The 'Labor Distribution Effort' Macro was created to assist users with effort monitoring and effort certification activities. This macro can be used on results obtained from the Financial Data warehouse (FDW) report called 'LD Effort History by Employee & Pay Period (Macro)' to quickly determine effort percentages and dollars (by employee) or just the effort percentages (by employee), among other useful information (detailed in Step 3 of this document) that can be used in effort certification.

There are three main steps that need to be completed in order to use the 'Labor Distribution (Effort)' macro, which are to (1) download the macro, (2) save the results for the 'LD Effort History by Employee & Pay Period (Macro)' data warehouse report by exporting them to excel, and (3) run the macro against the saved report results. Let's take a closer look at each how to do each of these steps.

Step 1: Download the 'Labor Distribution Effort' macro

1. Macros are available for download on the Financial Systems Data Warehouse Macros page at
    https://www.cmu.edu/finance/systems/prod-apps/macros.html. *Note: The macro only needs to be downloaded once to your machine.*

    a. Click on the Macro.[xls] link for the **Labor Distribution (Effort)** macro.

2. Select 'Save' when the dialogue box appears and then save the macro to your desired location.
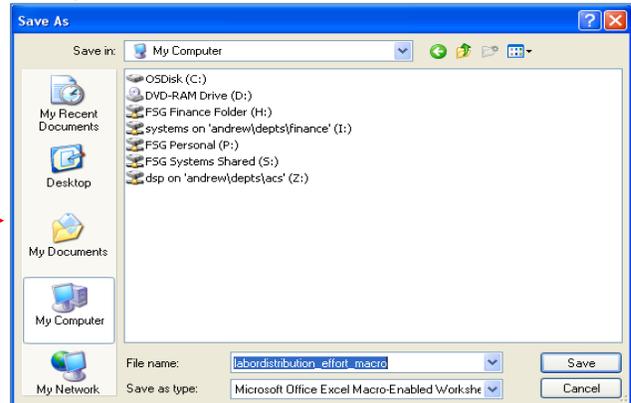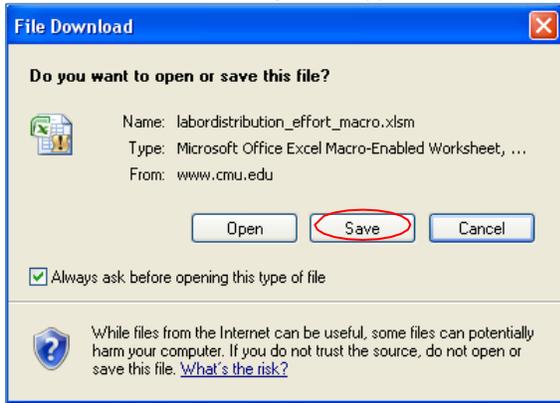
Step 2: Run the 'LD Effort History by Employee & Pay Period' report and save results to excel

1. Locate the '**LD Effort History by Employee & Pay Period (Macro)**' report in the Financial Data Warehouse (FDW) under the Labor Distribution section. Note: Save a copy to your Private Workspace to edit.

> This report can be used to run and view salary charges to assess and proactively monitor those eligible for effort generation for a specific effort period and features a "People Group" column ('none' result = no efforts generated, 'semester' result = efforts generated), charging instructions columns (Task Org Name, etc.), and the periods are *payroll periods* to better align with effort periods.
>
> *Note: This report does not show the performance supervisor due to inconsistencies with that person being identified in the data source (Workday), which could cause incorrect report results. Performance Supervisor information can instead be obtained using the 'Employee Performance Supervisor Lookup' FDW report and added to the results for this report using an Excel v-lookup.*

   a. Adjust the report filter values as necessary to return the desired data. Do not add, remove, or rearrange filters or the macro will not work.

2. Run the report. Remember, you must have access to labor distribution data in Oracle in order to obtain results in the data warehouse.

   a. Results will populate in the Results area. *Note: Results are not show on screenshot below due to the sensitive nature of the data.*

3. Export the results to Excel using the icon with three dots in the upper right hand corner of the report window. Clicking on those three dots will open additional menu options including Export Data. The default export option of 'Data with current layout' provides for the largest number of exported rows. An Excel worksheet will be automatically created containing the results.

4. Save the Excel results file to the desired location using the file name of your choice. *Note: The saved report results must have **all columns in their original position/format** as they appear in the standard report in the data warehouse.*

5. Close the Excel file. The results file *must be closed* in order to run the macro.

Step 3: Run the 'Labor Distribution Effort' macro on the saved Excel report results file

Tip: Prior to running the macro, make sure that you have macros enabled and that the macro security is set to medium on your version of Excel.

1. Locate the saved 'Labor Distribution Effort' macro on your machine and double click to open. *Do not attempt to run the macro from a browser.* The macro file will display as shown below.
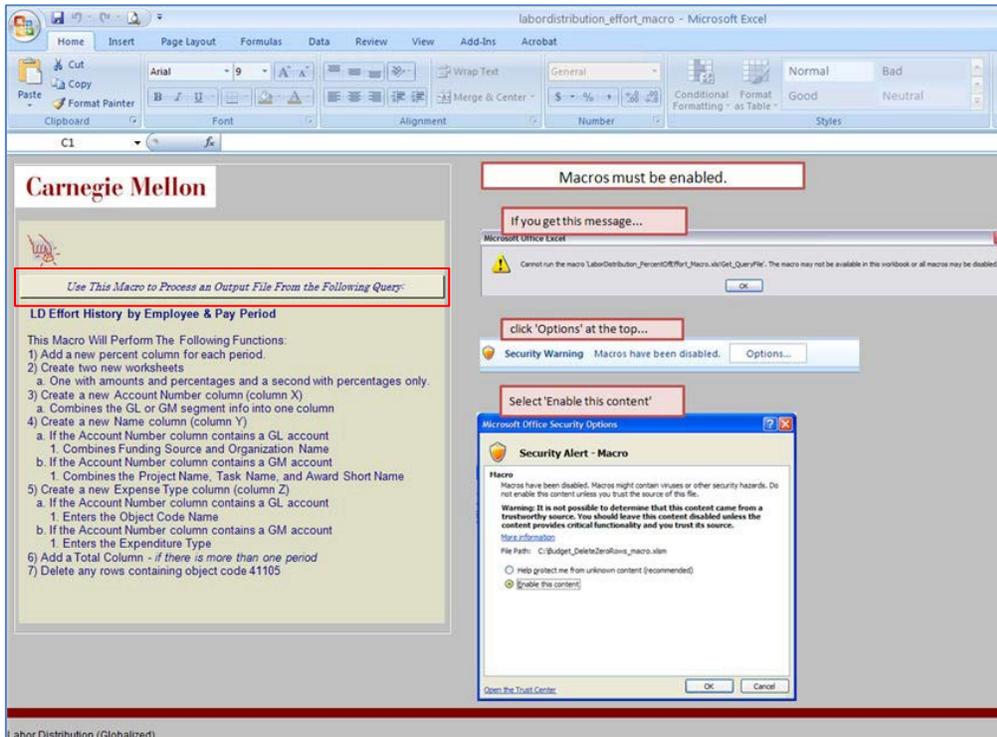
2. Click the ⬚ **Use This Macro to Process an Output File From the Following Query:** button.

3. A Microsoft Excel box will appear asking you to 'Please Select an LD Effort History Output File'. Click **OK**.
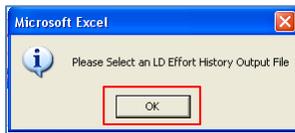
4. Locate the saved Excel report result file on your machine and click 'Open'.
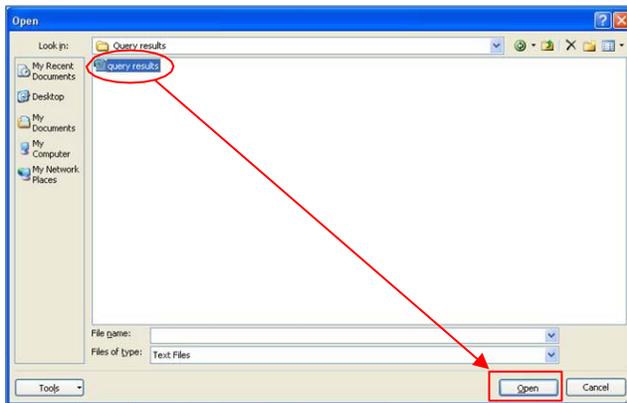
5. The macro will run and perform the following functions:

    a. Add a new percent column for each period.

    b. Create (2) additional worksheets in the workbook (for a total of 3) – the first worksheet will be the original report results, the second worksheet will display dollar amounts and percent totals (by employee), and the third worksheet will display percent totals (by employee) only.

    c. Add (3) columns to the end of the second and third worksheets, which are:

        i. Account Number: concatenates the GL or GM account string segments into one column for pivot table purposes.

      ii.   Name: concatenation of Funding Source Name and Organization Name (for GL account) or Project Name, Task Name, and Award Short Name (for GM account) for pivot table purposes.

      iii. Expense Type: for GL accounts this is the Object Code Name, for GM accounts this is the Expenditure Type in one column for pivot table purposes.

    d.   Add a Total Column (if more than one period).

    e.   Delete any rows containing object code 41105 – Summer Reserve Accrued Salaries and Wages, which are non-eligible earnings.

```
1) Add a new percent column for each period.
2) Create two new worksheets
   a. One with amounts and percentages and a second with percentages only.
3) Create a new Account Number column (column X)
   a. Combines the GL or GM segment info into one column
4) Create a new Name column (column Y)
   a. If the Account Number column contains a GL account
      1. Combines Funding Source and Organization Name
   b. If the Account Number column contains a GM account
      1. Combines the Project Name, Task Name, and Award Short Name
5) Create a new Expense Type column (column Z)
   a. If the Account Number column contains a GL account
      1. Enters the Object Code Name
   b. If the Account Number column contains a GM account
      1. Enters the Expenditure Type
6) Add a Total Column - if there is more than one period
7) Delete any rows containing object code 41105
```

Macro actions as listed on the macro file

6.   Once the macro has finished, you will be asked if you want to process one more report. Click 'Yes' or 'No' as appropriate.

LD History Report

? Report: query results.xlsx has finished.

Do you want to process one more report?
If No labordistribution_effort_macro.xlsm will close.

    [Yes]   [No]
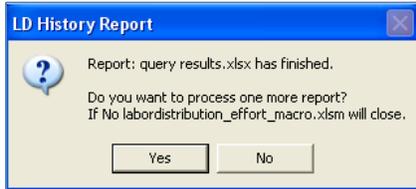
7.   Below is a partial view of how the 'LD Effort History by Employee & Pay Period (Macro)' report results Excel file would look after running the 'Labor Distribution Effort' macro. Notice the two new percentage worksheets that were added to the workbook. *Note: Some information is not shown here due to the sensitive nature of the data.*

| | | | Payroll Period Num | 9 | 10 | 11 | 12 | |
| | | | Pay Period End D | 2012/09/30 | 2012/10/31 | 2012/11/30 | 2012/12/31 | Total |
Expense Type	Functional Currency	Set of Books Name		Percentage	Percentage	Percentage	Percentage	Percentage
REGULAR FACULTY FT	USD	Carnegie Mel		100.00%	100.00%	98.52%		99.50%
FACULTY ADDL TEACH ASSGN	USD	Carnegie Mel				1.48%		0.50%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
REGULAR FACULTY FT	USD	Carnegie Mel		10.00%	8.70%	8.73%		9.14%
REGULAR FACULTY FT	USD	Carnegie Mel		67.78%	69.08%	65.95%		67.58%
REGULAR FACULTY FT	USD	Carnegie Mel		22.22%	22.22%	21.34%		21.92%
OTHER COMPENSATION	USD	Carnegie Mel				3.98%		1.36%
GRAD STUDENT NON-WORKSTUDY	USD	Carnegie Mel		92.31%	92.31%	92.31%		92.31%
GRAD STIPEND	USD	Carnegie Mel		7.69%	7.69%	7.69%		7.69%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel				100.00%		100.00%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel				100.00%		100.00%
GRAD STIPEND	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
PAID FACULTY LEAVE	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
GRAD STIPEND	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
GRAD STIPEND	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
REGULAR FACULTY FT	USD	Carnegie Mel		1.79%	1.65%	1.59%		1.68%
REGULAR FACULTY FT	USD	Carnegie Mel		66.67%	61.59%	59.35%		62.39%
REGULAR FACULTY FT	USD	Carnegie Mel		31.54%	29.14%	28.08%		29.51%
FACULTY ADDL TEACH ASSGN	USD	Carnegie Mel			7.62%	10.98%		6.42%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
INSTRUCTIONAL STAFF PT<17.5	AUD	Carnegie Mel		28.57%	50.00%			36.36%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel		14.29%				9.09%
INSTRUCTIONAL STAFF PT<17.5	AUD	Carnegie Mel		28.57%	50.00%			36.36%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel		28.57%				18.18%
INSTRUCTIONAL STAFF PT<17.5	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
ADMINISTRATIVE EXEMPT FT	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%
ADMINISTRATIVE EXEMPT FT	USD	Carnegie Mel		100.00%	100.00%	100.00%		100.00%

| ◄ ► ►| | **% By Employee Without Amts** | **% By Employee With Amts** | Original | 🕮 |

For additional information and instructions, please view the Data Warehouse Excel Macros page on the Financial Systems Website.

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