# Instructions for Template Scheduler - Tasks - 10

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The "Template Scheduler-Tasks-10" spreadsheet creates schedules for up to 10 employees for up to 52 weeks using a template of shifts and days off. The templates can be configured to have your people rotate days off (or not) and to rotate shifts (or not). You can also assign your employees to daily or hourly tasks or jobs according to their qualifications and preferences.

A Question Mark Icon ? is displayed next to the tables on the various sheets of this spreadsheet. If you click on the ? you will be taken to the appropriate place on the "Details" sheet where detailed instructions are provided.

## Office 2007/Excel 2007 Note:

This Excel workbook is compatible with all versions of Excel for the PC but some versions of Excel for the Mac do not support vBasic macros and some capabilities of this spreadsheet will be lost when used with those versions of Excel.

## Navigation Note:

This spreadsheet has several sheets and there is room for only a limited number of sheet tabs at the bottom of the screen. You can display additional sheet tabs by clicking on the directional arrows on the left of the sheet tabs. Another way to display additional tabs is to hold the mouse cursor over the directional arrows and click the right mouse button. You can now select the sheet of interest from the table of sheet names. You can also go from one sheet to the next by holding down the control key and pressing the Page Down or Page Up key on the keyboard.

If you find that you do not need all of the sheets, you can hide the unwanted ones. Do not delete them, for it might corrupt the spreadsheet logic. To hide a sheet, go to the sheet, select F**o**rmat, S**h**eet, **H**ide. To unhide a sheet, select F**o**rmat, S**h**eet, Un**h**ide, and then select the sheet from the menu.

# A. Definitions

A schedule consists of shifts, legs, tours and campaigns as defined below:

**Shift:** A specified number of consecutive hours that an employee works in a 24 hour period.

**Leg:** A time period of one or more days in which daily shifts are assigned. One week and two week legs are common. This spreadsheet can have up to 42 days in a single leg.

**Tour:** A group of one or more legs.

**Campaign:** One or more tours.

**Schedule:** One or more Campaigns.

# B. Scheduling Sheet Instructions

The scheduling is done on the Scheduling Sheet based on the data entered in the light green cells of the three scheduling tables. At the top of the sheet is a place to input the "First Day of the Schedule" and a place to input the "Number of Days in a Leg". In the scheduling tables many of the column headers have notes (indicated by a small triangle in the upper left corner of the cell) describing the contents of the columns. To view the note, simply place the cursor over the cell.

The **"Scheduling Assistant"** spreadsheet included in the download package provides simple instructions on how to create scheduling tables to provide the desired number of people each shift each day of the week. It also includes a few basic 8, 10 and 12 hour schedules for your consideration.

Basically, you define shifts, assign shifts to "legs" and then assign "legs" to your employees. If a "leg" is 7 days long, the shifts that you put in the "leg" are the shifts that will be assigned to one or more of your employees for a week.

Shifts are defined in the "Shift Definition Table". Shifts are defined by indicating a shift name, a start time, a stop time and the number of paid hours in the shift. If you want the hours associated with vacations and other miscellaneous shift assignments to be counted on the schedules you can add the miscellaneous shift with a number in the "Paid Hours" column

The "Tour Definition Table" is where each leg of the tour is defined. You need to give each leg a "name". The name can be a number such as 1,2,3, or it can be more descriptive such as Day-1, Day-2, etc. You need to input shift names in each column with an "Insert Shifts in this Column" header. If the "Number of Days in a Leg" is equal to a whole number of weeks (i.e. 7, 14, 21, etc.), day names will be shown in the table.

Below the "Tour Definition Table" is the "Employee Rotation Table" where you input employee names and employee group (optional). You also assign "Legs" to each employee for up to 52 time periods. You may (but are not required to) insert a leg number in each column with a header that says "Insert Leg in this Column". The program assigns daily shifts to each employee according to the shifts specified in the "Leg". The spreadsheet creates schedules of up to 52 weeks, so leg numbers inserted in columns where the schedule length exceeds 364 days will not be used. Also, since the schedule is for 52 legs, if the leg length is less than 7 days, the schedule will be for less than 52 weeks.

There is a special **"Group"** of employees in the **"Employee Rotation Table"** called **"Vac Fill"** that are used exclusively to fill shifts while a regular employee is on vacation (or other scheduled absence). If a person is in the "Vac Fill" group, he is not included in the employee rotation, but is used exclusively to fill vacation shifts. You can put someone in the "Vac Fill" group in the Employee Rotation Table and not assign any legs to that person and he will be available on the Unfilled Shifts sheet to be assigned shifts for vacation coverage or whatever. The "Vac Fill" employees scheduled on the Unfilled Shifts sheet will show up on the various scheduling outputs. If you assign legs to these people in the Employee Rotation Table, the shifts associated with those legs will be ignored by the program.

**A macro button** is located just above the Employee Names column to alphabetically sort employee names. Click this macro button if you would like to sort employee names and the "Group" and "Legs" you have assigned to them. When you sort with this macro the Overtime Hours associated with each employee on the Overtime Log Sheet are also sorted and remain with the correct employee. Likewise, Vacation and other miscellaneous assignments and shifts assigned on the Unfilled Shifts Sheet will be sorted along with the employee. And, e-mail addresses on the E-Mail sheet will also be sorted. If you sort names on this sheet without using this macro button, then just the names on the E-Mail, Overtime, Vacations and Unfilled Shifts Sheets will be sorted, but the other information will not be sorted and will be incorrect. Whenever this macro is run, the "Update Overtime Ledger" macro on the Overtime Log Sheet is also run to preserve any overtime hours you have recorded for your employees.

The basic 52 week schedule created on the "Scheduling" sheet can be modified ("tweaked") as necessary by assigning vacations and absences to your people on the "Vacations" sheet and then assigning people to cover those absences on the "Unfilled" shifts sheet. All schedule outputs will show the schedule as modified on these sheets.

## C. Vacations, etc. Sheet Instructions

The Vacations sheet is used to assign your people to vacations and other miscellaneous shifts such as "Training" , Medical" ,etc. There is a table at the top of the sheet where you can specify up to 12 miscellaneous shifts that will be available in the drop-down menu for you to assign to your people. Shifts that you assign on this sheet will appear on all of the schedule outputs, Calendar, Daily Details and Charts. **These 12 items also need to be added to the Shift Definition Table on the Scheduling sheet.**

This sheet lists your employees across the top and the dates down the left column. If someone has been assigned a shift on a given day, the cell under the person's name will be light green. If the cell is gray, it is a scheduled day off and a shift has not been assigned. Since the "Vac Fill" people may not be assigned vacations, the cells under the "Vac Fill" people are dark gray and can be ignored. Incidentally, if one of the "Vac Fill" people are assigned a shift (to cover someone's vacation day), the cell will turn light-green. If an employee is to be assigned to a vacation day, select the word "Vacation" from the drop-down menu. You can assign "Vacation" days to both scheduled and unscheduled work days (light green and gray cells). The total number of vacation days is shown at the top of the table for each employee. Vacation days create unfilled shifts that need to be filled by either your regular employees or your designated "Vac Fill" people. These unfilled shifts are shown on the "Unfilled Shifts' Sheet. If your schedule does not extend for the full 52 weeks, the unscheduled days will be dark gray and any vacation days assigned to these cells will be ignored.

Another approach to assigning vacations involves a group of employees (not called "Vac Fill") who fill in for vacations and are assigned whole legs in the Employee Rotation Table. For example, if someone assigned to work "Leg #3" in a certain week asks for the whole week off, you can delete the "3" in his row of the Employee Rotation Table and assign leg #3 to someone in your vacation fill group (but not labeled as a "Vac Fill" person). If an employee is assigned days off in this manner, the schedules will not show "Vacation" but instead will simply show no shift assignments on the extra days off. Since many "Legs" have regularly scheduled days off in the middle of the "Leg" this approach will not work if someone wants to schedule his vacation between his regularly scheduled days off.

Yet another approach is to add a special shift to your Tour Definition Table and Employee Rotation Table (lets call it "Day-Fill") and include it in the rotation so everyone gets to work this shift at some time or other. Anyone assigned to this shift normally works the day shift, but can be assigned to another shift instead of the Day-Fill shift if necessary to cover for a vacationing employee by simply making the new assignment on the "Unfilled Shifts" sheet. With this option, someone who normally has the day off is not assigned to the vacation fill shift, but someone normally assigned to the "Day-Fill" shift is used for that purpose.

## D. Unfilled Shifts Sheet Instructions

This sheet has the number of unfilled shifts each day (due to vacation, etc. assignments) indicated at the left and columns at the right where you can assign these unfilled shifts to your regular employees or to your "Vac Fill" people. If a regular employee is assigned to a regular shift, the cell is tan-colored and if the cell is light-green then the employee is scheduled for a day off. **All assignments entered on this sheet will override assignments made by the program based on the Tour Definition Table and the Employee Rotation Table**. There are several columns on the left side of the table where your shifts are listed. If you do not need all of the shift columns, click the macro button above the first unneeded column to hide all of the extra shift columns to the right. If you want to display additional shift columns, click the **"Unhide Unfilled Shifts Columns"** macro button.

You have the option of being notified if you need to assign a vacation fill shift if the daily shift staffing falls below the minimum specified for that day on the **"Daily Details"** sheet instead of falling below the "normal" shift staffing established by the Tour Definition Table and the Employee Rotation table on the "Scheduling" sheet. If you want to use the minimum staffing option, you need to click (check) the lavender-colored box at the top of the sheet.

You also have the option of having the program assume that shifts assigned on this sheet are overtime shifts and automatically added to the overtime tally on the **"Overtime Log"** Sheet. A lime-colored check box is provided at the top of the sheet for you to specify your preference.

You can fill a vacation or other absence with a whole shift or 2 half shifts assigned to 2 different people. You can define the half shifts in the table at the top of the sheet. The half shifts also need to be defined in the "Shift Definition Table" on the Scheduling Sheet.

As you are filling the vacation coverage shifts keep an eye on the date column where you will be notified of shift assignment errors. The **date cell will turn pink** if an incorrect number of vacation shifts have been assigned on that day (either you still need to assign a vacation shift to someone or if you have assigned an incorrect shift, for example, you assign a day shift instead of the needed night shift). The **date cell will turn rose-colored** if you have assigned more vacation coverage shifts than necessary on that day.

Once you have set the number of columns where the shifts are shown, you may want to adjust the sheet display so certain columns are always displayed at the left and certain columns are always displayed at the top of the sheet. The sheet display is initially set to always display the header the rows above the dates, but not to display fixed columns on the left. If you want to change the fixed columns and rows to be displayed, you first need to clear the default settings by selecting **W**indow, Un**f**reeze Panes. Next, click on the cell just below and right of your new fixed panes and select **W**indow, **F**reeze Panes.

## E. OT Signups Sheet

Shifts that are not covered due to vacations etc are shown on this sheet. Only those shifts that are displayed on the Unfilled Shifts sheet are shown here. If you have set the "Minimum Staffing Requirements" on the Daily Details sheet to allow some absences to remain uncovered, those absences will not be listed on the Overtime Signup sheet. After you select the week from the drop-down menu at the top of the sheet you need to click the "Show Signup Sheet for the Week" macro button to reveal all of the overtime shifts available.

## F. Tasks Sheet

You can specify up to 10 different tasks in the top row of the table on this sheet and then for each employee you can indicate if the person is qualified to perform the task. If the task requires that the employee needs to have a certificate issued by some regulatory agency in order to perform the task you need to input the date that the certificate expires. If a certificate is not required or if it does not expire you should put an "X" in the cell to indicate that the employee is qualified to perform the task.

At the top of the sheet are 2 cells where you can input the number of days before you receive a long-term and a short-term warning that a certificate is about to expire. If the certificate is set to expire within the period specified as the long-term warning, the cell with the certificate date will turn tan. And if the certificate is set to expire within the period specified as the short-term warning, the cell with the certificate date will turn pink. There is also a cell at the top of the sheet that shows the date of the next expiring certificate.

If you sort your employee names by using the sort macro on the Scheduling sheet, the names and qualifications will also be sorted on this sheet.

## G. Qual Count Sheet

The table on this sheet shows the number of people available each day who are qualified for each task. If someone is qualified for more than one task, his qualifications will be counted for each task he is qualified to perform. You need to specify what shift you are interested in and the first day of the 6 week period that will be displayed. There is a column on the left side of the table where you can specify the minimum number of people you need to be available for each task. If the daily total is at or below the minimum the cell will turn pink. **Note:** People with expired certificates or on vacation or otherwise unavailable (as specified on the Vacations, etc sheet) are not included in the count.

## H. Tasks-D Sheet

People can be assigned to daily tasks each day for up to 4 weeks on this sheet. You need to specify the start date and shift that you want to schedule in the cells provided at the top of the sheet. There is space to schedule tasks for 3 different shifts. Cells are light green on the days an employee is scheduled to work (minus any vacations, etc) and tasks can be assigned only on those days. If someone is placed on vacation after a task has been assigned **the cell will turn pink** and if someone with an expired certificate is assigned a task **the cell will turn red**.

To the left of the employee names is a matrix indicating (in black) the tasks each person is qualified to perform to help you find someone to assign to the tasks. At the top of the sheet is a table showing the number of people assigned to each task. On the left side of the table is a place for you to specify the minimum number of people needed for each task. If the total assignments fall below the minimum the cell will turn bright green.

After the first week has passed you can click the "Move Task Assignments Forward 1 Week" macro button to make room to schedule another week. The macro will copy weeks 2-4 to the weeks 1-3 columns and delete the old week 4 assignments. It will also add 7 days to the "Start Date".

## I. Task-D Sch Sheet

This sheet shows a 1 week schedule for a single shift and task. You need to specify the week (one that is included in the 4 week span on the Tasks-D sheet), the shift and the task name.

## J. Tasks-H Sheet

People can be assigned to hourly tasks for 2 days on this sheet. You need to specify the date of the first day that you want to schedule in the cell provided at the top of the sheet. Cells are light green on the hours an employee is scheduled to work (minus any vacations, etc) and tasks can be assigned only on those hours. If someone is placed on vacation after a task has been assigned **the cell will turn pink**.

To the left of the employee names is a matrix indicating (in black) the tasks each person is qualified to perform to help you find someone to assign to the tasks. At the top of the sheet is a table showing the number of people assigned to each task. On the left side of the table is a place for you to specify the minimum number of people needed for each task. If the total assignments fall below the minimum the cell will turn bright green.

When you are finished with the "Day1" tasks you can click the macro button below the date cell and the tasks from "Day 2" will be moved into the "Day 1" columns and the "Day 2" tasks will be deleted. The macro will also change the "Date" cell to reflect the new "Day 1" date.

## K. Task-H Sch Sheet

This sheet shows a 1 day schedule for a single task. You need to select the task and the date from the drop-down menus at the top of the sheet. The print range is set to print the schedule on 3 sheets of paper

## L. Scheduling Output Sheets

Schedules of 52 weeks duration are shown on the **Individual Schedules Sheet** for each employee. The **Location Schedule sheet** has a table showing shift/location assignments each day that can be filtered to display only selected shift/locations, employees and dates. A calendar is shown on the **Calendar Sheet**. You can select the calendar start day and date from drop-down menus in the light green cells at the top of the sheet. You can also have the option of keeping employee names on the same calendar row with a blank displayed for days the employee is not scheduled. Shifts assigned to each employee are shown on the **Group Schedule Sheets**. Group Schedule-1 is a 52 week schedule and Group Schedule-2 is a 4 week schedule.

The **Pocket Calendar** shows the individual schedule for each employee in a format that can be printed, trimmed and folded in half to provide a credit card-sized schedule for the employee to carry with him for handy reference when making dentist appointments etc.

When you click the macro button at the top of the Calendar sheet, the **ECalendar sheet** will be sent via e-mail to your employees. Insert your employees e-mail address next to their name on the **E-Mail sheet** if you want them to be eligible to receive the calendar. You may also insert other recipient e-mail addresses in the table if there is room. Be sure to select employees to receive the calendar by clicking on the individual check boxes, or you can choose the "Send to Everyone" option.

The **ECalendar sheet** contains the scheduling information on the Calendar sheet and will be sent to your recipients as a single sheet Excel workbook. If any of your recipients do not have the Excel software, they can download a free Excel viewer form Microsoft at:

**http://www.microsoft.com/downloads/details.aspx?FamilyID=c8378bf4-996c-4569-b547-75edbd03aaf0&displaylang=EN**

Your e-mail client will probably alert you that a program is attempting to send a message and you will need to click "Yes" in order to send each message. This is okay for a few messages, but if you are sending schedules to all of your people, this can become bothersome and time-consuming. You can change the security settings for your e-mail client to allow a program to send e-mail messages without asking your permission. The down-side of changing the security settings is that some not-so-friendly program can flood the world with spam from your computer. You need to decide if the reward is worth the risk. Instructions on how to adjust the Windows security settings for Outlook Express, Outlook and Windows Mail can be found at:

**http://www.rondebruin.nl/mail/prevent.htm**

## M. vCalendar Sheets

The scheduling information can be saved as a file using the vCalendar data format that can be imported into MS Outlook or other software that can read vCalendar files. The file includes a "summary" field that shows the employee's name and the shift assignment and a "categories" field that displays "Shift". A full 52 week schedule for a single employee is created on the vCalendar-1 sheet and is saved in the vCalendar file. Select the employee's name from the drop-down menu and click the "Create the vCalendar Now" macro button to create the file for the selected employee. The macro will save scheduling spreadsheet under it's current name and then save the vCalendar file in your scheduling directory with the name shown in the cell below the macro button. After the vCalendar file is created, the spreadsheet will close. A seven day schedule for all employees is created on the vCalendar-2 sheet. Select the first day of the schedule from the drop-down menu and click on the macro button to create the seven day file for all employees. The hidden vCal Out sheet appears blank, but is used in the creation of the vCalendar files. Therefore it should not be deleted.

If there is already a file in your scheduling directory with the same name as the vCalendar file being created by the macro, Excel will ask if you want to replace the old file with the new one. If you select "No" the macro will display an error message. Simply select "End" and the macro will stop. Also, after the vCalendar file is saved, Excel will ask you if you want to save the changes in the ?????????.vcs file. You can select either "Yes" or "No" since the old file is the same as the new file.

## N. Importing the .vcs file into MS Outlook

In MS Outlook select **F**ile, Impor**t** and Export. Then choose "Import an iCalendar or vCalendar file (.vcs) and browse to your scheduling directory or other folder where you have stored the vCalendar file. Select file type = vCalendar and all of the .vcs files will be displayed. Click on the one you want to import and then click "Ok". The procedure to import a file into a PDA or other device is probably similar, but you may need to check your operating manual.

If you receive an error when importing the .vcs file into MS outlook, it is probably due to miscellaneous punctuation marks in the "SUMMARY" line in the .vcs file. When Excel saves a worksheet as a text file, it puts quotation marks (" ") around lines containing certain punctuation marks such as a comma (,). MS Outlook can't import the lines with the quotes and will give you an error message. You can open the .vcs file with Notepad or other text editor and search for the lines containing quotation marks to locate the miscellaneous punctuation marks causing the problem.

The spreadsheet will convert employee names in the format "Last Name", "First Name" into "First Name" "Last Name" (without the comma) format in the .vcs file, so you can use employee names in the Last Name, First Name format.

## O. Overtime Log Sheet

The **Overtime Log Sheet** allows you to keep track of overtime hours assigned to each employee and shows you at a glance people who are available for an overtime shift. You enter overtime hours in the **"Overtime Ledger"** and the program shows employees with the least overtime and those with the most overtime. The **"Date for Overtime Candidates Check"** box is where you put the date that you want to assign an overtime shift. Employees with the fewest overtime hours will be shown in the **"OT Candidates Table"**. If two or more employees have the same number of overtime hours, the employee closer to the top of the **"Employee Rotation Table"** on the **Scheduling Sheet** will be shown first. The **"OT Candidates Table"** shows shifts that each candidate has been assigned on the date of interest as well as shifts assigned on the previous day and the next day. The **"Leading OT Employees Table"** shows which people have been assigned the most overtime for the period.

The "Overtime Ledger" is 364 rows (52 weeks) long and the first date of the ledger is input in the light-green cell at the top of the date column. If you want to keep track of overtime assignments from one year to the next, or if your initial schedules included overtime hours, you can put the overtime Carryover in the first row of the Overtime Ledger and it will be included in the OT Hours shown in the OT Candidates and the Leading OT Employees tables. The "Update Overtime Ledger" Macro can be run anytime that you want to accumulate all overtime assignments in the "Carryover" row and update the "First Day of Overtime Tally Date" to today's date.

## P. Daily Details

The data on the Daily Details Sheet shows the shift coverage on a daily basis and is used in the charts on the Coverage Charts Sheet. Rows are provided at the top of this sheet where you can specify the minimum number of people you need on each shift. If the number of people scheduled is less than the minimum specified, the daily value will turn Rose-colored. You can add people to a shift on the Unfilled Shifts sheet.

## Q. Coverage Charts Sheet

Charts on the Coverage Charts Sheet show how many people are assigned to each shift for each day of the schedule. One chart is provided for each of the shifts as defined on the Scheduling Sheet. You should review the charts to be sure that you have the required shift coverage.

## R. Pre-Defined Tour Definition and Employee Rotation Tables

The "Scheduling Assistant.xls" file included in the download package includes some example 8, 10 and 12 hour shift templates along with detailed instructions on how to create highly-customized templates to exactly fit your staffing needs. If you require additional templates, you can find a wide selection for sale on our website. In addition, if you would like, we can create a custom template for you for a modest fee.

## S. Password Protected Sheets

All of the sheets have protected cells (cells that you may not use to input data). All of the unprotected cells for use in storing data are light green in color. Each worksheet is protected to prevent you from overwriting the information in the protected cells. We advise that you leave the worksheets protected unless you want to make changes on a worksheet that can not be made if the sheet is protected. For example, if you want to hide or unhide rows and columns or change cell colors you will need to unprotect the sheet (Tools, Protection, Unprotect Sheet). Be sure that you do not change the contents of the protected (non-light green) cells. You can, however, change the color, formatting, etc of the protected cells. After you have made the changes, be sure to protect the sheet (Tools, Protection, Protect Sheet). No password has been assigned to the sheet protection. You may wish to add a password (part of the Tools, Protection, Protect Sheet series).

## T. Cautions

**Do not add or delete rows or columns** on any of the worksheets, for it may corrupt the spreadsheet logic. Rows and columns may be hidden if you do not need them or do not want to see them.

**If cells with input data are hidden** (the light green cells), any data contained in those cells will still be used by the spreadsheet.

## U. Technical Support

Technical Support is available by phone during normal business hours and by fax or e-mail 24 hours per day.

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