Quantitative Methods for Policy Evaluation Training Course

Professional Development Training Course Outline

Category	Political Science and International Relations	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Quantitative Methods for Policy Evaluation Training Course provides participants with the essential skills to apply **quantitative methods** and **data analytics** for rigorous **policy evaluation**. In today's data-driven world, policymakers and organizations must move beyond anecdotal evidence to make informed decisions. This program focuses on developing the practical expertise needed to design and conduct robust **impact evaluations**, ensuring that policies achieve their intended outcomes and demonstrate a clear **return on investment**. Through a blend of theoretical frameworks and hands-on application, participants will learn to measure **causal effects**, analyze large datasets, and communicate findings effectively to key stakeholders.

The curriculum is built on core principles of **causal inference** and **econometrics**, equipping participants with a powerful toolkit for assessing policy effectiveness. We will explore a variety of methodologies, from **experimental designs** like Randomized Controlled Trials (RCTs) to **quasi-experimental methods** such as Difference-in-Differences and Regression Discontinuity. The course emphasizes practical skills in statistical software (e.g., **Stata, R**), allowing participants to replicate real-world studies and conduct their own **policy analysis**. Upon completion, participants will be able to critically appraise existing research, design sound evaluations, and provide **evidence-based recommendations** that drive impactful policy change.

Programme Curriculum

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Course Duration

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Course Objectives

1. Master **causal inference** principles and their application in **public policy evaluation**.
2. Gain proficiency in **econometric modeling** for analyzing policy impacts.
3. Learn to design and implement **Randomized Controlled Trials (RCTs)** for robust impact measurement.
4. Acquire skills in **quasi-experimental designs**, including **Difference-in-Differences** (DiD) and **Regression Discontinuity Design** (RDD).
5. Develop expertise in **cost-benefit analysis** and **cost-effectiveness analysis** to assess policy efficiency.
6. Understand how to leverage **Big Data** and **data mining** techniques for large-scale policy analysis.
7. Analyze **social and economic impacts** using **statistical software** like Stata and R.
8. Formulate **evidence-based recommendations** grounded in rigorous **data-driven decision-making**.
9. Identify and mitigate **selection bias** and other threats to a study's validity.
10. Conduct **program monitoring and evaluation** using a mix of quantitative and qualitative data.
11. Communicate complex **analytical findings** through clear **data visualization** and report writing.
12. Explore the role of **machine learning** and **predictive analytics** in modern policy forecasting.
13. Apply a **theory of change** framework to design and structure comprehensive evaluations.

Organizational Benefits

- Organizations can make data-driven, strategic choices backed by empirical evidence, reducing risks and resource waste.
- Ensures that public policies and programs are effective and achieve their intended social or economic goals.
- Provides a clear, quantitative measure of program success, which is crucial for reporting to funders, governments, and the public.
- Helps identify the most efficient and effective interventions, allowing for the strategic allocation of limited budgets and human resources.
- Establishes the organization as a leader in **evidence-based policy-making**, fostering trust and attracting funding.
- Equips staff with high-demand **analytical skills**, enhancing their professional capabilities and the organization's overall expertise.

Target Audience

- Policy Analysts and Researchers
- Government Officials and Civil Servants
- Program Managers in NGOs and Non-profits
- Academics and Graduate Students
- Consultants in Public Sector and Development
- Data Scientists interested in Social Impact
- Monitoring and Evaluation (M&E) Specialists
- Economists in Public and Private Sectors

Course Outline

Module 1: Foundations of Policy Evaluation

- Understanding the **Policy Problem** and **Theory of Change**.
- The **Counterfactual** and the **Causal Inference Problem**.
- Difference between **Impact Evaluation** and process evaluation.
- Threats to validity: **selection bias**, omitted variable bias, and endogeneity.
- **Case Study:** Evaluating a microfinance program's impact on household income using a counterfactual approach.

Module 2: Experimental Designs: Randomized Controlled Trials (RCTs)

- Principles of **Randomization** and **Treatment/Control Groups**.
- Practical steps for designing and implementing an **RCT**.
- Estimating **Treatment Effects** and interpreting results.
- Ethical considerations and limitations of RCTs.
- **Case Study:** The STAR (Student-Teacher Achievement Ratio) project, a classic RCT on class size and student performance.

Module 3: Quasi-Experimental Methods I

- Introduction to **Observational Studies** and their challenges.
- **Difference-in-Differences (DiD)** method and its core assumptions.
- Parallel trends assumption and how to test for it.
- Using DiD to evaluate a natural experiment.
- **Case Study:** The impact of a minimum wage increase on employment using a DiD framework, comparing a state that raised the wage to a similar state that did not.

Module 4: Quasi-Experimental Methods II

- **Regression Discontinuity Design (RDD)**: principles and applications.
- **Sharp RDD** vs. **Fuzzy RDD**.
- Assumptions and validity checks for RDD.
- Practical implementation of RDD with real data.
- **Case Study:** Evaluating the impact of a scholarship program with an eligibility cutoff based on a test score.

Module 5: Matching and Selection on Observables

- The **Matching Problem**: Creating comparable treatment and control groups.
- **Propensity Score Matching (PSM)** and its use.
- Caliper matching, kernel matching, and nearest neighbor matching.

- Balancing tests to ensure matched groups are similar.
- **Case Study:** Estimating the effect of job training programs on earnings by matching participants with non-participants with similar characteristics.

Module 6: Advanced Econometric and Statistical Techniques

- **Instrumental Variables (IV)** to address endogeneity.
- **Panel Data Analysis** and fixed effects models.
- **Synthetic Control Method** for single-unit case studies.
- Introduction to **Bayesian methods** in policy evaluation.
- **Case Study:** The impact of a specific public health intervention on a single country using the Synthetic Control Method.

Module 7: Cost Analysis and Advanced Topics

- **Cost-Benefit Analysis (CBA)**: Valuing policy outcomes.
- **Cost-Effectiveness Analysis (CEA)**: Comparing different interventions.
- **Data Collection** methods: surveys, administrative data, and geospatial data.
- Introduction to **Big Data** tools and techniques.
- **Case Study:** A cost-benefit analysis of a large-scale infrastructure project.

Module 8: Communicating Findings and Practical Application

- **Data Visualization** for impact reporting.
- Structuring a compelling **policy brief** or report.
- Presenting findings to policymakers and non-technical audiences.
- Replicating a published study from scratch.
- **Case Study:** A final project where participants design, conduct, and present a policy evaluation plan for a real-world policy issue.

Training Methodology

This course uses a **blended learning approach** that combines interactive lectures with hands-on, **project-based learning**. Key methods include:

- **Interactive Lectures:** Core concepts are introduced with real-world examples.
- **Live Coding Sessions:** Participants work alongside the instructor using statistical software (Stata/R) to implement methods.
- **Case Study Analysis:** Deep dives into influential policy evaluations to understand practical application.
- **Group Projects & Peer Review:** Collaborative work to design and critique evaluation plans.
- **Final Capstone Project:** A comprehensive, hands-on project to apply all learned skills.

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	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

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