

M. G. SCIENCE INSTITUTE, AHMEDABAD AUTONOMOUS | AFFILIATED TO GUJARAT UNIVERSITY

Managed by: Ahmedabad Education Society

Post Graduate Diploma in **Business Analytics** 12 Months



ABOUT M G SCIENCE

M. G. Science Institute has been a temple of learning for almost seven decades. Established in 1946, the Institute is affiliated to Gujarat University and has a grantin-aid status from the Govt. of Gujarat. It has carved its path to eminence through sheer dynamism and dedication of its founder fathers and educators. M. G. Science Institute is a leading institute offering Undergraduate and postgraduate degree courses in various disciplines of science. There are 10 subjects taught at Under Graduate level and 2 subjects at Post Graduate level.

ABOUT PG DBA

The PG Diploma program in Business Analytics is tailored for individuals aspiring to enhance their expertise in the fields of data science and business analytics. This course serves as an introduction to the realm of business analytics, offering participants exposure to cutting-edge analytical tools such as programming, Python programming, SQL, Power BI, and more.

PROGRAM HIGHLIGHTS



Expert Instruction: Learn from accomplished faculty members and distinguished industry experts who bring a wealth of knowledge to the classroom.



• Hands-on Practical Approach: Engage in hands-on practice throughout the sessions, applying concepts to real-world case studies for a comprehensive learning experience.



Real-World Case Study Discussions: Dive into the intricacies of real-world case studies, fostering critical thinking and problem-solving skills.



• Capstone Project: Embark on a transformative journey with a capstone project, applying your skills to solve a real-world challenge and demonstrating your proficiency.



• Comprehensive Guidance: Benefit from expert guidance as you dissect real-world scenarios and gain valuable insights into effective problem-solving strategies.



Certificate of Completion: Earn a well-earned certificate upon successfully completing the program, validating your mastery of practical skills and theoretical knowledge.



Lifelong Alumni Status: Join a vibrant community of learners and professionals as you gain lifelong alumni status, opening doors to networking and continued learning.









PROGRAM PEDAGOGY

- Classroom sessions
- Hands-on training on computer
- Case-based learning
- Hands on exercises and quizzes
- Individual Assignments
- Get real-world experience through projects
- Capstone project

CURRICULUM

SEMESTER-I



Introduction to Business Analytics

- Overview of Business Analytics
- Applications of Business Analytics
- Understand Data Analytics Cycle
- Role of Analytics in Decision Making



R Programming

- Basics of R & RStudio
- R Data Types, Data Structures •
- Control Structures
- Functions and Packages in R
- Writing & Running R Scripts

Types of Analytics

Tools Used in Data Analytics

- Data Handling in R
- Data Wrangling in R
- Data Visualization



Python Programming

- Basics of Python Language
- Python Data Structure
- Control Flow
- Functions Module & OOP
- Exceptions Handling, File I/O
- Modules and Packages
- Numpy and Pandas Libraries
- Matplotlib and Seaborn



Database Management & SQL

- Introduction to Database
- Introduction to SQL
- Installation of SQL Server
- DDL and DML Statements
- Databases and Tables
- Aggregate Functions
- Join & Set Operations
- Sub-queries & Derived Tables



Statistical Techniques for Data Science

- **Basic Concepts of Statistics**
- Statistical Inference
- **Estimation of Parameters**
- Basic Concepts of Hypothesis
- · Parametric Tests
- ANOVA, ANCOVA
- Non-parametric Tests
- Linear Regression



SEMESTER-II



Data Visualization with Power BI

- Intro. to MS Power BI
- Data Transformation
- Model Data with Power BI
- DAX:Data Analysis Expression
- · Power Bi Dashboard
- Direct Connectivity in Power BI
- · Datasets in Power BI
- R and Python in Power BI



Machine Learning Part I

- Machine Learning Concepts
- Logistic Regression
- Decision Tree
- K-nearest neighbour
- Random Forest
- Naive Bayes Classifier
- Support Vector Machine



Machine Learning Part II

- Hierarchical Clustering
- Non-Hierarchical Clustering
- Market Basket Analysis
- Factor Analysis

Text Minning





Time Series Models

- Intro. to Time Series Data
- Components of Time Series
- Decomposition of Time Series
 ARIMA Model
- Forecasting



- ARMA model



Capstone Project (Any One)

- Retail Analytics
- E-commerce
- Sports Analytics
- HR Analytics
- Finance Analytics
 Social Media Analytics
- Marketing Analytics
- Insurance Analytics
- Healthcare Analytics

TOOLS USED









SQL Power BI + a b | e a u



LEARNING OUTCOMES

- Cultivate data-oriented abilities
- Address intricate business challenges through data analytics
- Craft solutions for practical business dilemmas using data-driven approaches







WHO CAN APPLY?

- · Bachelor in any discipline from any recognised University (with Mathematics or Statistics at 10+2 level)
- Minimum 50% marks at Bachelor Degree

PROGRAM DURATION

- 12 Months (Two Semester) (Offline)
- June 2024 to May 2025

EVALUATION

- A minimum 75% attendance is a prerequisite for successful completion of this programme.
- There will be periodic evaluation. These may be in terms of quiz, assignment, project.
- At the end of the semester, there will be final examination.

PROGRAM FEE

- 45,000/- per Semester
- Fee inclusive of GST
- Fee includes Admission, Tuition, Course Material

HOW TO APPLY?

- Fill the application form.
- Evaluation of Candidate.
- Get the Provisional Admission Offer Letter
- Payment of Fee
- Get the Confirmation Letter

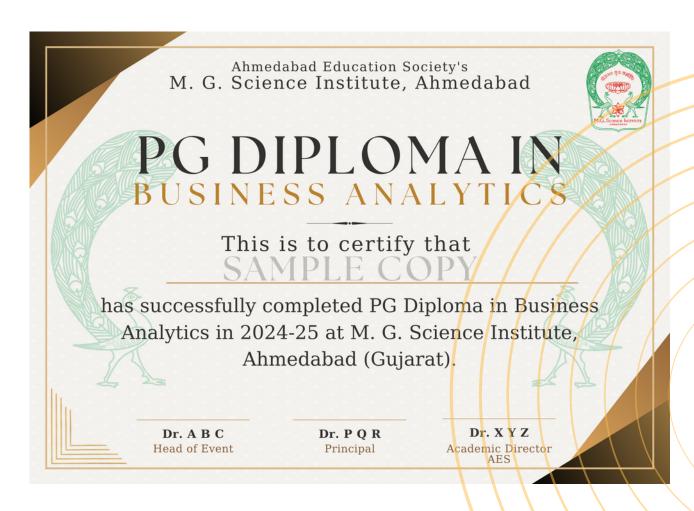


Enroll today to experience a program that offers expert mentorship, practical application, and a pathway to becoming a knowledgeable and capable professional.



PROGRAM CERTIFICATE

Awarded PG Diploma in Business Analytics cenrtificate after the completion of the program. Participant must fulfill requirements and other policies prescribed by M. G. Science Institute.

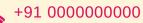


GET IN TOUCH





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