

## Microsoft Excel: Using VLOOKUP to Import Data from Another List

Microsoft Excel's VLOOKUP function allows you to import data from a list or table into a spreadsheet by using a matching look-up value such as Empl\_ID number. This becomes very useful when you are working with many columns and rows. The Syntax/Formula:

**=VLOOKUP (lookup\_value,table\_array,col\_index\_num,range\_lookup)**

**Lookup\_value** is the value found in the first column of the array. Lookup\_value can be a value, a reference or a text string. For example, a cell containing Empl\_ID number.

**Table\_array** is the table from which you want data imported or looked up. You should give the table range a name. The range must be placed in ascending order.

**Col\_index\_num** refers to the column number in the table array from which the value is imported. If you want data from the second column of the table array, the col\_index\_num is 2.

**Range\_lookup** specifies whether you want VLOOKUP to find an exact match or an approximate match of the lookup value. If Range\_lookup is TRUE or left blank, an approximate match is returned. An approximate match refers to the next largest value that is smaller than the lookup value, If Range lookup is FALSE, VLOOKUP will find an exact match of the lookup value. If one is not found, the error value #N/A is returned. If you are looking up Empl\_ID numbers, you need to specify FALSE for the range\_lookup.

### VLOOKUP step by step instructions

These instructions will use data from two separate files and combine them using the Empl\_ID as the common identifier. **Before beginning, save copies of each file as a backup.** The two files in this example are: (a) "webct\_download.xls" (downloaded WebCT Student Gradebook file), and (b) "vlookup\_test.xls" (Whitmore student exam file opened within excel (for more information see notes) with Empl\_ID and test score columns).

1. In your WebCT file, make Empl\_ID the first (far left) column and sort the Empl\_ID field in ascending order: (**Data > Sort > Ascending**). **Note:** In this example columns that will not be modified have been removed (leaving only Empl\_ID, User ID and empty Exam 1 columns)
2. In the WebCT file, select the first cell where you want data to be placed (in this example the first cell below empty "Exam 1" heading is selected).
3. Click on the Paste function button *fx* on your tool bar. Select "Lookup & Reference" from the Function Category. From Function Name, scroll down and select "VLOOKUP." Click OK. The VLOOKUP dialog box appears.

A	B	C
Empl_ID	User ID	Exam 1
12809476	mquinnan	
12940786	khamel	
13024952	aplaczek	
13030081	kmirto	
13040058	mmcgover	
13046578	slaufer	
13051953	mdrichar	

VLOOKUP

**Lookup\_value** A2

**Table\_array** [test\_scores.xls]Sheet1!\$A\$

**Col\_index\_num** 2

Range\_lookup false

1. **Lookup\_value:** Cell containing value to look up (Sort Ascending). In this case the first cell of Empl\_ID's from the WebCT file.

	A	B	C
1	Empl_ID	User ID	Exam 1
2	12809476	mquinnan	
3	12940786	khamel	
4	13024952	aplaczek	
5	13030081	kmirto	
6	13040058	mmcgover	
7	13046578	slaufer	
8	13051953	mdrichar	
9	13053133	gmitre	

Empl_ID	Exam 1
10460685	74
10480864	74
11061189	90
11137330	92
11410802	74
11413993	84
11614009	88
11618545	94
12485513	76
12527778	66
12545157	82
12557027	84
12598352	72
12608745	78
12723998	80
12755743	58

2. **Table\_array:** Cells containing data to lookup. In this case Empl\_ID (Sort Ascending) and test\_scores columns from Exam Scores file.

A	B
Empl_ID	Exam 1
10460685	74
10480864	74
11061189	90
11137330	92
11410802	74
11413993	84
11614009	88
11618545	94
12485513	76
12527778	66

3. **Col\_index\_num:** Column number containing data to be imported. In this case since exam scores are within 2<sup>nd</sup> column of test scores file, 2 is entered.

4. **Range\_lookup:** false = Absolute match. Note: leaving this blank or entering true will not result in exact match.

5. The result is a matching test score for each student who took the test and accurately provided their Empl\_ID. A return of the value "#N/A" is returned for Empl\_ID's not found in the test score file (or inaccurately provided by the student). Before uploading file to WebCT remove the #N/A's and make cells blank. Note: putting zeros in these cells with greatly skew statistics (e.g, mean score).

A	B	C
Empl_ID	User ID	Exam 1
12809476	mquinnan	74
12940786	khamel	#N/A
13024952	aplaczek	96
13030081	kmirto	#N/A
13040058	mmcgover	72
13046578	slaufer	86
13051953	mdrichar	60
13053133	gmitre	84
13058208	rnorton	96
13094429	caitlina	82

6. Finally, save the file as a .csv (file>save as>choose .csv as file type) and import the file to WebCT Student Management.

**Notes:**

- Students providing incomplete or incorrect Empl\_ID's at time of exam will result in an #N/A even though they took the test and received a score. This formula for importing exam scores only functions when it can find an exact Empl\_ID match within both files.
- It is not necessary to re-upload columns that you have not altered (others may be deleted). It is essential however, that the User ID column remains intact as WebCT will not successfully upload without it.

### Opening Whitmore Testing Services exam file in Excel

The file you receive is a text file (ex, scores.sdf) and can be accurately opened in excel in a few steps:

1. After opening Excel first, browse to locate your .sdf file (file>open). Select "all files" from the "files of type" window. Open the file.
2. (step 1) From the first screen of the Text Import Wizard select fixed width. Click next.
3. (step 2) Drag break lines so that columns of text are accurately separated. Click next.
4. (step 3) Next, identify which columns of data you wish to import. For most purposes, the student's name, Empl\_ID and test grade are sufficient. You may indicate to not import the others (highlight unwanted column>select the "do not import column (skip)" option")
5. Click finish. Visually inspect the imported data. Remember that accurate Empl\_ID numbers are essential for merging with the WebCT Student Management file.

