have the skills to turn raw safety data into actionable insights that drive accountability, transparency, and measurable results.

Programme Curriculum

Training Course on Safety Data Analysis and Performance Measurement

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Learning Objectives

1. Understand the fundamentals of safety data analysis using industry-standard tools.
2. Identify leading and lagging safety indicators for performance benchmarking.
3. Interpret OSHA and ISO safety metrics for organizational reporting.
4. Implement root cause analysis to address incident trends.
5. Utilize predictive analytics for proactive safety management.
6. Develop and monitor safety performance dashboards.
7. Analyze incident reports to determine behavioral patterns.
8. Apply statistical tools like Six Sigma in safety performance.
9. Improve safety decision-making through data visualization techniques.
10. Conduct comparative analysis using KPIs across departments.
11. Ensure compliance through effective safety audit tracking.
12. Leverage big data for predictive risk modeling.
13. Integrate safety data into strategic planning and resource allocation.

Target Audience

1. Health and Safety Managers
2. Safety Engineers and Supervisors
3. Operations Managers
4. Quality Assurance Professionals
5. Risk Analysts
6. Data Analysts in Safety & Compliance
7. Industrial Engineers
8. Environmental Health & Safety (EHS) Consultants

Course Duration: 10 days

Training Modules

Module 1: Introduction to Safety Data Analysis

- Importance of data in safety management
- Types of safety data: qualitative vs. quantitative
- Overview of data collection techniques
- Introduction to KPIs and safety metrics
- Regulatory frameworks influencing data collection
- **Case Study: Implementing data tracking in a manufacturing plant**

Module 2: Understanding Leading and Lagging Indicators

- Definitions and differences
- Examples across industries
- Strategic importance of indicators

- How to measure and monitor indicators
- Common pitfalls in indicator selection
- **Case Study: Using leading indicators to prevent workplace accidents**

Module 3: OSHA and ISO Reporting Standards

- OSHA data requirements and submission
- ISO 45001 performance reporting
- Common reporting errors
- Aligning organizational KPIs with standards
- Automating compliance reporting
- **Case Study: Bridging gaps between OSHA logs and ISO reports**

Module 4: Statistical Techniques in Safety Analysis

- Basics of descriptive and inferential statistics
- Confidence intervals and data reliability
- Histograms, control charts, Pareto analysis
- Correlation vs. causation in incident trends
- Applying Six Sigma to safety
- **Case Study: Reducing near-miss incidents using Pareto analysis**

Module 5: Root Cause Analysis Techniques

- What is RCA and when to use it
- Fishbone (Ishikawa) diagrams
- The 5 Whys approach
- Fault tree analysis basics
- Human factor consideration in RCA
- **Case Study: Identifying failure points in chemical handling incidents**

Module 6: Predictive Analytics in Safety

- Introduction to predictive modeling
- Use of historical data for forecasting
- Machine learning for incident prediction
- Setting thresholds and triggers
- Integrating predictive models into safety systems
- **Case Study: Predicting high-risk zones in a logistics facility**

Module 7: Creating Safety Performance Dashboards

- Selecting the right visualization tools
- Designing user-friendly interfaces
- Real-time vs. periodic dashboards
- Integrating dashboards with safety databases
- Data security and access levels
- **Case Study: Building a dashboard for construction site safety**

Module 8: Incident and Near-Miss Data Analysis

- Structuring incident reports for analytics
- Behavioral trend identification
- Categorizing incident severity
- Using data to revise training protocols
- Integrating with HR and operations data

- **Case Study: Rewriting safety SOPs after trend analysis**

Module 9: Benchmarking Safety Performance

- Industry benchmarks and databases
- Internal vs. external benchmarking
- Gap analysis techniques
- Strategic adjustments based on benchmarks
- Maintaining data integrity in comparison
- **Case Study: Multi-site safety performance comparison in energy sector**

Module 10: Data Visualization Tools

- Choosing the right chart types
- Excel, Power BI, Tableau for safety metrics
- Visual storytelling with data
- Best practices for readability and impact
- Interactive vs. static reports
- **Case Study: Transforming reports into engaging visuals**

Module 11: Safety Audit Data and Compliance

- Structure of audit reports
- Key metrics from audit findings
- Continuous audit improvement
- Data-driven audit scheduling
- Linking audit results to training plans
- **Case Study: Improving compliance scores through audit data analysis**

Module 12: Behavior-Based Safety Metrics

- What is BBS and its significance
- Observational data collection methods
- Tracking unsafe behaviors
- Integrating BBS with overall metrics
- Reinforcement strategies through data
- **Case Study: Launching a BBS program in a warehouse**

Module 13: Real-Time Monitoring and IoT Safety Data

- Sensors and wearables in safety monitoring
- Benefits of real-time alerts
- Data privacy and ethical concerns
- Maintenance and calibration of devices
- Integrating with cloud safety platforms
- **Case Study: IoT implementation in oil & gas rigs**

Module 14: Training Evaluation and ROI Measurement

- Measuring training effectiveness
- Kirkpatrick’s model for safety training
- Pre- and post-training assessment metrics
- Calculating return on safety investment (ROSI)
- Adjusting programs based on outcomes
- **Case Study: ROI of forklift safety training over 12 months**

Module 15: Strategic Integration and Action Planning

- Aligning safety data with business goals
- Building action plans from insights
- Engaging leadership with safety metrics
- Cross-functional integration of safety data
- Communicating progress to stakeholders
- **Case Study: Company-wide safety data transformation strategy**

Training Methodology

- Interactive instructor-led sessions (in-person or virtual)
- Real-world case studies and simulations
- Group discussions and breakout sessions
- Hands-on exercises with data tools
- Post-training assessment and feedback

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:

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