Excel and Power BI in 10 Weeks

Build reliable Excel foundations and a useful Power BI report every week.

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HOW TO LEARN

You do not need to remember every button. Learn a repeatable way to prepare, model, visualise, check and explain data in Excel and Power BI.

The learner pathway

Each week uses the same rhythm: reconnect, explain, prepare or calculate in Excel, checkpoint, build in Power BI, challenge, quiz and submission. The overall balance is approximately 60% Power BI and 40% Excel.

Week	Focus	Outcome
1	**Ask better data questions**	Classify fields, calculate Sales Value, build three Power BI visuals and explain one finding with a limitation.
2	**Clean data with Power Query**	Build repeatable Power Query steps in Excel and Power BI, retain genuine conflicts and validate the loaded data.
3	**Calculate in Excel and DAX**	Create checked Excel calculations and matching Power BI measures that respond correctly to filters.
4	**Relate, look up and filter**	Choose between Excel lookup and filter patterns, then build and test a one-to-many Power BI relationship.
5	**Design tables and highlight exceptions**	Create a reliable Excel Table and a Power BI exception report with tested, accessible formatting rules.
6	**Build effective Power BI visuals**	Choose, build and critique comparison, trend and relationship visuals in Power BI using checked Excel totals.
7	**Compare PivotTables and Power BI**	Create, refresh and reconcile an Excel PivotTable dashboard and a Power BI matrix report from one source table.
8	**Build an interactive Power BI report**	Clean and load data, then build and test an accessible interactive Power BI report page with a reset state.
9	**Model data and write DAX**	Create a checked star schema, date table and reusable DAX measures, including a time-aware comparison.
10	**Power BI capstone: insight to action**	Build, test and present a two-page Power BI report with explicit measures, accessible design and responsible recommendations.

Weekly quality standard

[ ]	A clear learner outcome and software/version requirement.
[ ]	A starter file and a worked solution used after the independent attempt.
[ ]	At least one numerical or behavioural checkpoint.
[ ]	A challenge with visible success criteria.
[ ]	A five-question knowledge check with explanations in the interactive lesson.
[ ]	A submission checklist and exact filename.
[ ]	A finding, limitation and next question.

My learning goal for this course:

The support or adjustment that will help me learn:

Week 1 - Ask better data questions

OUTCOME	**Classify fields, calculate Sales Value, build three Power BI visuals and explain one finding with a limitation.**

Move from rows of data to a clear question, a checked Excel table and a first Power BI report.

What you will be able to do

- [ ] Frame a data task with What, Why, Who, Where and When.
- [ ] Recognise categorical, numerical and date fields.
- [ ] Calculate and check Sales Value in Excel.
- [ ] Build a chart, card and slicer in Power BI.
- [ ] State a finding without claiming an unsupported cause.

Submission

- [ ] Complete the interactive lesson and practical evidence.

Week 2 - Clean data with Power Query

OUTCOME	**Build repeatable Power Query steps in Excel and Power BI, retain genuine conflicts and validate the loaded data.**

Profile and clean the same records in Power Query, then load a checked result into Power BI.

What you will be able to do

[ ]	Profile values, blanks, types and distributions before changing data.
[ ]	Remove exact duplicate copies without deleting conflicting records.
[ ]	Standardise text and phone fields without inventing missing facts.
[ ]	Repeat the cleaning logic in Power BI Power Query and refresh it.
[ ]	Reconcile source, removed, retained and review-row counts.

Submission

[ ]	Surname_Firstname_Week02_Clean_Contacts.xlsx
[ ]	Surname_Firstname_Week02_Clean_Contacts.pbix
[ ]	Screenshots of Applied Steps and the 118 to 114 reconciliation.
[ ]	One sentence explaining what the cleaning process cannot prove.

Week 3 - Calculate in Excel and DAX

OUTCOME	**Create checked Excel calculations and matching Power BI measures that respond correctly to filters.**

Build checked Excel formulas, then turn the same business logic into reusable Power BI measures.

What you will be able to do

[ ]	Build readable Excel formulas with suitable relative and absolute references.
[ ]	Use SUM, AVERAGE, MIN and MAX and verify a result by a second route.
[ ]	Explain the difference between a stored column and a Power BI measure.
[ ]	Create Total Income, Total Costs and Net Result measures.
[ ]	Test that measures recalculate under a month filter.

Submission

[ ]	Surname_Firstname_Week03_Budget.xlsx
[ ]	Surname_Firstname_Week03_Budget_Measures.pbix
[ ]	Screenshot showing the unfiltered measure cards and Month slicer.
[ ]	A repair note for one Excel formula and one DAX measure.

Week 4 - Relate, look up and filter

OUTCOME	**Choose between Excel lookup and filter patterns, then build and test a one-to-many Power BI relationship.**

Use Excel lookups for one answer, then use Power BI relationships and slicers for interactive analysis.

What you will be able to do

[ ]	Choose between a single-value lookup and a multi-row Excel filter.
[ ]	Use exact-match XLOOKUP with a useful not-found result.
[ ]	Create sorted, filtered detail using dynamic arrays.
[ ]	Relate Products to Sales as one-to-many in Power BI.
[ ]	Test filter flow with Product and Campus slicers.

Submission

[ ]	Surname_Firstname_Week04_Dynamic_Report.xlsx
[ ]	Surname_Firstname_Week04_Relationships.pbix
[ ]	Screenshots of the Excel spill result and Power BI Model view.
[ ]	One reconciliation statement for a selected campus.

Week 5 - Design tables and highlight exceptions

OUTCOME	**Create a reliable Excel Table and a Power BI exception report with tested, accessible formatting rules.**

Structure dependable data in Excel, then build an accessible Power BI exception view.

What you will be able to do

[ ]	Convert a range to an Excel Table with accurate headers and a calculated column.
[ ]	Use structured references, filtering and a Total Row.
[ ]	Apply and test purposeful conditional-formatting rules.
[ ]	Build a Power BI table and matrix that expose below-target performance.
[ ]	Use text and labels so colour is not the only status signal.

Submission

[ ]	Surname_Firstname_Week05_Sales_Table.xlsx
[ ]	Surname_Firstname_Week05_Exception_View.pbix
[ ]	Screenshots of the Excel rules and the Power BI below-target page.
[ ]	A one-sentence purpose and test result for each formatting rule.

Week 6 - Build effective Power BI visuals

OUTCOME	**Choose, build and critique comparison, trend and relationship visuals in Power BI using checked Excel totals.**

Prepare checked summaries in Excel, then build an interactive Power BI visual story without overclaiming.

What you will be able to do

[ ]	Match comparison, trend and relationship questions to suitable visuals.
[ ]	Prepare and check supporting totals in Excel.
[ ]	Build sorted bar, line and scatter visuals in Power BI.
[ ]	Control slicer and cross-highlight interactions deliberately.
[ ]	Write a supported takeaway and limitation for each retained visual.

Submission

[ ]	Surname_Firstname_Week06_Visual_Story.xlsx
[ ]	Surname_Firstname_Week06_Visual_Story.pbix
[ ]	Screenshot of the unfiltered Power BI page and one selected state.
[ ]	A takeaway and limitation for each retained visual.

Week 7 - Compare PivotTables and Power BI

OUTCOME	**Create, refresh and reconcile an Excel PivotTable dashboard and a Power BI matrix report from one source table.**

Answer the same questions with Excel PivotTables and a Power BI matrix, then compare refresh and interaction.

What you will be able to do

[ ]	Place fields deliberately in PivotTable Rows, Columns, Values and Filters.
[ ]	Confirm Sum versus Count and apply suitable number formats.
[ ]	Build a Power BI matrix, chart, cards and connected slicers.
[ ]	Refresh both tools after a controlled source change.
[ ]	Reconcile totals and explain when each tool is useful.

Submission

[ ]	Surname_Firstname_Week07_Pivot_Dashboard.xlsx
[ ]	Surname_Firstname_Week07_PowerBI_Summary.pbix
[ ]	Screenshots of both tools with filters cleared and one Campus selected.
[ ]	A short refresh-test result and one tool-choice comparison.

Week 8 - Build an interactive Power BI report

OUTCOME	**Clean and load data, then build and test an accessible interactive Power BI report page with a reset state.**

Turn a checked query into a focused report page with deliberate layout, interactions and a reliable reset state.

What you will be able to do

[ ]	Create and name repeatable Power Query steps in Power BI.
[ ]	Verify types, rows and totals before designing visuals.
[ ]	Build cards, comparison, trend and slicer visuals around one question.
[ ]	Edit visual interactions and create a known reset state.
[ ]	Check layout, labels, empty states and accessibility.

Submission

[ ]	Surname_Firstname_Week08_Interactive_Report.pbix
[ ]	Screenshot of the Applied Steps and QA cards.
[ ]	Screenshots of the default state and one filtered state.
[ ]	One usability finding and the change made because of it.

Week 9 - Model data and write DAX

OUTCOME	**Create a checked star schema, date table and reusable DAX measures, including a time-aware comparison.**

Build a reliable star schema, organise explicit measures and explain how filter context changes each result.

What you will be able to do

[ ]	State the grain of fact and dimension tables.
[ ]	Create one-to-many, single-direction relationships.
[ ]	Build and mark a date table with correctly sorted month names.
[ ]	Create and organise explicit measures using SUM, DISTINCTCOUNT, DIVIDE and CALCULATE.
[ ]	Explain and test filter context with campus and date selections.

Submission

[ ]	Surname_Firstname_Week09_Model_Measures.pbix
[ ]	Screenshot of Model view.
[ ]	Screenshot of measure cards under one Campus filter.
[ ]	One sentence stating the FactSales grain.

Week 10 - Power BI capstone: insight to action

OUTCOME	**Build, test and present a two-page Power BI report with explicit measures, accessible design and responsible recommendations.**

Use a prepared model to answer an audience question, test the evidence and present a concise recommendation.

What you will be able to do

[ ]	Translate an audience need into three report questions.
[ ]	Create validated DAX measures using consistent names.
[ ]	Build an overview and detail page with intentional interactions.
[ ]	Test totals, filters, empty states and accessibility.
[ ]	Present a finding, recommendation, limitation and next question.

Submission

[ ]	Surname_Firstname_Week10_Capstone.pbix
[ ]	PDF export or screenshots of both report pages.
[ ]	Completed QA checklist.
[ ]	Four-part conclusion or two-minute presentation recording.

Course support and submission

The website teaches the course through guided builds, checks and explanations. Recordings are optional support, not a replacement for doing the work yourself.

Build and keep your own work

Follow the exact click route, complete the checks and explain what the result means. Keep your Excel and Power BI working files. The course website records learning progress but does not store coursework files.

Email your weekly work

Attach every file and item of evidence listed in the weekly assignment and email them to mcclellandp@src.ac.uk. Use the subject: Week number - your name - SRC student number. Use the exact filenames shown in the lesson. Do not send an untouched starter file or copy a worked solution.

Arrange weekly support

Support runs one evening each week from 6:30-10 pm. Email your tutor at least two hours beforehand to arrange a slot. Attending the first support session is advised, especially if the software or file setup is new to you.

Before you send

- The required Excel and Power BI files open and use the exact filenames.
- The lesson checkpoint or expected result has been verified.
- The work includes the requested finding, limitation and evidence.
- Every required file is attached and the email subject includes the week number, your name and SRC student number.