Process Mining in Tax Compliance Training Course

Professional Development Training Course Outline

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

Course Introduction

Process Mining in Tax Compliance Training Course equips tax professionals with practical skills to convert event logs and digital traces into clear process maps that reveal inefficiencies, compliance gaps, and fraud indicators. By applying process discovery, conformance checking, and performance analysis, revenue authorities and tax teams can streamline workflows, improve audit targeting, and reduce revenue leakage through data-driven interventions.

This course combines conceptual foundations with hands-on tool use, case studies, and implementation planning so participants can implement process mining within their digital tax ecosystems. The course emphasises ethical data handling, governance, and sustainable rollout strategies to ensure long-term impact across tax operations.

Programme Curriculum

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Course Objectives

1. Understand foundational concepts and methodologies of process mining in tax contexts.
2. Identify and extract relevant event logs and data sources for tax process analysis.
3. Apply process discovery techniques to map actual operational flows.
4. Conduct conformance checking to detect deviations from prescribed procedures.
5. Use performance analysis to identify bottlenecks and throughput issues.
6. Integrate predictive techniques with process mining for early warning of non-compliance.
7. Leverage process mining outputs to improve audit selection and evidence collection.
8. Apply process mining for fraud detection and revenue assurance.
9. Select, evaluate, and deploy process mining tools and platforms.
10. Design API and integration approaches for linking mining tools to tax systems.
11. Implement governance, data privacy, and ethical safeguards around process mining.
12. Build dashboards and reports that translate findings into actionable insights.
13. Develop a practical implementation roadmap for scaling process mining in tax operations.

Organizational Benefits

- Improved transparency of end-to-end tax processes and workflows
- Faster identification and resolution of compliance bottlenecks
- Enhanced audit selection through data-driven process insights
- Reduced revenue leakages via early detection of anomalous flows
- Greater efficiency in taxpayer service processing and case handling
- Strengthened fraud detection and investigative capabilities
- Better evidence and audit trails for enforcement actions
- Improved cross-agency data integration and interoperability
- Increased capacity to monitor performance and KPIs in real time
- Sustainable process improvement culture and continuous optimization

Target Audiences

- Tax compliance officers and auditors
- Revenue authority analysts and data scientists
- IT and system integration teams in tax administrations
- Fraud investigation and enforcement units
- Policy makers and tax governance officers
- Digital transformation and modernization teams
- Process improvement and operations specialists
- Consultants supporting tax analytics and process redesign

Course Duration: 10 days

Course Modules

Module 1: Fundamentals of Process Mining in Tax Administration

- Define process mining and distinguish discovery, conformance, and performance analysis
- Understand the value proposition of process mining for tax compliance
- Review common tax administration use-cases and success metrics
- Identify organizational prerequisites and success factors for adoption
- Consider legal, ethical, and privacy implications at a high level

- Case Study: Introducing process mining to VAT processing — initial impacts

Module 2: Event Log Extraction & Data Requirements

- Identify typical event log sources in tax systems (e-filing, payments, refunds)
- Data requirements: case id, activity, timestamp, resources, and attributes
- Techniques for extracting logs from databases, APIs, and middleware
- Data cleaning, enrichment, and transformation best practices
- Ensuring data integrity, provenance and chain-of-custody for audits
- Case Study: Building an audit-ready event log from e-filing systems

Module 3: Process Discovery Techniques

- Overview of discovery algorithms (alpha, heuristic, inductive mining)
- Visualizing discovered models and simplifying complex process maps
- Identifying variants, parallelism, and bottleneck paths
- Linking discovery outputs to operational questions and KPIs
- Iterative discovery: refining models with domain knowledge
- Case Study: Discovery of undocumented steps in registration and onboarding

Module 4: Conformance Checking in Tax Compliance

- Defining reference models and business rules for tax processes
- Techniques for measuring fitness, precision, and generalization
- Detecting deviations, unauthorized steps, and policy non-compliance
- Prioritizing conformance issues for investigation and remediation
- Integrating conformance outputs into audit workflows and case files
- Case Study: Detecting non-compliant refund approval sequences

Module 5: Performance Analysis & Bottleneck Identification

- Measuring throughput, waiting times, and resource utilisation from logs
- Identifying choke points, SLAs breaches, and workload imbalances
- Using time-based analytics to prioritize interventions
- Root-cause approaches to convert findings into corrective actions
- Communicating performance findings to operational managers effectively
- Case Study: Reducing cycle times in tax dispute resolution using process metrics

Module 6: Predictive Analysis Using Process Mining

- Combining process features with predictive models for early warning systems
- Feature engineering from process traces (e.g., activity counts, durations)
- Building classification models to predict non-compliance or fraud risk
- Evaluating model performance and integrating predictions into dashboards
- Managing false positives and operationalizing predictive alerts
- Case Study: Predictive scoring to flag likely VAT refund frauds

Module 7: Enhancing Audit Efficiency Through Process Mining

- Automating identification of cases with high audit value using process indicators
- Prioritizing audits based on process deviations and risk scores
- Improving evidence collection and audit reproducibility via logs

- Integrating mining outputs with case management systems
- Measuring audit yield improvements and ROI from mining initiatives
- Case Study: Automated audit selection for corporate income tax cases

Module 8: Fraud Detection & Revenue Assurance

- Mapping known fraud typologies to process patterns and signatures
- Network and sequence analysis to detect collusion and structured frauds
- Combining external datasets (banks, customs, registries) with process traces
- Continuous monitoring for suspicious flows and rapid response workflows
- Escalation, investigation, and remediation workflows driven by mining insights
- Case Study: Process deviations exposing organized refund fraud ring

Module 9: Advanced Tools and Platforms for Process Mining

- Overview of commercial and open-source process mining platforms
- Key features: discovery engines, conformance modules, performance dashboards
- Integration capabilities: connectors, APIs, and data pipelines
- Scalability, licensing, and operational considerations for large datasets
- Evaluation checklist for vendor selection and proof-of-concept design
- Case Study: Enterprise-level deployment of a process mining platform

Module 10: Process Optimization & Workflow Redesign

- Translating mining insights into practical redesign proposals
- Lean approaches for process simplification and waste removal
- Designing automation and RPA candidates from frequent process paths
- Piloting changes, measuring impact, and iterative redesign
- Governance for sustaining optimized workflows and continuous improvement
- Case Study: Re-engineering taxpayer onboarding to reduce errors and delays

Module 11: Integrating Process Mining with Digital Tax Systems

- Architecting integrations with e-filing, payment, ERP, and CRM systems
- API design, message schemas, and real-time vs. batch considerations
- Building secure, auditable data pipelines and ETL processes
- Ensuring interoperability with analytics, BI and case management tools
- Monitoring data flows and pipeline health for operational resilience
- Case Study: Real-time monitoring integration between e-invoicing and audit systems

Module 12: Process Mining for Policy Evaluation and Design

- Using process evidence to evaluate policy impacts and compliance behaviors
- Identifying unintended process outcomes from regulatory changes
- Designing policy experiments and measuring operational impacts via logs
- Feeding insights into policy revision cycles and stakeholder consultations
- Reporting evidence-based policy recommendations to leadership
- Case Study: Policy redesign after process evidence revealed compliance risks

Module 13: Governance, Ethics & Data Management

- Establishing governance structures for responsible process mining use

- Data privacy, consent, and legal constraints in tax data analysis
- Role-based access controls, auditing, and secure storage of logs
- Ethical review, bias mitigation, and transparency of algorithms
- Documentation, retention policies, and compliance with data protection laws
- Case Study: Implementing ethical and governance controls in a revenue authority

Module 14: Reporting & Visualization of Findings

- Designing effective dashboards for operational, tactical and strategic users
- Visual storytelling: turning complex traces into concise recommendations
- KPI selection, thresholds, and alerting strategies for managers
- Exporting reproducible evidence for audit and legal proceedings
- Training stakeholders to interpret and act on visualization outputs
- Case Study: Dashboard rollout for VAT compliance monitoring

Module 15: Implementation, Change Management & Sustainability

- Building a phased implementation roadmap and pilot-to-scale approach
- Stakeholder mapping, communications, and capacity-building plans
- Defining metrics for success and continuous monitoring frameworks
- Budgeting, resource planning, and vendor/partner management
- Scaling, maintaining, and institutionalizing process mining capabilities
- Case Study: National rollout of process mining across tax operations

Training Methodology

- Instructor-led presentations and conceptual briefings
- Hands-on practical exercises with real or simulated event logs
- Guided tool demonstrations and lab sessions using process mining software
- Group case study analysis and collaborative action planning
- Data preparation exercises and ETL pipeline workshops
- Implementation clinics covering roadmap, governance, and pilot design

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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