

Course Details

- Instructor: Rich Malloy
 - Adjunct Professor, NCC
 - Computer Consultant
- Tuesdays, 6-9pm, 9/14 – 10/19
- Class Website: bit.ly/ncc-excel

The Class Website

- Go to: bit.ly/ncc-excel
- Source for:
 - Slide shows
 - Workbooks
 - Videos
- Will remain available after course

How to Take Part in the Course

- A recent copy of Excel is needed
 - Prefer Windows, but Mac is OK
 - Free versions available
- If you have problems ...
 - Don't hesitate to speak up

Student Benefits

- Student Email Address
 - Primary way for college to contact you
- Free Software
- Student Discounts
 - Use your .edu student email address
- College Gym
 - Is it open yet?

INTRODUCTION TO EXCEL

What Can Excel Do for Us?

1. Organize Data in Tables
2. Do Calculations
3. Create Charts & Graphs

Why Do We Want to:

1. Organize Data in Tables
2. Do Calculations
3. Create Charts & Graphs



What's the Goal of Business?



What's the Best Program for Keeping Track of Money?

- An Accounting Program such as QuickBooks
- But Excel is much more *versatile!*

How Do You Get Excel?

- Part of Microsoft Office
- Office 2019
 - Latest version
 - Office Home & Student: \$129
- Office 365
 - Rental program
 - \$79/year for 5 users

Which Versions for the PC?

- Excel 2003 and earlier
-
- Excel 2007
- Excel 2010
- Excel 2013
- Excel 2016
- Excel 2019

What About the Mac?

- Similar, not exactly the same, yet
- Single mouse button
- Command key vs Control key


Excel for Free?

- Simple on-line version
 - www.office.com
- Limited tools
- Great for collaboration/groups

Are There Any Alternatives?

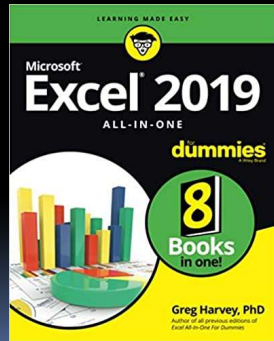
- LibreOffice or OpenOffice
 - Download for free
- Google Drive
 - Online, limited, free
- Apple Numbers
 - Download and Online, free
 - Different user interface

Free for NCC Students!

1. Go to: norwalk.edu
2. Click: MYCOMMNET
3. Click: LOG IN
4. Enter your Student ID & Password
5. Click the link for Outlook
6. Click the App Launcher button 
7. Click: Office 365
8. Click: Install Office

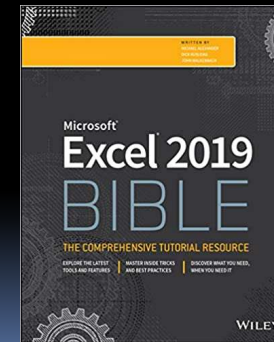
SUGGESTED BOOKS

Easy Read



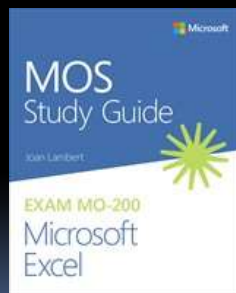
- Includes section on Excel Basics
- Approx. \$19

Comprehensive Resource



- Over 1,000 pages
- Approx. \$36

Microsoft Office Specialist



- Prepare for certification exam
- Approx. \$25

ONLINE TRAINING

Microsoft Training Videos

- Dozens of short videos
 - E.g., "IF Function"
- Go to:
 - <https://support.office.com/en-us/article/excel-for-windows-video-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>

Lynda.com

- Now: "LinkedIn Learning"
- Hundreds of video courses
- Approx. \$30/month
- Free at some local libraries

Udemy.com

- Hundreds of courses
- About \$10 each

Other Resources

- Google
- YouTube

MOS Certification

- Become "Microsoft Certified"
- 90-Minute Exam
- Approx. \$130 for two attempts
- Nearest: Westchester Comm. Coll.
- For more info:
 - <https://www.microsoft.com/en-us/learning/mos-certification.aspx>

WHAT IS A SPREADSHEET?

Pay roll at BRADWELL, N. Y. for work ending July 11, 1904.

Name	Occupation	10/10/03	7/10/04	Days Worked	Rate	Total
J. A. Shillet	Foreman	10/10/03	7/10/04	80	125*	10,000
M. W. Van Delt	Clerk	10/10/03	7/10/04	80	125*	10,000
William Ruyter	Night Watchman	10/10/03	7/10/04	80	87*	7,000
J. C. Zimmerman	Welder - working both	10/10/03	7/10/04	80	87*	7,000
J. D. Probst	"	10/10/03	7/10/04	80	87*	7,000
George Brown	"	10/10/03	7/10/04	80	75*	6,000
J. C. Shillet	Book Stacker	10/10	7/10	70	-	2,100
J. C. Salkin	"	5/10	7/10	18	-	1,350
J. P. Ruyter	"	5/10	7/10	35	-	3,080
Wm. Brown	Weld in team	10/10/03	7/10/04	80	35*	2,800
Wm. Brown	Blowing - both ends	10/10	7/10	17	16*	270
Wm. Brown	"	10/10	7/10	17	16*	270
Alonzo Johnson	Setting back to work	10/10/03	7/10/04	425	10*	4,250
Adam Brown	"	10/10	7/10	70	-	2,100
George Brown	"	10/10/04	7/10/04	35	-	3,080
Wm. Brown	"	10/10/03	7/10/04	80	-	6,000
J. C. Probst	"	10/10/03	7/10/04	25	-	2,080
Frank Probst	"	10/10	7/10	15	-	1,350
Wm. Brown	"	5/10/03	7/10/04	55	-	5,000
Samuel Snyder	"	10/10/03	7/10/04	80	-	6,000
Wm. Brown	"	10/10/03	7/10/04	80	-	6,000
J. C. Shillet	Repairing (factory)	10/10/03	7/10/04	30	-	2,700
J. C. Salkin	"	11/10	7/10	125	-	1,125
J. M. Brown	"	6/10	7/10	20	-	1,800
J. C. Probst	Painting at Stillman	25/10/03	7/10/04	225	-	2,250
J. C. Zimmerman	"	10/10/03	7/10/04	80	-	6,000
						\$12,850

An Old Spreadsheet

ELECTRONIC SPREADSHEETS

A Typical Spreadsheet

Cash Flow Comparison		
Actual versus Budget		
	Jan-06	
	Estimated	Actual
Cash balance (start of month)	\$ 1,500.00	\$ 1,500.00
Receipts		
Cash sales	1,700.00	1,852.00
Cash expenditures		
Advertising	200.00	211.00
Wages	900.00	900.00
Supplies	100.00	81.00
Total cash expenditures	1,200.00	1,192.00
Net cash flow	500.00	660.00
Cash balance (end of month)	\$ 2,000.00	\$ 2,160.00

Formulas

Cash Flow Comparison		
Actual versus Budget		
	Jan-06	
	Estimated	Actual
Cash balance (start of month)	\$ 1,500.00	\$ 1,500.00
Receipts		
Cash sales	1,700.00	1,852.00
Cash expenditures		
Advertising	200.00	211.00
Wages	900.00	900.00
Supplies	100.00	81.00
Total cash expenditures	1,200.00	1,192.00
Net cash flow	500.00	660.00
Cash balance (end of month)	\$ 2,000.00	\$ 2,160.00

What If ... ?

Cash Flow Comparison		
Actual versus Budget		
	Jan-06	
	Estimated	Actual
Cash balance (start of month)	\$ 1,500.00	\$ 1,500.00
Receipts		
Cash sales	1,700.00	1,852.00
Cash expenditures		
Advertising	200.00	211.00
Wages	900.00	900.00
Supplies	100.00	81.00
Total cash expenditures	1,200.00	1,192.00
Net cash flow	500.00	660.00
Cash balance (end of month)	\$ 2,000.00	\$ 2,160.00

Increase by \$100

The Impact

Cash Flow Comparison		
Actual versus Budget		
	Jan-06	
	Estimated	Actual
Cash balance (start of month)	\$ 1,500.00	\$ 1,500.00
Receipts		
Cash sales	1,700.00	1,852.00
Cash expenditures		
Advertising	200.00	211.00
Wages	900.00	900.00
Supplies	100.00	181.00
Total cash expenditures	1,200.00	1,292.00
Net cash flow	500.00	560.00
Cash balance (end of month)	\$ 2,000.00	\$ 2,060.00

Recalculates Automatically

How Does Excel Earn Money?

- An Example

An Order Form

855850

CUSTOMER'S ORDER NO.	DEPARTMENT	DATE	
		10/11	
NAME <i>R. Fleming</i>			
ADDRESS <i>625 E. Peterson</i>			
CITY, STATE, ZIP <i>Warwick 06853</i>			
SOLD BY <i>SJD</i>	CASH	C.O.D.	
	CHARGE	ON ACCT.	
	MOISE RETD.	PAID OUT	
QUANTITY	DESCRIPTION	PRICE	AMOUNT
1			
2	<i>PK9 Disk kits</i>	<i>19.95</i>	<i>38.90</i>
3			
6	<i>SR2 Assemblies</i>	<i>7.75</i>	<i>42.50</i>
3	<i>RJ Metal rods</i>	<i>1.95</i>	<i>4.85</i>
7			
8			
9			<i>\$ 76.25</i>
10			
11			
12			
13			

Hard to Read

Math Errors!

CAN EXCEL DO BETTER?

THE MICROSOFT OFFICE USER INTERFACE

The Office User Interface

Top Row:

- Quick Access Toolbar
 - Add frequently used tools
- Title Bar
 - For moving the window & Snap
- Window Sizing Buttons
 - Minimize, Maximize/Restore, Close

The Office User Interface

The Ribbon:

- Ribbon Tabs & File Menu
 - File, Home, Insert, etc.
- Groups
 - To make it easier to find controls
- Commands
 - Buttons, List boxes, Text boxes

The Office User Interface

The Status Bar

- The Bottom Row
- Various properties at the Left
- View Button at the Right
- Zoom Controls at Far Right

The Office User Interface

Quick Tips:

- Screen Tips
 - Revealed when mouse pointer hovers over an object
- Context Menu
 - Revealed when you click right mouse button (or Control + mouse button on the Mac)
- Alt Key
 - To access controls via keyboard, w/o mouse

THE EXCEL USER INTERFACE

The Excel Interface

- Name Box
- Formula Bar
- Worksheet Grid
 - Columns, Rows, Cells

The Excel Interface

- Active Cell
 - Thick border and Fill Handle at LR
- Worksheet Tabs
 - Workbooks can have many pages
- Status Bar
 - Modes: Ready, Edit, Point
 - Summaries: Average, Count, and Sum

Navigating a Worksheet

- Mouse
 - Click any cell, or use scroll wheel
- Arrow Keys
 - Also: PgUp and PgDn
- Name Box
- "Go To" Command
 - Click: Home > Find & Select > Go To...

Fast Navigation Keys

- Ctrl + Home: Upper Left of Sheet
- Ctrl + End: Lower Right of Sheet
- Ctrl + Down Arrow: Bottom of Column
- Home: Leftmost cell in a row
- End: Rightmost cell in a row

Editing Cells

- Enter data with the Enter key
- 2 Ways to Edit data:
 - Formula bar
 - Double-click cell
- Copy and Paste
- Fill Handle
- Series

Editing Cells

3 Types of Cell Contents:

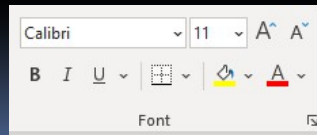
- Text
- Values:
 - Numbers, Dates, Times
- Formulas

Selecting Ranges

- With the mouse
- With the keyboard
- With the Control key

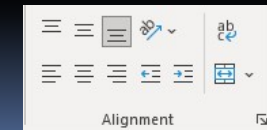
Cell Formatting: Font Group

- Font
- Font size
- Style (Bold, Italic, Underlined)
- Border
- Fill color
- Font color



Cell Formatting: Alignment Group

- Vertical alignment (Top, Middle, Bottom)
- Orientation Angle
- Wrap Text
- Horizontal alignment (Left, Center, Right)
- Outdent/Indent
- Merge & Center



Default Cell Alignment

- Bottom
- Left for Text
- Right for Values:
 - Numbers
 - Dates
 - Times

	Text	
	3.1415	
	7/1/22	
	6:00	

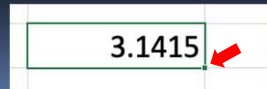
Changing Column Widths & Row Heights

- Grab and Drag Separators
- Double-click to auto size

	A	B	C
1			
2			
3			
4			

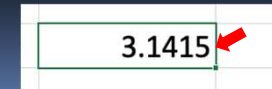
5 Ways to Copy Cells

- Click: Edit > Copy, Edit > Paste
- Right-click Copy, Right-click Paste
- Ctrl + C, Ctrl + V
- Copy button, Paste button
- Click & Drag Fill Handle



5 Ways to Move Cells

- Click: Edit > Cut, Edit > Paste
- Right-click Cut, Right-click Paste
- Ctrl + X, Ctrl + V
- Cut button, Paste button
- Click & Drag Border



The Key to Excel's Power

FORMULAS

Excel

"The most powerful general-purpose calculating tool known to mankind."

The Key to Excel's Power?

Formulas

Formulas: The Basic Operations

- Addition: +
- Subtraction: —
- Multiplication: *
- Division: /

(Parentheses)

- Not needed usually
- Use to change order of operations:

$$\text{Average} = (D2 + D3) / 2$$

- Or in Functions:

$$\text{Average} = \text{AVERAGE}(D2,D3)$$

The Four Laws of Formulas

1. Always begin with an equal sign



The Four Laws of Formulas

1. Always begin with an equal sign
2. Avoid numbers in formulas

Why?

Because numbers always change



The Four Laws of Formulas

1. Always begin with an equal sign
2. Avoid numbers in formulas
3. Always check by estimating values

Because it is too easy to make a miftake



The Four Laws of Formulas

1. Always begin with an equal sign
2. Avoid numbers in formulas
3. Always check by estimating values
4. Similar cells should have similar formulas

Because simpler is always better



Order of Operations in Formulas

Mathematics (PEMDAS)

1. Parentheses
2. Exponents
3. Multiplication
4. Division
5. Addition
6. Subtraction


Excel

1. Parentheses
2. Exponents
3. Mult. OR Div. *
4. Add. OR Subtr. *

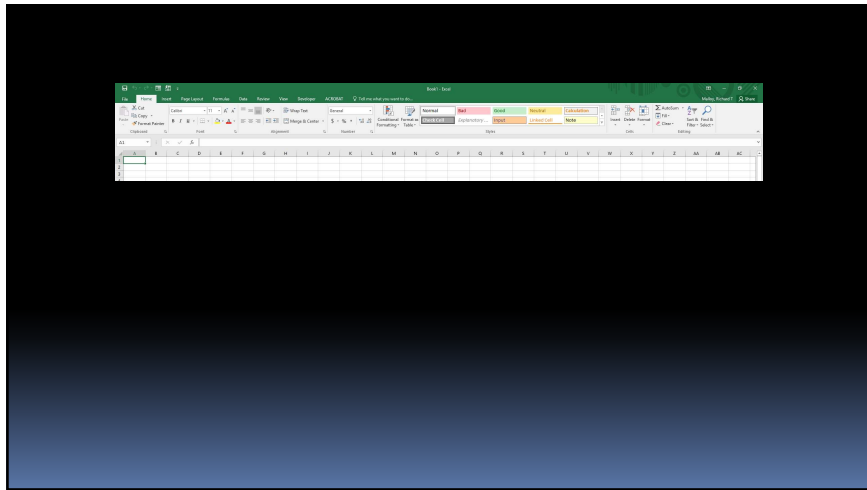
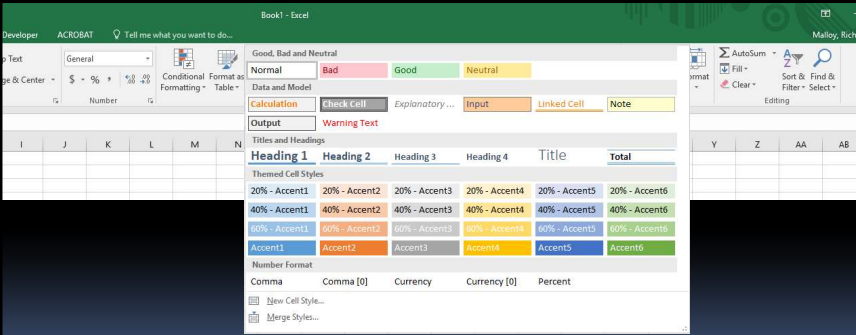
* *Whichever comes first*

CELL STYLES

Cell Styles



- Quick and consistent formats
- To Apply a Style:
 - Click: Home > Cell Styles (or *More* button)
- To Modify a Style:
 - Rt-click the Style and choose **Modify**

Homework - 1

- Go to: bit.ly/ncc-excel
- Click link for [Basic Excel Exercises](#)

Insert formulas into the yellow cells as described.

Add the Bonus to the Salary		
Salary	Bonus	Total
\$1,256.73	\$243.27	

Subtract Expense from Income		
Income	Expense	Net
\$2,143.87	\$843.87	

Divide the Increase by the Total		
Increase	Total	% Increase
\$829.24	\$2,764.12	

Homework - 2

- Create simple check register
- Click link for: [Checkbook-Register-Project](#)
- <http://techhelptoday.com/excel-class/>

	A	B	C	D	E	F	G
1	Number	Date	Description	Debit	Cleared	Credit	Balance
2							2,000.00
3	101	1/3/19	Dry cleaners	89.32	✓		1,910.68
4	102	1/4/19	Cable TV	114.87	✓		1,795.81
5		1/6/19	ATM cash withdrawal	100.00	✓		1,695.81
6	103	1/7/19	Utility bill	256.87	✓		1,438.94
7		1/9/19	Deposit			✓	1,500.00
8	104	1/15/19	Rent	1,250.00			1,688.94
9							1,688.94
10							1,688.94
11							1,688.94
12			Total	1,811.06		1,500.00	

Next Week:

- More Formulas
- Functions
- Budgets