

## Calculating Utilization for Rooms Scheduled in Microsoft Outlook

The following instructions will describe how to calculate utilization for a single room that has its events and meetings recorded in a Microsoft Outlook calendar. The result will show the percent time utilization by comparing the scheduled hours in a room to the actual hours available.

In order to calculate time utilization for rooms, you must first export the calendar's data a CSV or comma-separated value file (part one of these instructions) and then manipulate the data in Microsoft Excel (part two).

Please note that these instructions:

- Show calculations for one month's room usage for one room only\*
- Require intermediate knowledge of Microsoft Excel
- Are based on the menus for Microsoft Office 2003 run on Windows XP Professional

### \*Additional Resources

If you are interested in creating summaries for multiple rooms and/or larger date ranges, using formulas that incorporate named cell ranges would be more ideal than the formulas shown in these instructions. For more information on ranges, please refer to Microsoft Office help "Define named cell references or ranges".

Examples of more complex summaries are available on the Space Utilization Initiative website at <http://www.provost.umich.edu/space>. These include formulas that calculate utilization by date, day of week, or comparing room to room.

You may also send your raw data to the Space Utilization Initiative team and be provided a summary report of your data similar to the examples on the website. For this service or any questions, please contact the Space Utilization Initiative team.

### Contact Information

e-mail: [space.utilization@umich.edu](mailto:space.utilization@umich.edu)

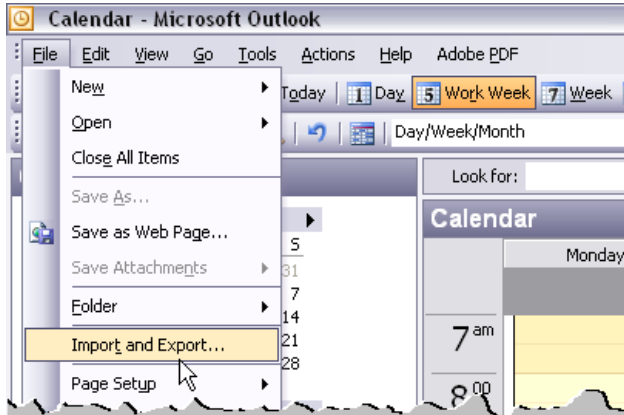
phone: (734) 763-9973

**Part One: Export calendar data from Outlook to a CSV file**

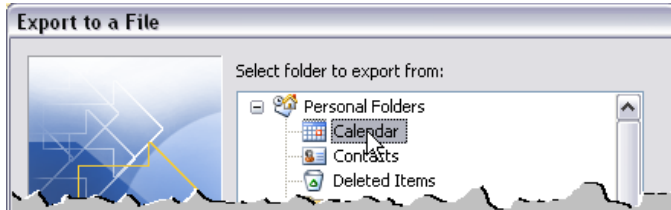
1. Open the calendar for the room you wish to get time utilization information from.

**NOTE: You will likely need to contact the IT department in your unit to get access to export this information or to have them export the data on your behalf.**

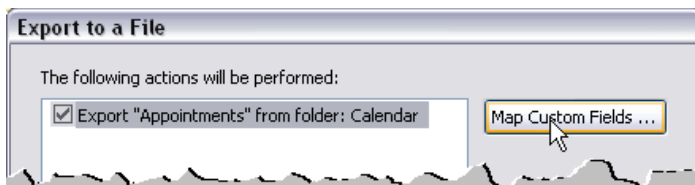
2. Go to file and click “Import and Export...”



3. Under “Choose an action to perform” select “Export to a file” and click next
4. Under “Create a file type” select “Comma Separated Values (Windows)” and click next
5. Under “Select folder to export from” select “Calendar” and click next

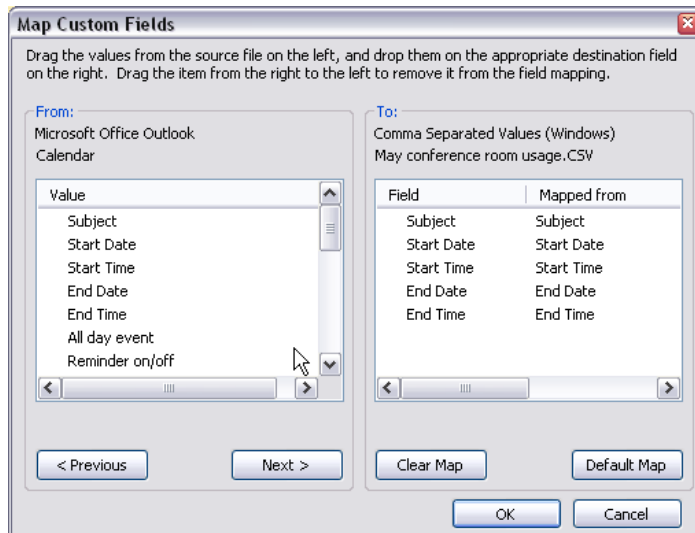


6. Click the “Browse” button.  
A folder navigation dialog box will pop up. Navigate to the folder to which you’d like to save the file. Name the file and click the “OK” button.
7. You should now see the file name and path in the “Export to a file” dialog box. Click next.
8. Click “Map customs fields” button to specify what data you would like exported.



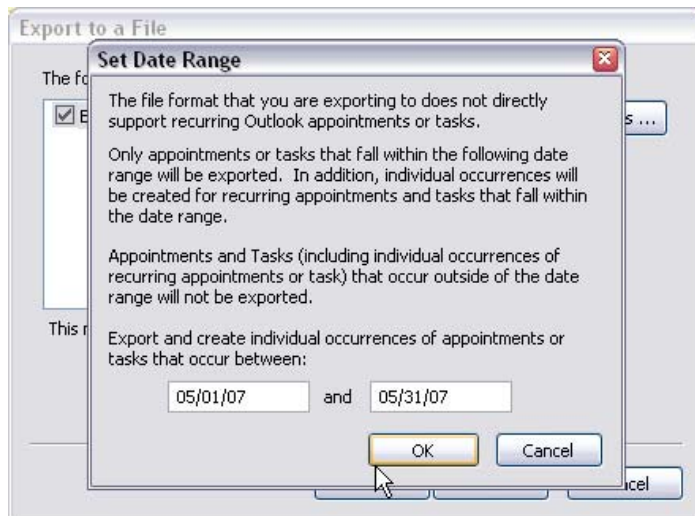
9. The left side of the screen shows the available data fields from Outlook. The right side of the screen shows the fields you would like to export.

For the purpose of time utilization, only the meeting Subject, Start Date, Start Time, End Date, and End Time need to be selected. To do this, click the “Clear map” button to clear the default value values, and then drag the data fields you would like to export from the left panel to the right panel.



10. Click OK and then the Finish button

11. Select the date range of the export. It may take a few minutes to export for a large date ranges.



12. The CSV file should now be in the location you specified earlier. Open the file and resave it as a Microsoft Excel workbook.

## Part Two: Calculating in Microsoft Excel

1. Open the Excel file with Microsoft Excel. The file should look similar to the following. The column headings are the data fields selected when exporting from Outlook; the rows are the individual meetings scheduled in the room's calendar:

	A	B	C	D	E
1	Subject	Start Date	Start Time	End Date	End Time
2	Faculty weekly lunc	5/7/2007	12:00:00 PM	5/7/2007	1:00:00 PM
3	Faculty weekly lunc	5/14/2007	12:00:00 PM	5/14/2007	1:00:00 PM
4	Faculty weekly lunc	5/21/2007	12:00:00 PM	5/21/2007	1:00:00 PM
5	Faculty weekly lunc	5/28/2007	12:00:00 PM	5/28/2007	1:00:00 PM
6	Weekly brownbag	5/8/2007	12:00:00 PM	5/8/2007	1:30:00 PM
7	Weekly brownbag	5/15/2007	12:00:00 PM	5/15/2007	1:30:00 PM
8	Weekly brownbag	5/22/2007	12:00:00 PM	5/22/2007	1:30:00 PM
9	Weekly brownbag	5/29/2007	12:00:00 PM	5/29/2007	1:30:00 PM
10	Student master's pr	5/1/2007	3:00:00 PM	5/1/2007	5:00:00 PM

2. Add a new column named "Duration".

	A	B	C	D	E	F
1	Subject	Start Date	Start Time	End Date	End Time	Duration
2	Faculty weekly lunch	5/7/2007	12:00:00 PM	5/7/2007	1:00:00 PM	
3	Faculty weekly lunch	5/14/2007	12:00:00 PM	5/14/2007	1:00:00 PM	
4	Faculty weekly lunch	5/21/2007	12:00:00 PM	5/21/2007	1:00:00 PM	
5	Faculty weekly lunch	5/28/2007	12:00:00 PM	5/28/2007	1:00:00 PM	
6	Weekly brownbag	5/8/2007	12:00:00 PM	5/8/2007	1:30:00 PM	
7	Weekly brownbag	5/15/2007	12:00:00 PM	5/15/2007	1:30:00 PM	
8	Weekly brownbag	5/22/2007	12:00:00 PM	5/22/2007	1:30:00 PM	
9	Weekly brownbag	5/29/2007	12:00:00 PM	5/29/2007	1:30:00 PM	

3. In the empty cell directly underneath the "Duration" column heading, you will need to subtract the end time from the start time and multiply by 24 to get the duration in hours for that meeting. In this example, the formula appears as  $=(E2-C2)*24$ .

	A	B	C	D	E	F
1	Subject	Start Date	Start Time	End Date	End Time	Duration
2	Faculty weekly lunch	5/7/2007	12:00:00 PM	5/7/2007	1:00:00 PM	$=(E2-C2)*24$
3	Faculty weekly lunch	5/14/2007	12:00:00 PM	5/14/2007	1:00:00 PM	
4	Faculty weekly lunch	5/21/2007	12:00:00 PM	5/21/2007	1:00:00 PM	
5	Faculty weekly lunch	5/28/2007	12:00:00 PM	5/28/2007	1:00:00 PM	
6	Weekly brownbag	5/8/2007	12:00:00 PM	5/8/2007	1:30:00 PM	
7	Weekly brownbag	5/15/2007	12:00:00 PM	5/15/2007	1:30:00 PM	
8	Weekly brownbag	5/22/2007	12:00:00 PM	5/22/2007	1:30:00 PM	
9	Weekly brownbag	5/29/2007	12:00:00 PM	5/29/2007	1:30:00 PM	

4. Copy this formula down for the remainder of the meetings and change the format to "Number" with two decimals. The worksheet should appear similar to following:

	A	B	C	D	E	F
1	Subject	Start Date	Start Time	End Date	End Time	Duration
2	Faculty weekly lunch	5/7/2007	12:00:00 PM	5/7/2007	1:00:00 PM	1
3	Faculty weekly lunch	5/14/2007	12:00:00 PM	5/14/2007	1:00:00 PM	1
4	Faculty weekly lunch	5/21/2007	12:00:00 PM	5/21/2007	1:00:00 PM	1
5	Faculty weekly lunch	5/28/2007	12:00:00 PM	5/28/2007	1:00:00 PM	1
6	Weekly brownbag	5/8/2007	12:00:00 PM	5/8/2007	1:30:00 PM	1.5
7	Weekly brownbag	5/15/2007	12:00:00 PM	5/15/2007	1:30:00 PM	1.5
8	Weekly brownbag	5/22/2007	12:00:00 PM	5/22/2007	1:30:00 PM	1.5
9	Weekly brownbag	5/29/2007	12:00:00 PM	5/29/2007	1:30:00 PM	1.5

- To get useful summary/utilization statistics, you will need to do the calculations on a separate sheet. Insert a new worksheet into the workbook and set up the structure similar to the following:

	A	B	C	D
1	<b>Conference room utilization</b>			
2	<b>Total time available in hours</b>		9	
3				
4			+	
5	<b>Day</b>	<b>Date</b>	<b>Total hours used</b>	<b>Time utilization</b>
6	Tuesday	5/1/2007		
7	Wednesday	5/2/2007		
8	Thursday	5/3/2007		
9	Friday	5/4/2007		
10	Saturday	5/5/2007		
33	Monday	5/28/2007		
34	Tuesday	5/29/2007		
35	Wednesday	5/30/2007		
36	Thursday	5/31/2007		
37	Summary / conference room usage /			

- Under the “Total hours used” column, you will need to use a SUMIF function to sum the total hours of meetings used for a specific date. In this example, the formula is:

Formula structure:

=SUMIF(range, criteria, sum\_range)

Exact formula for this example:

=SUMIF('conference room usage'!\$B\$2:\$B\$33,Summary!B6,'conference room usage'!\$F\$2:\$F\$33)

	A	B	C	D
1	<b>Conference room utilization</b>			
2	<b>Total time available in hours</b>		9	
3				
4				
5	<b>Day</b>	<b>Date</b>	<b>Total hours used</b>	<b>Time utilization</b>
6	Tuesday	5/1/2007	=sumif(	
7	Wednesday	5/2/2007	SUMIF(range, criteria, [sum_range])	
8	Thursday	5/3/2007		
9	Friday	5/4/2007		

Formula explanation:

In this example, the formula sums the total hours used ('conference room usage'!\$F\$2:\$F\$33) for a specific date (Summary!B6) within a specific date range ('conference room usage'!\$B\$2:\$B\$33). The dollar sign is used in the formula to prevent the cell references from changing when you copy the formula down. The part of the cell reference preceded by the “\$” will not change.

**Please note** this example shows the calculation of May’s usage only. If you want to create a summary document to which you would add data monthly, this formula would not be ideal. Using named ranges rather than referring to them by the actual cell locations would be more ideal. For more information on ranges, please refer to Microsoft Office help “Define named cell references or ranges”. For examples of more complicated summaries, please visit the Space Utilization Initiative website at <http://www.provost.umich.edu/space>.

- Copy the formula down for the remainder of the rows.

8. In the "Time utilization" column, divide the numbers of hours used that day by the total hours available for the room. In this example, the total number of hours available is 9, noted in cell C2.

	A	B	C	D
1	<b>Conference room utilization</b>			
2	<b>Total time available in hours</b>		9	
3				
4				
5	<b>Day</b>	<b>Date</b>	<b>Total hours used</b>	<b>Time utilization</b>
6	Tuesday	5/1/2007	2.75	=C6/\$C\$2
7	Wednesday	5/2/2007	6.5	
8	Thursday	5/3/2007	2	
9	Friday	5/4/2007	2	
10	Saturday	5/5/2007	0	
11	Sunday	5/6/2007	0	

9. Copy the formula down and change the cell format to percentage. Your summary page should appear similar to the following:

	A	B	C	D
1	<b>Conference room utilization</b>			
2	<b>Total time available in hours</b>		9	
3				
4				
5	<b>Day</b>	<b>Date</b>	<b>Total hours used</b>	<b>Time utilization</b>
6	Tuesday	5/1/2007	2.75	31%
7	Wednesday	5/2/2007	6.5	72%
8	Thursday	5/3/2007	2	22%
9	Friday	5/4/2007	2	22%
10	Saturday	5/5/2007	0	0%
11	Sunday	5/6/2007	0	0%
35	Wednesday	5/30/2007	2.5	28%
36	Thursday	5/31/2007	0	0%

Summary / Conference room usage /

If you have any questions, please contact the Space Utilization Initiative team by email at [space.utilization@umich.edu](mailto:space.utilization@umich.edu) or by phone at (734) 763-9973.