Program Name: db_personnel_ratio.sas

Last Updated: July 2025 by E. Zwieg

Contact: Enterprise Data Office; data@northcarolina.edu

Purpose: calculate ratios of active, permanent employee headcounts and salary expenditures within a certain job category compared to the headcounts of all active, permanent employees and earned student credit hours.

- User will need to update libname statements to connect to their own data. Any references to System Office specific drives or data would need to be removed.
- The population for this report is active, permanent employees.
- Pull records from ***hrdm_basic_employee_mv*** starting in July FY 2018. Remove any records where the period has not yet reached the Friday before the 2nd Tuesday of the next month.
- If the record from ***hrdm_basic_employee_mv*** is missing jcat_code_value, then get the jcat_code_value from ***hrdm_basic_position_mv***. Join on campus, period, and position number.
- Create a flag to indicate which periods are from the latest 12 months. Create a flag to indicate which period is from the latest October.
- Summarize the total employee headcount in the population by campus and period.
- Import the list of JCAT, broad job category, and job category from JOB_CATEGORY_NEW and Personnel_Ratio_Dashboard_JCATs plus Job Category_20250613.xlsx. Remove any duplicate JCATs, keeping record from JOB_CATEGORY_NEW dataset over the spreadsheet.
- Join the latest 12-month flag, latest October flag, broad job category and job category to the employee data by JCAT code. If a JCAT does not map to a broad job category or job category, then set the broad job category and job category to "Not Determined".
- Read in the **rolling_sch** SAS dataset. This data is created in the following steps:
    - Summarize the hours_earned from SDM_CREDIT_AWARDED_INST_MV by institution and term. Filter on: primary_career_flag = Y, snapshot_type_code = 4 (Post-grades), exclude_from_ipeds_cai_flag = N, career_code = U or G (Undergraduate or Graduate) from Spring 2016 to the latest completed post-grades term.

    - Set both Summer 1 and Summer 2 to have the same term code. Then summarize the earned hours by institution and term code.
    - Sum the earned hours for each term and the two preceding terms. For example: the Fall 2023 term adds the earned hours from Fall 2023, Summer 2023, and Spring 2023. The Spring 2024 term adds the earned hours from Spring 2024, Fall 2023, and Summer 2023. The Summer 2024 term adds the earned hours from Summer 2024, Spring 2024, and Fall 2023.
    - Create a record for each month of the year with the appropriate earned hours for the latest applicable fall, spring and summer terms.
    - Determine the corresponding Period for each month/year combination in the data.
- Join the earned hours to the employee data on institution id and period.
- Import the legislative salary adjustments (LSI_SAL_ADJ) and join it to the employee data on period. Calculate the total adjusted salary by dividing employee salary total by the legislative salary adjustment. Calculate the base adjusted salary by dividing employee base salary by the legislative salary.
- Create a record with an employee count = 0 for each combination of campus, period, job family and employee type. Set employee count = 1 for records coming from the employee data. Rename ASU, NCSU, and UNCC.
- Concatenate the JCAT code value and JCAT name.
- Use the utility_007_maco_squeeze.sas to reduce the size of character variables to make the data more efficient in Tableau.