

JOB TITLE: STATISTICIAN 3
JOB CODE: 05680

SERIES NATURE OF WORK: The Statistician job series describes work in the collection and statistical analysis of quantified data.

DEFINITION: This is advanced professional consultative and developmental statistical work in the collection, analysis, interpretation, and presentation of quantified data and statistics.

An employee in this job independently designs, plans, and conducts statistical studies, projects, or surveys to support agency decision making. Work involves consulting with program staff to understand their needs and determine study, project, or survey objectives; researching, evaluating, and determining or developing the most appropriate study, project, or survey methodologies; determining study, project, or survey schedules; obtaining, evaluating, and analyzing data using mathematical and statistical methods; resolving complex data issues; drawing inferences from the data; and preparing comprehensive reports of findings and narrative interpretations of data including factors that would impact on the use of the data for decision making. Work may also involve developing databases used to store, retrieve, link, and manipulate data or coordinating the efforts of statistical, information technology, or contract staff performing such work. Work is self-generated or assigned by the supervisor in the form of basic study needs with minimal guidance, and is reviewed upon completion for effectiveness and accomplishments.

DISTINGUISHING CHARACTERISTICS:

- Work is distinguished from the Statistician 2 job by the complexity of the work performed, which is generally characterized by responsibility for independently designing and planning studies, projects, or surveys including researching and evaluating study, project, or survey methodologies; direct impact on decision making for major or highly visible agency programs or operations; and extensive independent consultation with program staff to develop projects and proactively meet their statistical needs.

EXAMPLES OF WORK: (NOTE: The examples of work are representative of the work, but every position classified to this job may not perform all examples of work listed. Conversely, this is not an all-inclusive list of work examples.):

- Consults with program staff to evaluate study needs and resource and time limitations, determines appropriate study objectives, evaluates possible research designs and methodologies that might satisfy needs, and develops a plan and schedule to conduct the study.
- Determines data needed to perform studies and designs forms and questionnaires to obtain required baseline data, extracts data from enterprise systems, obtains data from external sources, researches and obtains new sources of data, or develops new data sets by crossing various internal and external source data.
- Researches, evaluates, and either selects, develops, or modifies sample designs and statistical methods applicable to studies and surveys.
- Applies mathematical and statistical techniques to analyze and interpret data and adapts techniques based on changing study needs.

- Utilizes various statistical methods such as analysis of variance and correlation, regression, and multivariate analyses.
- Utilizes database, spreadsheet, and statistical software, including developing extensive custom statistical software queries, to process, manipulate, and statistically analyze data.
- Researches and develops mathematical and statistical models to forecast performance of new or proposed programs or initiatives and to evaluate the impacts of legislative or policy changes.
- Predicts relationships and interactions of data and designs studies to test their validity.
- Prepares comprehensive narrative and statistical reports explaining study, survey, or project methodologies, interpretations, and conclusions that can be drawn from data.
- Researches and analyzes how to address new information needs and develops new data analysis tools, systems, and processes to meet those needs.
- Determines the application of computerized data processing to data needs and works in conjunction with IT staff to develop databases to store, retrieve, link, and manipulate data.
- Responds to the most complex data/information requests.
- Identifies program data needs and recommends data use plans and strategies.
- Explains study methodologies, determinations, and recommendations to high level agency officials.
- Designs, plans, and coordinates extensive probability surveys.
- Performs related work as required.

ENTRY LEVEL KNOWLEDGES, SKILLS, AND ABILITIES:

- Knowledge of analytical, statistical, and mathematical methods applicable to conducting statistical studies and surveys.
- Knowledge of the principles and practices utilized in the collection, editing, analysis, summarization, and presentation of quantified data and statistics.
- Knowledge of statistical software programs and their application.
- Knowledge of the use and functionality of standard computer software including spreadsheet and database programs.
- Knowledge of the application of computerized data processing to perform the collection, organization, classification, processing, and presentation of quantified data.
- Knowledge of coding practices for the classification of data.

- Ability to effectively present findings and conclusions in tabular, graphic, and narrative form.
- Ability to read, interpret, and analyze numerical information.
- Ability to read and interpret policies and legislation.
- Ability to communicate effectively in writing.
- Ability to communicate effectively orally.
- Ability to establish and maintain effective working relationships.

MINIMUM EXPERIENCE AND TRAINING: (NOTE: Based on the Entry Level Knowledges, Skills, and Abilities):

- One year as a Statistician 2;

or
- Two years of professional experience in the collection, compilation, editing, and statistical analysis of quantified data and a bachelor's degree;

or
- An equivalent combination of experience and training.