

INTRODUCTION TO SPREADSHEETS & MODELS

Don Huesman

Module 1: Spreadsheets as a tool for thinking with numbers

Lecture 1 Objectives & a little spreadsheet history



Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE

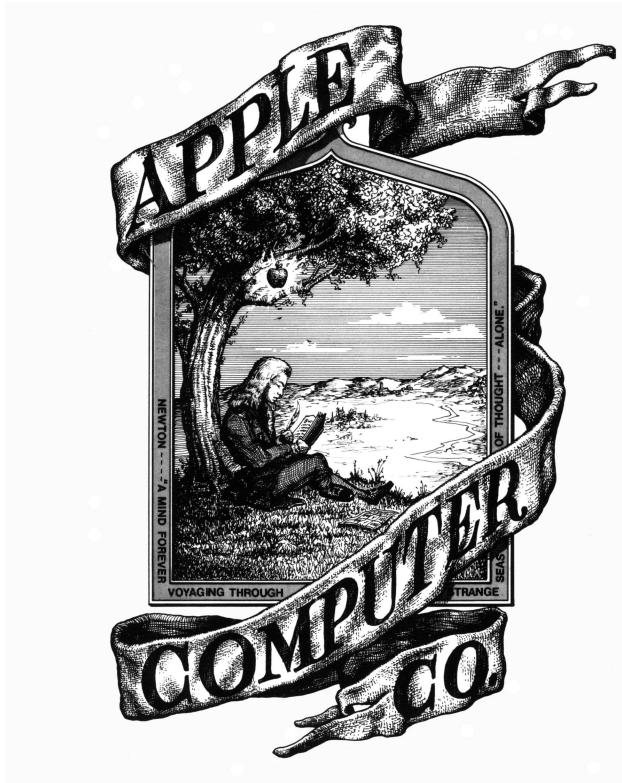
Course organization

- Module 1 – the spreadsheet as a tool for thinking with numbers, and a little history
- Module 2 – moving from spreadsheets to models
- Module 3 – statistical operations in Excel & Sheets
- Module 4 – linear programming in Excel & Sheets

Lecture 1 Learning objectives

- Understand the context in which spreadsheets and personal computers first emerged as tools for individuals
- Review the differences between ledgers & spreadsheets
- Identify the tools needed to complete the course, and where to find them

The spreadsheet as the original “killer app”



The spreadsheet as the original “killer app”



Dan Bricklin & Bob Frankston, circa 1979

From ledgers

	1925 add		1928	
	1923 5 yrs Apr 11			
	1926 5 yrs July 26	1931 add	2000	
			3000	
	1926 add	July 26 1931 tot	5000	
			add 250	
	1926 add	Sept 28 1928 tot	10100	
	1927 5 yrs	May 19 1932 add	3610	
	1927 yrs		500	
	1925 yrs	May 20 1930 tot	3550	
		June 2 1932	4500	

To models



Resources

- Software used in this Specialization
 - [Excel](#)
 - [Google sheets](#)
 - Data analysis toolpak for Excel
 - XLMiner Analysis Toolpak for Sheets

INTRODUCTION TO SPREADSHEETS & MODELS

Don Huesman

*Module 1: Spreadsheets as a tool for thinking with numbers
Lecture 2 Navigating a spreadsheet and crafting formulas*



Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE

Lecture 2 Learning objectives

- Gain familiarity and comfort in navigating a spreadsheet,
- Identify the different types of data used in a spreadsheet and options for displaying them
- Use spreadsheet notation for mathematical operations on cells and arrays
- Understand and control the order of processing in formulas
- Use shortcuts for copying data and formulas

Exploring a new job opportunity by thinking through the numbers



INTRODUCTION TO SPREADSHEETS & MODELS

Don Huesman

Module 1: Spreadsheets as a tool for thinking with numbers

Lecture 3 Using functions



Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE

Lecture 3 Learning objectives

- Learn to use built in functions, including those included in the Business & Financial Modeling specialization
- Understand the different uses of the sum and sumproduct functions
- Use basic statistical functions of average, min, max and standard deviation

Exploring a new business opportunity by thinking through the numbers



INTRODUCTION TO SPREADSHEETS & MODELS

Don Huesman

Module 1: Spreadsheets as a tool for thinking with numbers

Lecture 4 Using conditional expressions in formulas



Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE

Lecture 4 Learning objectives

- Use conditional expressions within the logic of your formulas
- Understand some applications of conditional logic

INTRODUCTION TO SPREADSHEETS & MODELS

Don Huesman

Module 1: Spreadsheets as a tool for thinking with numbers

Lecture 5 Common errors in spreadsheets



Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE

Lecture 5 Learning objectives

- Understand relative and absolute references in formulas
- Recognize errors in formulas
- Identify and correct circular references
- Audit formulas

INTRODUCTION TO SPREADSHEETS & MODELS

Don Huesman

Module 1: Spreadsheets as a tool for thinking with numbers

Lecture 6 Differences between Sheets and Excel



Wharton
UNIVERSITY of PENNSYLVANIA

ONLINE

Excel & Sheets

- Differences between Excel & Sheets
- Creating a Google account to use Sheets
- Installing add-ins for statistical computation