S P Jain School of Global Management
DUBAI • MUMBAI • SINGAPORE • SYDNEY

PLQ
PREMIUM LEARNING ONLINE

DATA ANALYTICS WITH SAS – JMP CERTIFICATION

CURRICULUM

MODULE 1: INTRODUCTION TO DATA ANALYTICS

In this module, we will introduce the field of Data Analytics and its relevance to all the organisations across the globe. We will discuss the various application areas of Data Analytics in an organisation. We will also cover the contribution of Data Analytics for achieving strategic objectives for an organisation. Topics covered will include:

- What is Data Analytics
- Application Areas of Data Analytics
- Benefits of Data Analytics for organisations

MODULE 2: DESCRIPTIVE ANALYTICS

Descriptive Analytics tries to understand what has happened in the past through the analysis of data. It is a conventional form of Business Intelligence and Data Analysis. It seeks to provide a summary view of facts and figures in an understandable format. Topics covered will include:

- Descriptive Statistics
- Inferential Statistics
- Descriptive Data Mining
- Data Visualisation

MODULE 3: PREDICTIVE ANALYTICS

Predictive Analytics tries to forecast what will happen. It helps to forecast trends based on current events. Topics covered will include:

- Regression Techniques
- Predictive Data Mining
- Multivariate Techniques
- Time Series Techniques

MODULE 4: PRESCRIPTIVE ANALYTICS

Prescriptive Analytics is concerned about how to make it happen. It is a set of techniques to indicate the best course of action. It tells what decision to make to optimise the outcome.
Topics covered will include:

- Optimisation
- Simulation
- Decision Analysis
- Design of Experiments

MODULE 5: DATA ANALYTICS STRATEGY AND DEPLOYMENT

In this module, we will discuss how data analytics can be used in the area of Strategic Management. Organisations can use Data Analytics to determine their Business Strategy. We will also discuss how Data Analytics can be deployed throughout the organisation leading to a complete transformation to a Data Driven Organisation. Topics covered will include:

- Role of Data Analytics in Strategy
- Data Analytics Deployment & Life Cycle Management
- Data Analytics Eco System

MODULE 6: CAPSTONE PROJECT

The Capstone Project is a student-led team project that offers a significant value proposition to organisations and the students. It provides a platform for students to apply their classroom learning to real business problems and leverage the power of data to provide valuable insights. Student teams address a business issue currently being faced or considered by organisations and come out with actionable solutions/recommendations. The team will be guided by the faculty and monitored by the program team. Final deliverables from the students will be a report based on the data analysis of a suitably developed model.

CASE STUDIES*

SOME OF THE CASES COVERED WILL BE:

1. HOUSING PRICES IN AN AREA

Learning Objective: The objective of this case is to develop a model to predict median values of home in an area (depending upon data availability). Multiple Models will be built and after a comparison of the performance of these models, the best model will be selected.

Sector: Real Estate

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2. CUSTOMER CHURN IN MOBILE PHONE INDUSTRY

Learning Objective: The objective of this case is to build a model to predict which customers are most likely to move their service to a competitor. This knowledge will be used to identify customers for targeted interventions, with the ultimate goal of reducing churn.

Sector: Telecom

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3. CREDIT CARD MARKETING

Learning Objective: The objective of this case is to build a model to provide insight into why some bank customers accept credit card offers.

Sector: Financial Services

4. BANK REVENUES

Learning Objective: The objective of this case is to understand how customer banking habits contribute to revenues and profitability.

Sector: Financial Services

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5. IMPROVING PATIENT SATISFACTION

Learning Objective: The objective of this case is to investigate potential causes of decreased patient volume.

Sector: Healthcare

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6. ANALYTICS TO MANAGE BLOOD AT BLOOD BANK

Learning Objective: The objective of this case is to predict the future demand on a daily basis and to help in planning blood donation camps regularly. Various time series forecasting techniques can be used to forecast the demand for blood components.

Sector: Healthcare

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7. PRODUCTION PROCESS MODELS

Learning Objective: The objective of this case is to take production decisions related to demand of product for selling. The objective is to maximize sales, subject to limited labour hours.

Sector: Manufacturing

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8. OPTIMIZED MOTOR CARRIER SELECTION

Learning Objective: The objective of this case is to assign truckloads to carriers to minimize its total shipping cost.

Sector: Logistics

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9. RATING SPORTS TEAMS

Learning Objective: The objective of this case is to enable sports fans to identify which team is the best in each sport. Non-Linear Programming will be used to rate the sports team.

Sector: Sports

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10. PRICING PRODUCTS

Learning Objective: The objective of this case is to find the best pricing strategies for customers who value each succeeding unit of a product less than the previous unit.

Sector: FMCG

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11. INVESTING FOR RETIREMENT

Learning Objective: The objective of this case is to use Simulation to estimate the value of an individual future investment from several investment strategies.

Sector: Financial Services

*Tentative List