SVKM's NMIMS

School of Mathematics, Applied Statistics & Analytics

B.Sc. Data Science

Course Structure

Year I Semester I • Descriptive Statistics - I • Introduction to Probability Theory • Univariate Calculus • Elementary Number Theory • Discrete Mathematics • Foundations of Computer Science • Introduction to R • Environmental Studies	**Year I Semester II** • Descriptive Statistics - II • Probability Models for Discrete Data • Probability Models for Continuous Data • Linear Algebra • Numerical Methods • Introduction to Programming • Effective Communication
Year II Semester III • Statistical Inference for Data Science - I • Sampling Distributions & Applications • Statistics Lab - I • Multivariate Calculus • Mathematics Lab - I • Data Management • Technology Lab - I • Data Analysis using Python • Research Writing • Research Initiative in Data Science - I	**Year II Semester IV** • Statistical Inference for Data Science - II • Regression Analysis • Designs of Experiments • Statistics Lab - II • Theory of Optimization & Graph Theory • Mathematics Lab - II • Machine Learning - I • Technology Lab - II • Data Wrangling with Python • Research Ethics • Research Initiative in Data Science - II
Year III Semester V • Multivariate Analysis • Operations Research • Statistics Lab - III • Differential Equations • Mathematics Lab - III • Machine Learning - II • Technology Lab - III • Big Data Analytics • Professional Skills • Research Initiative in Data Science - III	**Year III Semester VI** • Markov Chains • Time Series & Forecasting • Statistical Process Control • Statistics Lab - IV • Deep Learning Techniques • Technology Lab – IV • Data Visualization and Modelling • Entrepreneurship Skills • Capstone Project