

Financial Analysis Certificate

Using Excel

by Distance Learning



Australia's premier Excel course for finance professionals for remote study

This course is designed for existing users of Excel or similar spreadsheet programs needing to vastly increase their modelling & analytical skills especially in the disciplinary areas of Finance, Accounting, Management & Procurement.

It is a unique & practical 48-hour hands-on course designed to improve the Excel modelling & analytical skills of finance professionals for the forecast, analysis & presentation of business & financial information.

Modes of Study

- By distance learning: 48 – 72 hours over six to twelve months (see separate brochure)

Key Outcomes

- Significantly upgrade your modelling & analytical skills;
- 48 to 56 hours of continuing professional education for accountants;
- Learn proven methodologies & techniques to build more transparent & powerful models & reports whilst reducing complexity;
- Gain effective approaches to build robust sensitivity into models;
- Build a useful & effective framework for assimilating technical knowledge;
- Importantly – develop measurable improvements in accuracy, productivity & transparency!

The Course Delivers

- A thorough grounding in the tools & features available in Excel;
- Techniques to assist in auditing & understanding existing workbooks;
- Coverage of essential Excel functions for modelling, forecasting & financial analysis;
- Methods to generalise formulas for more dynamic & flexible calculations for modelling & analysis;
- Approaches to simplify calculations & increase the transparency of models & analyses;
- Practical guidance on the layout & structuring of workbooks for financial modelling.

Who Benefits

- Financial modellers & those building valuation & forecasting models;
- Business Analysts responsible for forecasting & performance analysis;
- Accountants, finance managers & financial controllers budgeting & analysing business performance;
- Fund accountants & managers in equity & property funds;
- Financial advisers, public accountants, management consultants;
- Procurement, project planning & logistical staff responsible for financial & logistical planning;
- Managers responsible for their own analysis & forecasting;
- Post grad finance & MBA students from both financial & non-financial disciplines;
- Anyone who uses Excel to perform their role, looking to improve their productivity & accuracy.

Benefits for the Employer

- Direct & measurable improvement in staff productivity & a reduction in errors through good design;
- Standardisation of technique within workgroups is an important outcome;
- A number of our clients have made this course an integral part of their employee training & development programs & have reaped measurable benefits from the standardised techniques adopted;
- The very flexibility that is the principal attraction of modern spreadsheet products is the reason for shortcomings in design. A user must adopt & develop a strongly defined technique that enhances their efficiency, increases transparency & improves reliability. This course is not “just another Excel course”, it delivers on these requirements.

Testimonials

Most of these testimonials were offered some months after course completion, not just as polite feedback on the final day of the course.

- “During the six weeks since this course commenced, my models have evolved from complex and volatile to simple and efficient. Furthermore, I have been able to add a level of functionality that was hitherto unappreciated.” - Patrick H
- “I am writing to just let you know how much your course has helped me increase my productivity and add value to the work I do. With the learning’s from the course I can run various scenarios with so much ease. I have received appreciation from my manager and senior management as these models have really helped them in making informed business decisions” - Sameer M
- “I found this course incredibly helpful and would highly recommend it as a good investment of time and money to anybody requiring advanced skills in the use of Excel. It has been an invaluable resource with fantastic quality of course notes for later reference. As a business person involved in feasibilities, computer modelling, due diligence etc and in my work as a Chartered Accountant and Licensed Real Estate Agent, it has certainly been very helpful” - Rob E
- “This course is not just about "Formulas". James challenges our entrenched way of building models through technique and planning. A tremendous value-add for any employee using Excel!” - John E
- “James has a passion for his subject which he effectively communicates to his students. This course has the potential to be very dry but James keeps it interesting and relevant. Few courses achieve what they claim in their promotions however this course exceeded my expectations and was excellent value.” - Jim R

Detailed Course Outline

Key Techniques for Model Building

- Guidelines for effective model layout
- Guidelines for improving model and analytical clarity & reducing complexity
- Handling assumptions & designing for powerful & effective scenario & sensitivity analysis
- Model segregation

Sensitivities

- Setting up workbooks to enable sensitivity analysis
- Methods to implement scenario analysis
- Sensitivity & scenario analysis using Data Tables
- Models with tables of scenarios
- Dynamic reference sensitivity solutions
- Placement of data tables on any worksheet
- Multi-variable data tables

Formula Building

- Building formulas robustly
- Developing productive and error-averse formula entry techniques
- Pointing techniques to reference ranges & avoid errors
- Tools for building & interpreting formulas
- Important shortcuts for formula building
- Formula view, finding inconsistent formulas

Understanding Formulas

- Understanding Excel expressions (formulas) and how they are evaluated
- Excel operators and their precedence
- Relative, mixed, absolute & multi-sheet addressing; A1 versus R1C1 addresses
- Expression nesting and managing complexity
- Identifying & implementing the appropriate function to solve problems
- Formula building techniques to reduce referential errors
- Range, Union & Intersection operators
- Data types & conversion
- Understanding array formulas
- Understanding the new Dynamic array formulas
- When to use array functions
- Alternatives to array formulas
- Understanding ambiguous & generalised references

Keyboard Techniques

- Accessing ribbon controls, context menu commands, ranges, dialog boxes etc.
- Navigating and selecting ranges, sheets, objects, chart elements
- Range selection for formula entry, and during formula entry

Working with Names

- Understanding names
- Working with names
- Defining, creating & editing names
- Guidelines for the use of names - when and when not to use names
- Effective naming techniques
- Creating dynamically defined names
- Alternatives to naming ranges
- Use of names to improve workbook links
- Working with names in formulas
- Keyboard shortcuts for effective name use and navigation

Conditional Expressions

- Logical expressions & logical operators
- Use of trigger & switch expressions
- Use of IF() to handle conditional logic
- Use of CHOOSE() to handle conditional logic
- When (and when not) to use IF, CHOOSE, IFS, SWITCH
- Use of “Product of Comparison” formulas
- Replacing IF() with alternative, less complex solutions for conditional logic
- Handling complex, multi-step conditions
- Simplifying date-sensitive logic
- Implementing conditional formatting to identify errors, mismatches, duplicates
- Logical expressions in array formulas
- Alternatives to AND() and OR()

Lookup and Referencing Formulas

- Use of VLOOKUP(), HLOOKUP(), XLOOKUP(), LOOKUP()
- Use of MATCH(), XMATCH(), INDEX() to more flexibly reference data and ranges
- Exact match & threshold match type lookups & when to use each, setting search order and search method
- Dealing with discontinuities and conditional logic using lookup tables
- Use of OFFSET(), INDIRECT(), INDEX() and CHOOSE() to dynamically reference ranges
- Building dynamic names to be sensitive to data, including UNIQUE() & SEQUENCE()
- Use of ROW(), COLUMN(), ROWS(), COLUMNS(), ADDRESS() and CELL() in referential formulas to locate values
- Use of & issues with GETPIVOTDATA()
- Using choices in drop-down boxes to dynamically access data / settings / assumptions
- Alternatives to lookup formulas

Workbook Linking

- Building safe links using range names & the intersection operator
- Understanding link resolution
- Locating & removing invalid links

Working with Dates & Times

- Understanding Excel’s date & time functionality
- Date & time functions available in Excel
- Building date & time triggers for models
- Apportionment between financial periods
- Sensitivities dependent upon action dates & timing of transactions
- Robust solutions to deal with common but difficult calendrical calculations - Simplifying date and time logic which is a common source of complexity in many models
- Calculating financial year, financial quarter, recurrent dates, maturities
- Forecasting cyclically
- Use of and issues with YEARFRAC()
- Date & time custom formatting & related issues
- Converting to & from date & time values

Financial Functions

- Annuity cash flow functions PMT(), RATE(), NPER(), PV(), FV(), IPMT(), PPMT()
- Discounted cash flow functions IRR(), XIRR(), NPV(), XNPV()
- Statistical / forecasting functions SLOPE(), INTERCEPT(), RSQ(), TREND(), FORECAST(), FORECAST.ETS()

Data Type & Conversion Functions

- Information functions explained incl. ISBLANK(), ISNUMBER(), ISTEXT()
- Type conversion functions
- Coercion of data type by operator, function argument

Summary & Analysis using Formulas

- Formulas to identify & analyse matched, duplicate, missing or unique entries
- Functions including SUMIF(), SUMIFS(), COUNTID(), COUNTIFS(), and optimising
- Summarising data using standard formulas
- Summarising data using array formulas, including SUMPRODUCT()
- Ranking & sorting data using formulas
- Transposing ranges using array formulas
- Basic statistical functions
- Building frequency distributions with FREQUENCY()

Summary & Analysis using Tools

- PivotTables & accessing summarised data from pivot tables for reporting
- PivotTable settings
- Building calculated fields in PivotTables
- Building calculated items in PivotTables
- Consolidation via PivotTables (Power Query)
- Data subtotalling
- Outline & associated settings and shortcuts
- Filtering & sorting records
- De-duplicating data
- Working with text, CSV and data files
- Parsing text ranges
- Icon sets, colour scales & data bars using conditional formatting

Sample Reports & Financial Techniques

- Cyclic cash forecasts
- Forecasting costs and cash flows using S Curves
- Discounted Cash Flow calculations
- Financial distress forecasting using Z scores
- Monitoring financial performance using the DuPont model
- Developing a planning model including assumption tables & incorporating changes
- Building three-way models – integrated Profit & Loss Balance Sheet & Cash Flow

Formatting

- Understanding & using styles to build effective, manageable workbooks
- Key settings to improve workbook layout
- Using custom number formatting to control appearance of models
- Advanced custom formatting
- Conditional formatting
- Understanding Office themes
- Page layout settings
- Using and formatting shapes
- Working with linked text objects

Interface Design

- Data validation & creating in-cell drop-down boxes
- Utilising values from in-cell drop-down boxes & applying default values
- Embedded controls for managing dynamic lists, based on user selections
- Use of Styles for consistent layout & aiding end-user interaction

Model Deployment and Security

- Housekeeping & security
- Worksheet & workbook security
- Issues around distribution of models
- Understanding styles
- Development of templates, incorporating standard content & predefined styles
- Hyperlink Index worksheet for a standardised index to workbook content
- Template title pages

Working with Lists and Filling Ranges

- Understanding AutoFill
- Sorting shortcuts
- Re-ordering rows and columns
- Pick from list keys and settings
- Autocomplete settings
- Paste special settings
- Excel Tables & Column Formulas

Formula Errors

- Understanding the Excel error types, including new #SPILL! error
- Errors generated by ambiguous references
- Identifying & handling formula errors
- Identifying & handling data type errors
- Use of built-in functions to bypass errors rather than tortuous nested IF() functions
- Errors aren't all bad – making use of errors
- ISNA(), ISERR(), ISERROR(), ERROR.TYPE(), IFERROR(), IFNA() to manage errors
- Use of VALUE(), TEXT(), N(), T(), SUM() & information functions to avoid data type mismatch errors
- Formatting errors
- Reducing the complexity engendered by formula errors, alternative approaches
- Background error checking
- Building in a checklist

User Errors

- Building-in cross checks to identify data inconsistency & user errors
- Building-in defaults to avoid errors
- Identifying errors using conditional formatting & styles
- Useful custom formatting to present cross-checks & errors
- Identifying out-of-order lookup tables

Typical Course Schedule

The typical planned schedule is as follows, based on study sessions of approximately two to three hours each...

Session 1

- Case Study: Sales Forecasting model by region per page, consolidated totals and averages
 - Fundamental techniques for controlling Excel, navigating & selecting via mouse & keyboard shortcuts
 - Building robust formulas

Session 2

- Case Study: Loan Repayment Calculator
 - Address modes in Excel - working with Mixed, Relative and Absolute addresses
 - Data Tables introduced

Sessions 3 and 4

- Case Study: Simple Profit & Loss Model
 - Segregation of model
 - Layout of assumptions
 - Use of names in models working with names in models
 - Breaking down complexity
 - Handling conditional results
 - Use of switch and trigger formulas
 - Building-up forecasting calculations - sensitive to triggers & switches
 - Alternatives to IF() functions
 - Use of “Product of Comparison”
 - Adding scenarios to an existing model
 - Scenario sensitivity report with Data Tables

Session 5

- Review Exercise 1

Session 6

- Case Study: Summary Reports
 - Introduction to Lookup Functions
 - HLOOKUP(), VLOOKUP(), XLOOKUP(), LOOKUP()
 - Introduction to Conditional Functions
 - SUMIF(), SUMIFS(), COUNTIF(), COUNTIFS(), wildcard matching, date range matching

Session 7

- Case Study: Building a Dashboard
 - Date and selection sensitive formulas
 - Introduction to charting
 - Use of embedded charts
 - Conditional formatting for performance indicators

Session 8

- Case Study: Revised Sales Forecast
 - Dynamically retrieving drivers & assumptions
 - Use of MATCH() & INDEX() to streamline lookups
 - Formulas sensitive to Sheet Names

Session 9

- Case Study: Fixed Asset Register & Depreciation Forecast
 - Date sensitive calculations
 - Simplifying formula layout
 - Generating asset register using Data Table
 - Allowing for asset acquisition and disposal scenarios
 - Forecasting depreciation and asset balance movements for modelling

Session 10

- Review Exercise 2

Session 11

- Case Study: Cash Requirements Forecasting
 - Date sensitive calculations
 - Forecasting cyclic payments
 - Including conditional (scenario-based) flows

Session 12

- Case Study: DCF Modelling and Investment
 - Introductions to financial functions
 - Modelling sensitivity to key assumptions

Session 13

- Review Exercise 3

Session 14 and 15

- Case Study: Three-way Model
 - Layout for two-dimensional (time variable inputs)
 - Managing two-dimensional scenarios
 - Date sensitive triggers
 - Balance Sheet assumptions
 - Forecasting Balance Sheet movements from trading & P&L results
 - Deriving the Balance Sheet
 - Deriving the Source & Application of funds
 - Deriving movements in debt
 - Handling circularity in interest earned / paid

Session 16

- Case Study: Linked Workbooks Summary
 - Use of names to make links robust
 - Use of MATCH() & INDEX() in linking

Session 17

- Review Exercise 4 – optional if planning to do assessment

Session 18

- Final Assessment (optional)

Excel Version

- The course materials are fully compatible with all versions of Excel from Excel 2016 to Excel 2019 (Office 365). Version specific instructions are given where these vary between versions.
- Public courses are conducted using Excel 2019 (Office 365) desktop version.
- Some keyboard shortcuts taught are not available in the Macintosh versions of Excel but all formulas and techniques are applicable to the Macintosh.
- Some new features added in Excel 2019, are not supported by older versions of Excel, but they are included in the course and will become relevant as student machines are upgraded.
- Versions for the Macintosh before 2016 can be used, but some features are not supported and the ribbon and menu functionality is significantly different.

Course Materials

- The course materials include a 300+ page course text
- Access to online ready reference
- Online lectures and videos to support the materials presented
- A full set of blank and worked sample workbooks as well as a number of reference documents are available for download online.

Review Exercises & Study Process

The student works their way through the materials, completing the included exercises as they go. Sample solutions are provided for those exercises which they will need to check their progress, those for which the solution is not provided in the materials themselves.

In addition, starting in 2020, there are online modules with video to assist students in completing their studies. There are also some skills modules, not specifically based on particular modules, but demonstrating skills which may not be clear from written instructions.

In addition, there are four review exercises which are spaced at roughly even intervals throughout the materials and for which no solution is provided. They are designed to enable us to monitor the student's progress and to provide them with individual feedback and guidance. As each review exercise is encountered in the materials, the student should complete it and submit it for review. Students enrolled together may submit jointly worked exercises.

After the exercises are submitted and reviewed, commentaries and sample solutions are provided to the students for the review exercises. Each student or group will receive feedback on their own solution, workings, formula selection and layout.

The review exercises are not marked and included in any final grade, they are presented for educational purposes only and to allow some dialog between the facilitators and students.

Educational Support

Support is provided initially by email, although most students find they seek clarification on points as and when they submit review exercises, we will provide support at any time if the student is having difficulty completing exercises or understanding concepts.

Most needs can be fulfilled by the exchange of emails, however, where the concepts need to be explained or the student is clearly in need of further support, telephone will be made to discuss issues with the student. For longer international calls, Skype may be used.

Certificate and Assessment

Upon completing the course, the student has the option to sit the final assessment. If they do not elect to do so, the submission of the four review exercises, demonstrating techniques and knowledge from the course, leads to the award of the certificate of completion.

If the student elects to undertake the final assessment, they may opt to submit only the first three review exercises and undertake the assessment. About half prefer to complete all four review exercises before attempting the assessment. The student nominates a two-day period that is convenient to them, usually a weekend, and the materials are sent to them by email and they have the two days to complete and submit one or more of the assessment questions for grading. In this case, after assessment, a certificate is awarded at Pass, Credit, Distinction or High Distinction grade.

Time Allowed for Course Completion

Initially a student is allowed six months for completion and may be granted an automatic extension of six months if required, upon request.

Extensions beyond that are subject to a fee equivalent to twenty five per cent (25%) of the original course fee, although leniency will be extended where there are genuine extenuating circumstances. Average time for completion is six to nine months from commencement of actual study.

Public Courses

The offering of the Financial Analysis Certificate by Distance Learning is available year-round. Enrolments may be made at any time, with study due to commence on the supply of materials. For details, visit our web site (www.uts.edu.au/future-students/business/business-study-areas/accounting/continuing-professional-education/financial or bit.ly/uts-fac) or call +61 (0) 417-777-750.

About the Course Author and Lead Presenter



Following an early career in both public and commercial accounting, James Clarkson has more than twenty-five years' experience as a presenter of professional programs and more than thirty consulting & model building for corporate clients.

He has gained wide experience in model & analytical report design & development and also has wide experience in application development using Microsoft Office (especially Excel), Visual Basic & Visual Basic for Applications (VBA).

He is an outstanding educator, demonstrating the ability to clearly explain difficult and technical subjects and consistently rates above 90% for satisfaction across a number of measures on student evaluations.