

# Day 1 Lab: Claude in Excel (OPTIONAL)

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**Duration:** 30-45 minutes

**Prerequisites:** Excel desktop or web, Claude Pro/Max/Team/Enterprise account

**Purpose:** Hands-on practice with Claude in Excel add-in using realistic business scenarios

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## Before You Start

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### Installation (5 minutes)

If you haven't installed Claude in Excel yet:

1. Open Excel (desktop or web)
2. Click **Insert > Add-ins** (or **Home > Add-ins**)
3. Search for "Claude by Anthropic"
4. Click **Install**
5. Claude sidebar appears — sign in with your Claude account
6. **Keyboard shortcut:** Ctrl+Alt+C (Windows) / Ctrl+Option+C (Mac)

**License requirement:** Claude Pro (\$20/mo), Max (\$100-200/mo), Team (\$30/user/mo), or Enterprise

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## Lab Files

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Download the sample files for this lab: - **Scenario 1:** `quarterly_sales_data.xlsx` (Sales analysis) - **Scenario 2:** `budget_vs_actual.xlsx` (Variance analysis) - **Scenario 3:** `broken_financial_model.xlsx` (Debugging) - **Scenario 4:** Blank Excel file (Template building)

Files provided in: `/labs/sample-data/claude-excel/`

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# Scenario 1: Sales Analysis & Insights (10 minutes)

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**File:** `quarterly_sales_data.xlsx`

**Context:** You're a regional sales manager reviewing Q1-Q4 performance across four regions (North, South, East, West) with three product categories (Hardware, Software, Services).

## Your Tasks

### Task 1A: Understand the Data (2 min)

Open the file and open Claude sidebar (Ctrl+Alt+C).

Ask Claude:

```
What are the key metrics in this workbook?  
Provide an overview of the data structure.
```

**What to observe:** - Claude reads ALL tabs, not just the active sheet - It identifies columns, data ranges, and relationships - Cell-level citations are clickable (click to navigate)

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### Task 1B: Trend Analysis (3 min)

Ask Claude:

```
What trends do you see in sales performance across  
regions and quarters? Which region and product  
category should I focus on?
```

Then ask:

```
Why did West region Software sales drop in Q3?  
Reference the specific cells in your answer.
```

**What to observe:** - Claude provides cell references (e.g., "Cell E15 shows...") - Click the reference to jump directly to that cell - Claude interprets patterns, not just summarizes numbers

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### Task 1C: Formula Creation (3 min)

Ask Claude:

```
Add a new column calculating QoQ (quarter-over-quarter)
growth percentage for each region. Show the formula.
```

**What to observe:** - Claude provides the formula AND explains how it works - It suggests where to place the formula - Confirmation pop-up appears before changes are made

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### Task 1D: Visualization Recommendation (2 min)

Ask Claude:

```
Suggest 3 ways to visualize this sales data.
Which would be most effective for an executive briefing?
```

**What to observe:** - Claude understands the audience (executives) - Recommendations are specific (chart types, data ranges)

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## Scenario 2: Budget Variance Analysis (10 minutes)

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**File:** budget\_vs\_actual.xlsx

**Context:** You're a finance analyst preparing a monthly variance report. The spreadsheet has budget, actual, and variance columns for 15 expense categories.

### Your Tasks

#### Task 2A: Identify Problem Areas (3 min)

Ask Claude:

Which expense categories have variances greater than 10%?  
Explain what this means for our budget performance.

Then:

Create a formula to flag any variance over \$5,000 OR  
over 10% of budget. Apply it to the Variance column.

**What to observe:** - Claude understands both absolute (\$) and relative (%) thresholds - Provides an IF/OR formula that meets both criteria - You must approve changes (confirmation pop-up)

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### Task 2B: Root Cause Exploration (4 min)

Ask Claude:

For the three largest negative variances, suggest possible reasons and what questions I should ask department heads.

**What to observe:** - Claude analyzes business context, not just numbers - Provides actionable follow-up questions - Helps you prepare for stakeholder conversations

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### Task 2C: Executive Summary (3 min)

Ask Claude:

Draft a 3-bullet executive summary of this variance report for the CFO. Focus on the most critical issues.

**What to observe:** - Claude synthesizes findings into leadership-ready language - Prioritizes by impact - Concise, decision-focused

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## Scenario 3: Debugging a Broken Model (10 minutes)

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**File:** `broken_financial_model.xlsx`

**Context:** You've inherited a financial model from a former analyst. It has multiple errors and you need to understand and fix them quickly.

### Your Tasks

#### Task 3A: Error Detection (3 min)

Open the file. You'll see several #REF!, #VALUE!, and #NUM! errors.

Ask Claude:

```
Find all errors in this workbook and explain what's causing each one. Prioritize by severity.
```

**What to observe:** - Claude identifies errors across multiple tabs - Explains the root cause (not just "there's a #REF! error") - Traces formula dependencies

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#### Task 3B: Fix Critical Errors (4 min)

Ask Claude:

```
Fix the #REF! errors in the Revenue tab. Explain what you're changing and why.
```

**What to observe:** - Claude highlights EVERY cell it changes - Provides explanation for each fix - Preserves formula dependencies - You can undo with Ctrl+Z if needed

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#### Task 3C: Model Validation (3 min)

After fixes, ask Claude:

```
Are there any remaining errors? Also check for circular references and potential logic issues in the formulas.
```

**What to observe:** - Claude checks for non-obvious issues (circular refs, logic errors)  
- Proactive about model integrity

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## Scenario 4: Build a Template from Scratch (10 minutes)

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**File:** Blank Excel file

**Context:** You need a monthly expense tracking template for your team. Instead of building it manually, let Claude create it.

### Your Tasks

#### Task 4A: Define Requirements (2 min)

Open a blank Excel file. Ask Claude:

```
Create a monthly expense tracking template with these columns:  
- Date  
- Category (dropdown: Travel, Meals, Supplies, Software, Other)  
- Description  
- Amount  
- Receipt? (Yes/No dropdown)  
- Status (dropdown: Pending, Approved, Reimbursed)
```

```
Also add a summary section at the top showing:
```

```
- Total expenses  
- Total by category  
- Pending vs. approved count
```

**What to observe:** - Claude builds structure, formulas, and dropdowns - Creates summary section with formulas - Applies basic formatting

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#### Task 4B: Add Formatting (3 min)

Ask Claude:

Apply conditional formatting:

- Highlight expenses over \$500 in yellow
- Highlight "Pending" status in orange
- Make the summary section header bold with light blue background

**What to observe:** - Opus 4.6 model (select from dropdown) has stronger formatting capabilities - Claude applies rules and explains what it did

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#### Task 4C: Data Validation (2 min)

Ask Claude:

Add data validation so Amount can only accept positive numbers and Date must be in the current month.

**What to observe:** - Claude sets Excel data validation rules - Explains the constraints applied

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#### Task 4D: Test & Refine (3 min)

Add 5 sample expense entries manually, then ask Claude:

Review my sample data and suggest improvements to the template based on how I'm using it.

**What to observe:** - Claude analyzes your usage pattern - Suggests practical improvements (additional columns, formulas, etc.)

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## Security Exercise (5 minutes) ⚠️ IMPORTANT

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**Context:** Prompt injection is a real risk with Claude in Excel. Malicious instructions can be hidden in cells, formulas, or comments.

## Your Task: Understand the Risk

### Task 5A: Read the Warning (2 min)

Ask Claude:

What is prompt injection in spreadsheets and why should I be careful?

**What to observe:** - Claude explains the risk - Emphasizes the confirmation pop-up as protection

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### Task 5B: Safe Practices (3 min)

Ask Claude:

What are 5 best practices for using Claude in Excel safely, especially with spreadsheets from external sources?

**Key takeaways to remember:** 1. ☐ **Always approve changes** — read the confirmation pop-up carefully 2. ☐ **Use with trusted spreadsheets only** — avoid downloaded templates, vendor files 3. ☐ **Undo is your friend** — Ctrl+Z works on all Claude changes 4. ☐ **Verify critical outputs** — especially financial calculations 5. ☐ **Don't share sensitive data** — use dummy data for testing

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## Reflection & Debrief (5 minutes)

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### Discussion Questions

1. **What surprised you?**
2. What did Claude do that impressed you?
3. What did it struggle with?
4. **Where would you use this in your actual work?**
5. What repetitive Excel tasks could Claude handle?
6. What's one workflow you'd automate this week?

7. What concerns do you have?

8. What makes you hesitant to trust Claude's output?

9. How would you verify its work?

10. Claude vs. Copilot in Excel

11. When would you use Claude instead of Copilot?

12. When would Copilot be better?

Decision Guide: When to Use Claude in Excel

Task	Use Claude	Use Copilot	Use Manual
Explain complex formula chains	☐	⚠	×
Debug errors with root cause	☐	⚠	×
Build financial models	☐	⚠	☐
Create PivotTables quickly	☐(new)	☐	⚠
Python in Excel	×	☐	×
VBA macros	×	⚠	☐
Audit-critical calculations	⚠	⚠	☐
Untrusted spreadsheets	×	×	☐

**Legend:** - ☐ Recommended - ⚠ Use with caution - × Not supported or not recommended

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# Key Takeaways

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## What Claude in Excel Does Well

- ☐ **Cell-level citations** — clickable references that navigate you to source data
- ☐ **Change tracking** — highlights and explains every modification
- ☐ **Whole workbook understanding** — reads all tabs, formulas, dependencies
- ☐ **Formula debugging** — traces errors to root cause
- ☐ **Financial modeling focus** — purpose-built for analysis

## Current Limitations (as of Feb 2026)

- × **No VBA support** — can open .xlsm but can't modify/execute macros
- × **No Power Query/Power Pivot**
- × **Chat history not saved** — fresh conversation each session
- ⚠ **Prompt injection risk** — never use with untrusted spreadsheets

## Best Practices

1. **Always verify** — Claude assists, you validate
2. **Approve carefully** — read confirmation pop-ups
3. **Use with trusted data only** — prompt injection is real
4. **Iterate** — refine outputs with follow-up prompts
5. **Combine tools** — Claude + Copilot + manual work

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## Bonus Challenges (If Time Permits)

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### Challenge 1: Multi-Sheet Analysis

Create a workbook with 3 tabs (Sales, Expenses, Profit). Ask Claude to: - Summarize relationships between tabs - Create a dashboard tab that pulls from all three

### Challenge 2: Scenario Planning

Using the budget file, ask Claude to: - Increase all categories by 3% for next year's budget - Show the impact on total budget - Create a side-by-side comparison

## Challenge 3: Error-Free Formula Audit

Take any complex spreadsheet you have and ask Claude to: - Audit all formulas for potential errors - Flag any cells that might break if data changes - Suggest more robust alternatives

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## Lab Completion Checklist

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By the end of this lab, you should be able to:

- ☐ Install and open Claude in Excel (Ctrl+Alt+C)
  - ☐ Ask Claude to analyze spreadsheet data
  - ☐ Use cell-level citations to navigate
  - ☐ Create and debug formulas with Claude's help
  - ☐ Build a template from natural language requirements
  - ☐ Apply conditional formatting and data validation
  - ☐ Understand prompt injection risks and safe practices
  - ☐ Decide when to use Claude vs. Copilot vs. manual work
  - ☐ Verify Claude's outputs before trusting them
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## Additional Resources

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**Official Documentation:** - Claude in Excel Help: <https://support.claude.com/en/articles/12650343-using-claude-in-excel> - Claude in Excel Landing Page: <https://claude.com/claude-in-excel>

**Installation Guides:** - AlphaTechFinance 2026 Guide: <https://alphatechfinance.com/productivity-app/claude-for-excel-2026-guide/> - SumProduct Setup Guide: <https://sumproduct.com/blog/ai-blog-claude-for-excel-basics-setup-and-licence-requirements/>

**Microsoft Marketplace:** - Claude Add-in: <https://marketplace.microsoft.com/en-us/product/saas/wa200009404>

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# Instructor Notes

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**Time Allocation:** - Scenario 1 (Sales): 10 min - Scenario 2 (Budget): 10 min - Scenario 3 (Debugging): 10 min - Scenario 4 (Template): 10 min - Security: 5 min - Debrief: 5 min - **Total:** 50 minutes (flexible based on class pace)

**Tips for Success:** - Students can skip scenarios based on interest (e.g., finance-focused users prioritize Scenarios 2-3) - Demo Scenario 1 live if students struggle with installation - Emphasize the security section — prompt injection is a real risk - Have backup sample files ready in case downloads fail - Encourage sharing: "What did Claude do for you that was surprising?"

**Common Issues:** - "Claude sidebar won't open" → Check add-in is installed and signed in - "Claude isn't understanding my prompt" → Be more specific, include column names - "Changes aren't applying" → Check if confirmation pop-up was approved - "I don't have Pro/Max/Team/Enterprise" → Use demo/instructor's account for lab

**Model Selection:** - Sonnet 4.5 (default) — Faster, good for most tasks - Opus 4.6 — Better for complex formatting, deeper reasoning - Switch models via dropdown in Claude sidebar