

Management Development Programme on

## Advanced Multivariate Data Analysis



**DURATION**  
3 Days



**MODE**  
Offline



**DATE**  
8-10 October 2026



**VENUE**  
Indian Institute of Forest  
Management, Bhopal



### ABOUT THE PROGRAMME

The rapid growth of digital technologies has resulted in unprecedented volumes of structured and unstructured data across industries, government organizations, financial institutions, and environmental sectors. Effective decision-making increasingly depends upon the ability to analyze, visualize, model, and interpret these datasets using modern analytical tools.

This three-day Management Development Programme is designed to provide participants with comprehensive hands-on training in advanced data analysis using **Blue Sky Statistics** software. The programme covers the complete data analytics workflow—from data acquisition and preprocessing to statistical modelling, machine learning, visualization, and interpretation of results. Participants will gain practical exposure through numerous real-world datasets and case studies drawn from finance, sustainability, marketing, public policy, healthcare, and natural resource management.



### PROGRAMME OBJECTIVES

Participants will be able to:

- ✓ Understand the complete data analytics lifecycle
- ✓ Perform exploratory data analysis (EDA)
- ✓ Apply statistical methods for decision making
- ✓ Build predictive regression and classification models
- ✓ Evaluate machine learning models
- ✓ Perform clustering and dimensionality reduction
- ✓ Interpret analytical results for managerial decision-making



### PROGRAMME FEE

- Faculty Members : Rs. 15,000
- Research Scholars : Rs. 10,000
- Industry Professionals : Rs. 20,000
- International Participants : USD 500



The above fee includes course materials. Limited accommodation in the Institute hostel on twin sharing basis will be available @ Rs 2000 per day per person. This will include breakfast and dinner. A separate email needs to be sent to the coordinator for advance booking.



### EXPECTED OUTCOMES

Participants will be able to:

- Develop predictive models for organizational decision making
- Apply statistical and machine learning techniques to real-world problems
- Publish empirical research using reproducible workflows
- Design analytics solutions for sustainability, finance, healthcare, marketing, and policy research



### WHO SHOULD ATTEND

- Faculty members
- Research Scholars
- Industry Professionals
- Government Officials
- Consultants
- Data Analysts
- PhD Scholars

### TOPICS



#### 1. SIMPLE LINEAR REGRESSION

- Least Squares Estimation
- Interpretation of coefficients
- Goodness-of-fit
- Diagnostic tests



#### 2. MULTIPLE LINEAR REGRESSION

- Dummy variables
- Interaction terms
- Log-linear models



#### 4. CLASSIFICATION METHODS

- Logistic Regression
- Random Forest
- K-Nearest Neighbours (KNN)



#### 5. PANEL DATA ANALYSIS

- Pooled OLS
- Fixed Effects Model
- Random Effects Model



#### 6. DIMENSIONALITY REDUCTION

- Principal Component Analysis (PCA)
- Association Rule Mining
- Cluster Evaluation



### CERTIFICATION

Participants attending all sessions will receive a Certificate of Participation from the Indian Institute of Forest Management, Bhopal.



### COORDINATOR

**Dr. Santanu Das**

Professor (Finance)  
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