FinShiksha

Course Outline

Financial Modelling

About Document

The purpose of this document is to provide an idea about the content covered in this course. You are also entitled to receive updated content for the next one year. All information has been sourced from publicly available data or a dummy data only for the illustration purpose.

Videos	Content covered
Module 1 - Basic Formatting, Intro to Excel, Key Functions, And Basic Charts	
Basic Formatting	Understand fundamentals of Excel Structure: Worksheet, Workbook, Rows and Columns Cut, Copy and Paste of Cell Content Cut, Copy and Paste function for Rows and Columns Understand Worksheet Protection
Usage of Formulas	How to write Formula Use Functions like SUM, AVERAGE, MIN, MAX, COUNTA, COUNTBLANK and COUNTA
Data Formatting	Use font, and font colour with borders Use alignment, wrap text and merge & centre Use different types of number format Use currency, percentage, comma delimited format Use table formatting Use autosum
Conditional Formatting Type 1	Range based conditional formatting using formula and different colours Understand how rules are created and modified to suit the purpose
Conditional Formatting Type 2	Conditional formatting to identify the duplicate values
Conditional Formatting Type 3	Conditional formatting on Company Sales Dashboard with trend Understand how to setup the values for flags
Conditional Formatting Type 4 and Type 5	Use pie style and traffic signal icons as a part of conditional formatting
Conditional Formatting Type 6	Conditional formatting usage to identify trend using bar style formatting
Sort and Filter	Use Sort and Filter – explore various options
Error Handling	Understand the various Errors in Excel #DIV/0! #NAME? #N/A #NULL! #NUM! #REF! #VALUE! Understand Error Handling in Excel using Formulas: IFERROR IFNA ISERR ISERROR ISNA
Charting	Bar Charts Line Chart Pie Chart Column Chart

Text to Column	Understand various concepts like Delimited, Fixed Width when Text is Converted to Column
Cell Referencing	Understand Absolute and Relative Cell Referencing in Excel and practical usage using example
Data Table Ranges	How to convert Table Data to Range and Usage in Formulas
Module 2 - Advanced Lookup Functions, Logical Functions, Information, Date, Text, Other key functions, Formula Auditing	
IF Functions	IF and Nested IF Along with IF, understand SUMIF, AVERAGEIF and COUNTI Understand how to use *Special Characters* in Excel
Vlookup	Understand SUMPRODUCT and its usage to find specific value from the table and limitations Create data list for the variable Vlookup formula understanding Vlookup formula as the array function Vlookup formula in conjunction with other formula like COUNT, SUM
INDEX and MATCH	Limitation of Vlookup function Explanation of INDEX Explanation of MATCH Usage of INDEX and MATCH function together to overcome limitation of Vlookup
OFFSET and INDIRECT	Explanation of OFFSET Find the latest value dynamically using OFFSET Function Explanation of INDIRECT Using INDIRECT create dynamic dropdown
Logical Functions	Understand functions with examples: AND OR XOR NOT IFS
Text Functions	Understand functions with examples: CHAR CONCAT EXACT FIND LEFT LENGTH LOWER MID PROPER REPLACE REPEAT RIGHT T TEXT TEXTJOIN TRIM UPPER
Date and Time Functions	Understand functions with examples: DAY DAYS

	DAYS360 HOUR MINUTE MONTH NETWORKDAYS NOW SECOND TIME TODAY WEEKDAY WEEKNUM WORKDAY YEAR YEARFRAC
Module 3 – Advanced Charting	
Advanced Charting	Bubble Chart Bullet Chart Waterfall Chart Thermometer Chart Combo Chart Understand finer nuances around representation of data on chart
Module 4 – Financial And Statistical Functions	
Financial Functions Part 1	Usage of PV, FV and CAGR Calculate time value of money concepts
Financial Functions Part 2	Advanced usage of Functions for creating Loan Amortization Schedule using PMT Function Calculate Depreciation using the similar approach
Financial Functions Part 3	Evaluate Projects using Capital Budgeting concepts like NPV, IRR and XIRR using Excel
Case Study - Normalization of Indices	Using excel we will analyse and understand (using various stock market index data) Average Daily Return Daily Standard Deviation Number of Positive Return Days Total Return CAGR Annualized Standard Deviation
Statistics	This module will explain Correlation and Descriptive Statistics Regression Multivariable Regression Forecast, Seasonality and Trend smoothening) Histogram Rank and Percentile ANOVA Test
Module 5 – Pivots and Pivot Charts	
PIVOT	Creation of PIVOT Table, PIVOT Charts, Slicers to be used in Dashboard and Creation of New Variable

Module 6 – Data Handling - Data Collection, Data Editing, What if Analysis, Data Tables, Solver	
FORECAST	How sales are predicated using Moving Averages and Liner Approximation. We use FORECAST function to solve the same.
Goal Seek	Using Goal Seek, understand how the financial planning works by incorporating Age, Retirement Age, Inflation, Expense
Solver	Using Solver, we solve a case related to a factory which tries to maximize production using the resources and constraints in place
Module 7 – MIS Dashboard Case	
MIS Dashboard	Through this Dashboard the concepts covered (dashboard uses data related to HR, Sales, Service specific data) Create list for a variable Create Radio buttons and Grouping of Buttons Creation of Sparklines Combination of Functions like SUMIF, COUNTIF, CHOOSE Creation of Dynamic Charts based on List Selection
Module 8 - Financial Modelling Case	
Financial Modelling	Two case study is solved using Excel in the field of Personal Financial Management. One of the Case is as below: *Mr. Z, aged 52 years, is working in a leading company. His net savings are Rs 50,000 p.m. Based on salary growth and other factors, he expects this to rise by 20% p.a. till his retirement at age 60. This does not include monthly contributions of Rs 9,000 (Rs 4000 own contribution: Rs 5000 employer contribution) to various funds towards retirement corpus. These are expected to grow by 20% p.a. till retirement. The retirement corpus by the end of the year will be Rs 12 lakhs, entirely in debt, which will yield 8% p.a. on average. Besides his own residential house and the retirement corpus, his savings and investments will amount to Rs 50 lakhs by the end of the year, 30% of which will be in equity. He has a practice of investing, at the end of each year, his disposable savings into debt and equity in the ratio of 80:20. In the long run, he expects equity to yield 15% and debt to yield 8.5%. At the end of age 55, he expects an outflow of funds amounting to Rs 5 lakhs, which he hopes to meet out of annual savings. He expects inflation of 10% and post-retirement investment return on his portfolio at 11%. His current expenses are Rs 40,000 per month. Assume zero date as the end of age 52. Calculations are to be done on annual basis. Ignore taxation and interest income on savings and contributions during the year.*
Module 9 – Company Financial Model	
DCF Model	In this module, we create an entire 3 Statement Valuation Model for a company. The module focuses on the creating the following parts of the model, and linking them, to create a completely dynamic model for valuation of securities P&L Statement Balance Sheet Cash Flows Discounted Cash Flows Discount Rate Calculation Capex Schedule Debt Schedule Assumptions and Business Drivers Identification
Module 10 – Portfolio Optimization	
Portfolio Optimization	In this module, we try to create an optimized portfolio, trying to either maximize the returns or minimize the risk in the portfolio, subject to certain constraints, and assuming a Normal

	Distribution in Asset Returns. For this purpose, we are using 3 asset classes – Equities (BSE Sensex), Gold, and Bonds (10 Year GSec) in India. The entire exercise will use some of the functions we have already studied, such as VLOOKUP & IFERROR for data organization Statistical Functions for various indices Functions such as COVARIANCE for the calculation of portfolio Standard Deviation NORM.DIST Solver