Satellite and Remote Sensing Data for Monitoring Programs Training Course

Professional Development Training Course Outline

Category	Monitoring and Evaluation	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s data-driven world, satellite and remote sensing technologies have revolutionized monitoring and evaluation (M&E) programs, enabling organizations to access real-time, high-resolution geospatial data for informed decision-making. Satellite and Remote Sensing Data for Monitoring Programs Training Course equips participants with the essential skills to leverage remote sensing, GIS, and satellite imagery for monitoring environmental, social, and developmental programs. Through practical insights, participants will learn how to interpret multispectral, hyperspectral, and radar data to track trends, assess impacts, and generate actionable intelligence for strategic planning.

Participants will gain hands-on experience in data acquisition, processing, and visualization, integrating geospatial analysis, predictive modeling, and AI-powered interpretation into monitoring frameworks. Case studies from agriculture, disaster management, urban planning, and climate monitoring provide real-world context, ensuring learners can translate remote sensing data into impactful program decisions. By the end of the course, participants will be proficient in spatial analytics, change detection, and reporting mechanisms, making them invaluable assets in modern M&E initiatives.

Programme Curriculum

Satellite and Remote Sensing Data for Monitoring Programs Training Course

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Course Duration

5 days

Course Objectives

By the end of this training, participants will be able to:

1. Understand the fundamentals of satellite imagery and remote sensing for M&E.
2. Identify and access high-resolution geospatial data sources.
3. Apply GIS tools and software for data visualization and analysis.
4. Perform land use and land cover mapping using satellite data.
5. Conduct change detection analysis to monitor program outcomes.
6. Integrate remote sensing data with field survey results.
7. Apply machine learning techniques for predictive monitoring.
8. Develop dashboard reporting systems for program tracking.
9. Interpret multispectral and hyperspectral imagery for targeted insights.
10. Analyze environmental and social impact indicators via geospatial data.
11. Utilize cloud-based platforms for remote sensing data processing.
12. Assess disaster risk, climate patterns, and agricultural productivity using satellite data.
13. Prepare monitoring reports with actionable recommendations for stakeholders.

Target Audience

1. Monitoring & Evaluation (M&E) Specialists
2. Data Analysts and Geospatial Professionals
3. Project Managers in Development Programs
4. Environmental Scientists and Researchers
5. Disaster Management and Climate Monitoring Officers
6. Government and NGO Program Coordinators
7. Policy Makers and Strategic Planners
8. Students and Professionals in GIS, Remote Sensing, and Data Science

Course Modules

Module 1: Introduction to Remote Sensing & Satellite Data

- Fundamentals of remote sensing principles
- Types of satellite imagery and sensors
- Data acquisition techniques and platforms
- Overview of spatial resolutions and accuracy

- **Case Study:** Using Landsat imagery for deforestation monitoring

Module 2: Geospatial Data Sources & Platforms

- Open-source and commercial satellite data platforms
- Accessing Earth Observation (EO) datasets
- Cloud-based GIS platforms
- Metadata interpretation and quality assessment
- **Case Study:** Sentinel data in crop yield monitoring

Module 3: GIS Tools for Data Visualization & Analysis

- Introduction to GIS software (QGIS, ArcGIS)
- Spatial mapping and overlay analysis
- Thematic map creation for program monitoring
- Geospatial data cleaning and preparation
- **Case Study:** Urban expansion analysis using GIS

Module 4: Land Use, Land Cover & Environmental Monitoring

- Land classification techniques
- Vegetation and water body mapping
- Soil and terrain analysis
- Monitoring environmental change over time
- **Case Study:** Wetland degradation assessment in Kenya

Module 5: Change Detection & Time Series Analysis

- Detecting spatial-temporal changes
- Satellite image differencing and classification
- Trend analysis using remote sensing data
- Applications for program evaluation
- **Case Study:** Tracking forest cover changes over 5 years

Module 6: Integration of Remote Sensing & Field Data

- Combining geospatial data with survey results
- Accuracy assessment and validation techniques
- Data triangulation for robust monitoring
- Reporting insights for decision-making
- **Case Study:** Crop health assessment with drone and satellite data

Module 7: Advanced Analytics: AI & Predictive Modeling

- Machine learning for satellite imagery interpretation
- Predictive models for program outcomes
- Risk and impact assessment using AI tools
- Automation of geospatial data workflows
- **Case Study:** Predicting flood-prone zones using satellite data

Module 8: Reporting & Decision Support Systems

- Dashboard creation for M&E tracking

- Visualization of key performance indicators
- Integrating satellite insights into reports
- Communicating geospatial data to stakeholders
- **Case Study:** Dashboard reporting for NGO intervention programs

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	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

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

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