AMITY UNIVERSITY

UTTAR PRADESH

## AMITY BUSINESS SCHOOL

### Professional Development Program (PDP)

ABS conducted a Professional Development Programme on "**Power BI Essentials: Data Visualization and Analytics**" on November 7, 2024 from 2:00 pm - 5:30 pm in CR 301, Third Floor, F3 Block by Dr. Samarth Sharma, Asst. Professor, ABS.

### Objectives of the Professional Development Programme (PDP):

1. Understand the fundamentals of Power BI and its role in data analysis and visualization.
2. Learn how to connect, transform, and clean data from multiple sources.
3. Gain hands-on experience in creating interactive dashboards and reports.
4. Learn how to apply best practices in data visualization and storytelling with data.
5. Understand how to share reports and collaborate using Power BI service and mobile app.

The steps for downloading Power BI were given to the participants in advance.

### Module 1: Introduction to Power BI

- **Objective:** Understand the purpose of Power BI, its components, and how it fits into the broader data analysis landscape.
- Topics:
    - Overview of Power BI (Desktop, Service, Mobile)
    - Power BI Architecture and Workflow
    - Installing and setting up Power BI Desktop
    - Power BI Interface Tour

## Module 2: Connecting to Data Sources

- **Objective:** Learn how to connect Power BI to various data sources.
- Topics:
    - Connecting to Excel, SQL Server, Web data, and other data sources
    - Import vs Direct Query Mode
    - Basic data loading and refresh

## Module 3: Data Transformation with Power Query

- **Objective:** Clean, shape, and transform data using Power BI's built-in Power Query Editor.
- Topics:
    - Understanding Power Query Editor
    - Cleaning and shaping data (removing duplicates, handling nulls, changing data types)
    - Data transformations (merging, appending tables, filtering)
    - Creating calculated columns and measures

## Module 4: Data Modelling and Relationships

- **Objective:** Learn to create relationships between different data tables and build an effective data model.
- Topics:
    - Introduction to data modelling concepts
    - Managing relationships between tables
    - Creating hierarchies and calculated tables
    - Best practices in data modelling for performance

## Module 5: Creating Visualizations and Reports

- **Objective:** Build interactive, insightful reports using a variety of visualizations.
- Topics:
    - Introduction to Power BI visualizations (bar charts, pie charts, line charts, etc.)
    - Customizing visualizations (formatting, themes)
    - Adding slicers, filters, and interactive elements

- Designing effective dashboards

**Module 6: Advanced Features (Optional)**

- **Objective:** Explore advanced features such as DAX, custom visuals, and R integration.
- Topics:
  - Introduction to DAX (Data Analysis Expressions)
  - Creating custom visualizations
  - Using AI features (Q&A, Key Influencers)
  - R and Python integration for advanced analytics (if applicable)

**Photos**