Training Course on Advanced Data Analytics in Education

Professional Development Training Course Outline

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

Course Introduction

In the age of digital transformation, Advanced Data Analytics in Education has emerged as a powerful tool for improving student outcomes, optimizing learning pathways, and making data-informed decisions at all levels of academic institutions. Training Course on Advanced Data Analytics in Education equips education leaders, administrators, teachers, data scientists, and edtech professionals with the technical knowledge and strategic insight required to effectively implement advanced data analytics in educational environments. Leveraging AI-powered insights, predictive modeling, and machine learning, the course bridges the gap between raw educational data and actionable educational strategies.

By combining real-world case studies, hands-on analytics tools, and evidence-based frameworks, this course empowers participants to uncover trends, improve instructional quality, and enhance institutional performance. Whether focusing on student retention, curriculum alignment, or performance dashboards, the course ensures participants can transform complex datasets into meaningful outcomes. Ultimately, the program enhances decision-making capacity, supports personalized learning, and drives systemic educational improvements.

Programme Curriculum

Training Course on Advanced Data Analytics in Education

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Course Objectives

1. Understand the fundamentals of data-driven decision-making in education.
2. Explore predictive analytics and its applications in student performance tracking.
3. Implement machine learning models to identify at-risk learners.
4. Apply data visualization tools to communicate educational insights.
5. Utilize big data technologies to manage large-scale academic datasets.
6. Integrate AI in education to enhance personalized learning strategies.
7. Evaluate learning management systems (LMS) through analytics.
8. Master real-time dashboard development for academic KPIs.
9. Conduct sentiment analysis on student feedback for course improvement.
10. Develop ethical policies for student data privacy and governance.
11. Design adaptive learning frameworks using historical data.
12. Apply natural language processing (NLP) to assess open-ended responses.
13. Interpret academic data trends to guide institutional planning.

Target Audiences

1. School Principals and Education Administrators
2. Higher Education Faculty
3. Data Analysts in Education
4. Curriculum Developers
5. Instructional Designers
6. EdTech Professionals
7. Government Education Officers
8. Education Policy Makers

Course Duration: 10 days

Course Modules

Module 1: Introduction to Data Analytics in Education

- Overview of educational data types
- Role of analytics in modern pedagogy
- Differences between descriptive, predictive, and prescriptive analytics
- Key tools and platforms used
- Trends in EdTech and AI
- **Case Study**: Transforming dropout rates using data insights

Module 2: Understanding Educational Metrics

- Key performance indicators (KPIs) in education
- Attendance, engagement, and grading analytics
- Metrics for learner success and retention

- Using benchmarks and standards
- Reporting for stakeholders
- **Case Study**: University data transparency project

Module 3: Predictive Analytics for Student Success

- Definition and scope of predictive modeling
- Algorithms for risk identification
- Early warning systems for student performance
- Data preparation techniques
- Interventions based on predictive alerts
- **Case Study**: Predicting high school graduation rates

Module 4: Data Visualization in Education

- Best tools (e.g., Tableau, Power BI)
- Dashboard creation for school boards
- Visualizing learner pathways
- Data storytelling for educators
- Custom visual analytics
- **Case Study**: Data dashboards in K-12 districts

Module 5: Machine Learning Fundamentals

- Introduction to ML in education
- Supervised vs unsupervised learning
- Applications in student feedback analysis
- Model training and evaluation
- Bias in algorithmic decision-making
- **Case Study**: Predicting exam success with ML models

Module 6: Big Data and Education

- What is big data in the academic context?
- Cloud storage and data lakes
- Managing massive student datasets
- Data scalability and integration
- Infrastructure requirements
- **Case Study**: National education repository project

Module 7: AI and Adaptive Learning Systems

- AI applications in personalized instruction
- Smart content and chatbots
- Dynamic course delivery
- AI recommendation systems
- Feedback loops and performance optimization
- **Case Study**: Adaptive platform in virtual schools

Module 8: Data Governance and Student Privacy

- FERPA and GDPR compliance
- Ethics in educational data use
- Creating data governance frameworks
- Transparency in data collection
- Parental and student consent

- **Case Study**: Ethics breach and policy reform

Module 9: Sentiment and Text Analysis in Education

- Overview of NLP tools
- Analyzing open-ended survey data
- Understanding student emotions
- Text mining techniques
- Topic modeling in feedback
- **Case Study**: Student voice in institutional planning

Module 10: Real-Time Analytics in the Classroom

- IoT and smart classroom data
- Live dashboards for teachers
- Immediate performance feedback
- Attendance and behavior tracking
- Integration with LMS
- **Case Study**: Smart classroom pilot program

Module 11: LMS Optimization Using Analytics

- Analyzing LMS interaction data
- Detecting usage trends
- Improving course content via heatmaps
- Engagement scoring
- Retention improvements via data insights
- **Case Study**: LMS redesign based on analytics

Module 12: Data-Driven Curriculum Development

- Aligning curriculum with performance data
- Closing achievement gaps
- Incorporating skills analytics
- Real-time feedback from assessments
- Measuring learning outcomes
- **Case Study**: Curriculum overhaul using analytics

Module 13: Institutional Planning and Analytics

- Long-term academic planning with data
- Budget allocation based on trends
- Staff performance metrics
- Resource planning
- Policy formulation using insights
- **Case Study**: District-wide strategic alignment project

Module 14: Communicating Data to Stakeholders

- Visual report building
- Simplifying data for non-technical audiences
- Storytelling with charts
- Presentation strategies
- Creating infographics
- **Case Study**: Board of education data report

Module 15: Capstone Project and Implementation Plan

- Identify an institutional challenge
- Choose and apply analytics tools
- Present visual dashboards
- Propose data-driven solutions
- Reflective learning assessment
- **Case Study**: Capstone project from previous cohort

Training Methodology

- Interactive lectures and live demonstrations
- Hands-on lab sessions with real-world datasets
- Peer collaboration and group discussions
- Quizzes and periodic knowledge checks
- Capstone project implementation and review
- Mentorship and post-training support

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 CenterANCY LD 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:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com