Building Teaching Handbooks

with Claude AI

A Quick-Start Guide for Educators

This document was generated entirely by Claude, Anthropic's AI assistant. It serves as both a guide to using Claude for teaching material preparation and a demonstration of the document formatting quality Claude can produce.

Tools used: **Claude.ai** (web & desktop) + **Claude Code** (command line)

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What Is Claude?

Claude is an AI assistant developed by Anthropic. For educators preparing course materials, Claude offers three access points, each suited to different workflows and comfort levels.

Platform	Description
Claude.ai (Web)	Browser-based chat interface at claude.ai. No installation required. Ideal for drafting text, generating outlines, brainstorming exercises, and reviewing content. Supports file uploads (PDFs, spreadsheets, images) for analysis.
Claude Desktop App	Standalone application for macOS and Windows. Same capabilities as the web version with native OS integration. Convenient for frequent use without keeping a browser tab open.
Claude Code (CLI)	Command-line tool for advanced users. Can directly create, edit, and format documents (Word, Excel, PowerPoint, PDF) on your computer. This is what produced the document you are reading now.

> **Getting Started**
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> If you are new to Claude, the web interface (claude.ai) or the desktop app is the easiest way to begin. You can start generating teaching materials immediately with no setup. Claude Code is optional and best suited for users who are comfortable with a terminal environment.

What Claude Can Do for Teaching

Claude can assist with virtually every stage of course material preparation. Below are some of the most common applications for educators.

Content Generation

Claude can draft lecture notes, case study discussions, assignment prompts, and exam questions from a brief description of the topic and learning objectives. It can tailor content to specific student levels (introductory, intermediate, advanced) and align with your pedagogical approach. For example, you might ask Claude

to generate a set of practice problems on exponential smoothing that progress from basic calculation to interpretation of results.

Document Formatting

Using Claude Code, you can generate publication-quality Word documents, Excel spreadsheets with formulas and charts, PowerPoint presentations, and PDF handouts directly from natural language instructions. Claude handles styling, table formatting, page layout, and cross-references, freeing you to focus on content rather than formatting.

Data Analysis & Visualization

Claude can build interactive analysis templates, generate charts and graphs, and create sample datasets for classroom exercises. It supports Python, R, Stata, and Excel, making it adaptable to whatever analytical tools your course uses.

Editing & Refinement

Upload an existing document, and Claude can proofread, restructure, or reformat it. This is particularly useful for converting rough notes into polished handbooks or transforming a set of slides into a written study guide.

Example Workflow

The following illustrates a typical workflow for creating a teaching handbook chapter using Claude.

Step 1

1	**Draft the Content**
	Open Claude (web or desktop) and describe what you need: "Create a teaching module on ARIMA time series forecasting for MBA students. Include an intuitive explanation, step-by-step Stata examples, and three practice problems with solutions."

Step 2

2	**Review and Iterate**
	Claude generates a complete draft. Review it and ask for specific adjustments: "Simplify the explanation of differencing" or "Add a real-world supply chain example using retail demand data." Each revision builds on the previous version.

Step 3

3	**Format the Document**
	Once the content is finalized, ask Claude to produce a formatted Word document, PDF, or PowerPoint. You can specify styling preferences such as font, color scheme, heading hierarchy, and table formatting.

Step 4

4	**Generate Supplementary Materials**
	Ask Claude to create companion materials: an Excel template for students to practice with, a solution key, a grading rubric, or a set of discussion questions for in-class use.

Complementing Quarto & GitHub

If you already use Quarto for document rendering and GitHub for version control, Claude can generate Quarto-compatible markdown (.qmd) files with YAML headers, code chunks, and cross-references. You can also ask Claude to write the R or Python code blocks that Quarto will render, then commit the output to your repository.

Sample: Formatted Data Table

Below is an example of a formatted summary table that Claude can produce directly in Word. This type of output is useful for course handbooks, student reference sheets, or report templates.

Table 1. Forecasting Methods Overview

Method	Best For	Complexity	Stata Command
Moving Average	Stable demand patterns	Low	tssmooth ma
Exponential Smoothing	Trend + seasonality	Medium	tssmooth exponential
ARIMA	Complex autocorrelation	High	arima
OLS Regression	Causal relationships	Medium	regress

This document was produced entirely by Claude to demonstrate its document generation capabilities. For questions or a live walkthrough, feel free to reach out.

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