

Data Storytelling with Excel Course

Transform raw data into persuasive visual narratives using a structured, hands-on workflow in Microsoft Excel. This one-day course teaches federal professionals how to eliminate visual clutter and apply cognitive design principles to deliver clear, actionable insights to leadership and the public.

Group classes in Live Online and onsite training is available for this course. For more information, email onsite@graduateschool.edu or visit: <https://www.graduateschool.edu/courses/data-storytelling-with-excel-course>



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Course Outline

Module 1: The Importance of Context

- Learn the difference between exploratory and explanatory analysis.
- Understand your audience and what they need from your data.
- Ask the right questions before building any visualization.
- Use the 3-Minute Story and Big Idea techniques to distill your message.
- Plan your visual narrative through storyboarding.
- Ensure your data is clean and reliable before you begin.

Module 2: Choosing an Effective Visual

- Match your data relationships to the right visualization type.
- Know when simple text or tables work better than charts.
- Use bar charts and bullet charts for comparisons.
- Show trends with line charts, slopegraphs, and sparklines.
- Display composition with stacked bars, waterfall charts, and treemaps.
- Avoid 3D effects, misleading dual-axis charts, and overly complex visuals.

Module 3: Clutter is Your Enemy

- Recognize that your audience has limited mental processing capacity.
- Identify clutter like unnecessary borders, gridlines, and decorative elements.
- Apply Gestalt principles to create visual groupings and order.
- Use alignment and white space strategically.
- Systematically remove elements that don't contribute to understanding.
- See before-and-after examples that demonstrate the power of simplification.

Module 4: Focus Your Audience's Attention

- Understand how memory affects the way people process visuals.
- Use preattentive attributes like color, size, and position to grab attention instantly.
- Apply the gray baseline technique to make key data stand out.
- Create visual hierarchy through size and placement.
- Design with color accessibility in mind for all viewers.
- Direct attention strategically in both text and graphs.

Module 5: Think Like a Designer

- Make charts intuitive by leveraging familiar visual conventions.
- Design for accessibility with proper contrast, font sizes, and alt text.
- Build trust and credibility through visual appeal.
- Ensure your work gets seen and used by considering your audience's environment.
- Explore how Excel's AI features can assist your design process.
- Maintain consistency and professionalism across all your visualizations.

Module 6: Dissecting Model Visuals

- Analyze an annotated line graph with forecast elements.
- Examine strategic use of positive and negative values in stacked bars.
- Study a before-and-after slopegraph comparison.
- Review a decluttered dashboard panel with clear visual hierarchy.
- Identify the principles that make these visualizations effective.
- Discuss ethical considerations and how to avoid misleading your audience.

Module 7: Lessons in Storytelling

- Discover why our brains are wired to respond to narrative.
- Structure your data story with a clear setup, conflict, and resolution.
- Build tension through the sequence of your visualizations.
- Reinforce key messages through repetition across different channels.
- Ensure your story flows logically from start to finish.
- End with impact and a clear call to action.

Module 8: Pulling It All Together

- Walk through a complete 7-step data storytelling workflow.
- Integrate context, chart selection, decluttering, attention, design, and narrative.
- Complete a capstone exercise using a provided dataset.
- Review common pitfalls to avoid in your own work.
- Receive resources for continued learning including books, tools, and communities.
- Explore next steps like Power Query, interactive dashboards, and advanced features.