Graduate Diploma in Business Analytics (GDBA)
Developed and awarded by Singapore Institute of Management, Singapore

Schedule for GDBA

September Intake	January Intake	May Intake
Data Mining for Managers	Customer Relationship Management	Business Analytics Concepts, Principles and Applications
Predictive Modelling	Data Visualisation	Python for Data Analysis

Module Outlines

Business Analytics Concepts, Principles and Applications

This module covers what business analytics is, why it is valuable, what resources are needed to support business analytics, and how business analytics is applied. It illustrates three key types of analytics (descriptive, prescriptive and predictive), identifies common challenges that can be addressed by business analytics, and offers guidance for undertaking business analytics projects.

Customer Relationship Management

This module introduces business analytics applications in marketing and customer relationship management (CRM). The topics covered include clustering models for customer segmentation, patterns and association rule mining for market basket analysis, prediction models for customer acquisition and churn analysis, analysis of human mobility patterns, and predictive models for fraud detection.

Data Mining for Managers

This module introduces students to the key concepts of data mining and the potential applications in business environment to enhance operational efficiency. Topics include methodology of data mining, data exploration, data management and model building. The data mining techniques covered include association, clustering, classification and predictive modelling to solve business problems.

Data Visualisation

This module introduces the terminology, concepts and techniques behind visualising data. Students will use a data visualisation tool to get hands-on experience of creating visual representations of data. The module covers the design principles for creating meaningful displays of quantitative and qualitative data to facilitate managerial decision-making.

Predictive Modelling

This module teaches students the necessary skills to formulate predictive analytics objectives, identify and select the most appropriate predictive modelling methods, and data mining tools such as logistic regression, artificial neural network and decision trees. It also covers how these methods can be applied to answer business problems and generate data-driven solutions.

Python for Data Analysis

This module provides a broad introduction of the Python programming language and the related standard library to help student to write programs, access various tools, and document and automate analytics processes. The topics covered include NumPy package, pandas data analysis library, IPython and PyDev development environments, and Matplotlib 2D plotting library.