Program Curriculum

SEM I

Business Intelligence & Analytics for Competitive Advantage

1. Overview of Business Intelligence Landscape
2. Designing effective BI Architecture
3. Understanding Enterprise Data Models
4. Big Data, Datafication & its impact on Data Science
5. Data Warehousing and Data Mining
6. DDL and DML Discovering Knowledge with Data Mining
7. Data Mining Process
8. Dash boarding and Scorecards
9. SQL Workshop
10. Data Governance & Data Security

Statistics for Business Analytics

1. Economic model and Econometric model
2. Basics of Statistics
3. Data Collection and Measurement
4. Measures of Central Tendency (Mean, Median and Mode)
5. Sampling and Estimation
6. Measures of Dispersion and Correlation
7. Linear Regression and Logistic Regression
8. Ordinary least squares (OLS) estimation
9. Statistical inferences
10. Generalized least squares (GLS) estimation
11. Time-series regression

Data Visualization and Communication

1. Introduction to Data Visualisation
2. Visualisation of Numerical Data
3. Visualisation of Non-numerical Data
4. Common Visualisation Idioms
5. Visualisation of Spatial Data, Networks & Trees
6. Data Reduction
7. Data Visualisation with Industry Tools

Specialisation

HR - Introduction to Human Resource Technology and Analytics

1. Human Resource Management
2. HR Technology Overview
3. HR Analytics
4. HR Analytics popular frameworks
5. Skills required for HR Analytics
6. HR Automation with Analytics Tools
7. Importance of Data Availability and Governance

Marketing - Introduction to Marketing Analytics

1. Marketing Management
2. Marketing Technology Overview
3. Marketing Analytics
4. Marketing Analytics popular frameworks
5. Skills required for Marketing Analytics
6. Marketing Automation with Analytics Tools
7. Importance of data availability and governance

Finance - Introduction to Financial Analytics

1. Financial Management
2. Financial Technology Overview
3. Financial Analytics
4. Financial Analytics popular frameworks
5. Skills required for Financial Analytics
6. Financial Automation with Analytics Tools
7. Importance of data availability and governance

Program Curriculum

Business Analytics with R

1. Introduction to R
2. Data Types and Data Structures
3. Loops and Functions in R
4. Mathematics in R
5. Visualization using R
6. Missing Value Treatment
7. Exploratory Data Analysis using R

Analytics with Tableau

1. Introduction to Tableau Architecture
2. Connections For Organizing Data
3. Tableau Graphs, Reports, And Calculations
4. Working With Groups and Set
5. Working With Dashboard
6. Data Blending and Aggregation
7. Data Visualization
8. Generated Fields and Special Fields
9. Case Study: Hands on Using Tableau

Specialization

HR - Advanced HR Analytics

1. Primary Sources of Employee Data
2. Secondary sources of Employee data
3. Efficiency & Effectiveness metrics
4. General employee data fields
5. Key metrics for each vertical of HR
6. HR Scorecards & Practice Case Study
7. HR Case study of correlation
8. HR Case study of Linear regression
9. HR Case study of Logistic regression

Marketing - Retail Analytics

1. Retail Analytics
2. Terminologies: Review
3. Customer Analytics
4. KNIME
5. Retail Dashboards
6. Customer Churn
7. Association Rules Mining

Finance - Finance & Risk Analytics

1. Risk Management
2. Credit Risk-Using a Market Case Study
3. Risk Management Using Derivatives Strategies
4. Comparison of Credit Risk Models
5. Overview of Probability of Default (PD) Modelling
6. PD Models, Types of Models, Steps to Make a Good Model
7. Market Risk
8. Value at Risk- Using Stock Case Study
9. Fraud Detection

Program Curriculum

4. Capstone Projects

Retail: Market basket analysis for consumer durables (used by retail stores to predict and increase impulse purchases based on groups of items a customer buys)

Banking: Developing best prediction model of credit default (used by retail banks to analyse data on credit defaults using logistic regression)

HR: Developing best prediction model the probability of attrition using a logistic regression (used by organization for manpower requirement planning)