**Course Title:** Excel Data Analysis for Beginners

**Course Description:** This course is designed for individuals looking to develop or enhance their data analysis skills using Microsoft Excel. It covers fundamental Excel functions, data manipulation techniques, basic analysis tools, and visualization methods.

**Course Duration:** 8 Weeks

**Course Objectives:**

* Understand the fundamentals of Excel.
* Learn data manipulation and cleaning.
* Perform basic to intermediate data analysis.
* Create meaningful data visualizations.
* Develop skills for data-driven decision-making.

**Week 1-2: Excel Basics**

* Introduction to Excel Interface
* Basic Excel Functions and Formulas
* Data Entry and Formatting
* Working with Rows, Columns, and Cells
* Basic Excel Charts

**Week 3-4: Data Manipulation and Cleaning**

* Advanced Excel Functions (VLOOKUP, etc.)
* Data Sorting and Filtering
* Conditional Formatting
* Handling Missing Data and Errors
* Introduction to Pivot Tables

**Week 5-6: Data Analysis Techniques**

* Exploratory Data Analysis in Excel
* Statistical Functions and Analysis
* Utilizing Pivot Tables for Data Summarization
* Working with Excel Tables and Ranges

**Week 7: Data Visualization**

* Advanced Charting Techniques
* Creating Dashboards in Excel
* Using Conditional Formatting for Visualization
* Dynamic Charts and Graphs

**Week 8: Capstone Project and Review**

* Real-world Data Analysis Project
* Applying Learned Skills to Practical Scenarios
* Course Review and Feedback

**Assessment and Certification**

* Weekly Assignments
* Final Capstone Project

**Course Title:** Mastering Data Transformation with Excel Power Query

**Course Description:** This course is designed to introduce participants to the powerful data transformation capabilities of Excel Power Query. It covers techniques for importing, cleaning, transforming, and automating data preparation tasks.

**Course Duration:** 6 Weeks

**Course Objectives:**

* Understand the capabilities of Power Query in Excel.
* Learn to connect to various data sources.
* Master data cleaning and transformation techniques.
* Automate data preparation workflows.
* Integrate Power Query with Excel and other Microsoft tools.

**Week 1: Introduction to Power Query**

* Overview of Power Query in Excel
* Power Query Interface and Basic Operations
* Importing Data from Different Sources (Excel, CSV, Web)

**Week 2: Data Cleaning and Transformation**

* Basic Data Cleaning Techniques
* Using Filters and Sorting in Power Query
* Handling Missing and Duplicate Data

**Week 3: Advanced Data Transformation**

* Advanced Text, Number, and Date Functions
* Working with Columns: Splitting, Merging, and Pivoting
* Conditional Logic in Power Query

**Week 4: Data Modeling and Integration**

* Introduction to Data Modeling Concepts
* Combining Data from Multiple Sources
* Creating Relationships and Using Lookup Functions

**Week 5: Automating Data Preparation**

* Setting up Automatic Refresh and Data Update
* Writing Custom Functions in Power Query
* Error Handling and Debugging in Power Query

**Week 6: Capstone Project and Review**

* Real-World Data Transformation Project
* Best Practices for Data Preparation and Analysis
* Course Review and Feedback

**Assessment and Certification**

* Weekly Assignments and Exercises
* Final Capstone Project

**Course Title:** Microsoft SQL Server for Beginners

**Course Description:** This course is designed to introduce beginners to the fundamentals of database management using Microsoft SQL Server. It covers the basics of SQL queries, database design, and data manipulation and retrieval techniques.

**Course Duration:** 8 Weeks

**Course Objectives:**

* Understand the basics of relational databases and SQL Server.
* Learn to write basic to advanced SQL queries.
* Gain proficiency in data manipulation and retrieval.
* Understand database design and normalization.
* Learn about stored procedures, functions, and triggers.

**Week 1: Introduction to Databases and MSSQL**

* Basics of Relational Databases
* Introduction to MSSQL and its Environment
* SQL Server Installation and Configuration
* SQL Server Management Studio (SSMS) Overview

**Week 2: Basic SQL Queries**

* Understanding Tables, Rows, and Columns
* Data Types and Schemas
* Writing Basic SELECT Queries
* Filtering Data with WHERE Clause
* Sorting Data with ORDER BY

**Week 3: Advanced Data Querying**

* Aggregate Functions and GROUP BY Clause
* JOIN Operations: INNER, LEFT, RIGHT, FULL
* Subqueries and Common Table Expressions (CTEs)
* Set Operations: UNION, INTERSECT, EXCEPT

**Week 5: Database Design and Normalization**

* Understanding Database Design
* Normalization Concepts
* Designing a Relational Database Schema
* Constraints: PRIMARY KEY, FOREIGN KEY, UNIQUE, CHECK

**Week 6: Indexing and Performance Tuning**

* Introduction to Indexing
* Types of Indexes: Clustered, Non-Clustered
* Query Optimization Techniques
* Understanding Execution Plans

**Week 7: Stored Procedures, Functions, and Triggers**

* Creating and Using Stored Procedures
* User-Defined Functions (UDFs)
* Working with Triggers
* Error Handling and Transactions in Procedures

**Week 8: Final Project and Review**

* Developing a Small Database Project
* Applying Learned Skills in a Real-World Scenario
* Course Review and Feedback

**Assessment and Certification**

* Weekly Assignments and Quizzes
* Final Project Submission
* Certification upon Course Completion

**Course Title:** Power BI for Data Analysis and Visualization

**Course Description:** This course introduces participants to Microsoft Power BI, a leading tool for business analytics and data visualization. Students will learn how to connect, transform, and visualize data using Power BI Desktop and Power BI Service.

**Course Duration:** 8 Weeks

**Course Objectives:**

* Learn the fundamentals of Power BI and its components.
* Understand how to connect to various data sources.
* Develop skills in data transformation and modeling.
* Create interactive reports and dashboards.
* Publish and share reports and dashboards.

**Week 1: Introduction to Power BI**

* Overview of Power BI
* Power BI Ecosystem and Components
* Installing Power BI Desktop
* Power BI User Interface

**Week 2: Data Connectivity**

* Connecting to Various Data Sources (Excel, SQL, etc.)
* Import vs. DirectQuery
* Data Refresh Options

**Week 3: Data Transformation**

* Power Query for Data Transformation
* Cleaning and Shaping Data
* Working with Queries in Power BI

**Week 4: Data Modeling**

* Basics of Data Modeling
* Creating Relationships Between Tables
* Introduction to DAX (Data Analysis Expressions)

**Week 5: Data Visualization**

* Creating Basic Visuals (Charts, Graphs, Tables)
* Formatting and Customizing Visualizations
* Best Practices for Data Visualization

**Week 6: Advanced Data Analysis and DAX**

* Writing Basic DAX Formulas
* Time Intelligence Functions
* Advanced DAX Scenarios

**Week 7: Creating Dashboards and Reports**

* Designing Interactive Reports
* Creating Dashboards in Power BI Service
* Using Bookmarks and Drillthrough

**Week 8: Publishing and Sharing**

* Publishing Reports to Power BI Service
* Sharing Dashboards and Reports
* Collaboration in Power BI

**Assessment and Certification**

* Weekly Practical Assignments
* Final Project: Building an End-to-End Power BI Report