

**New York State Department of Civil Service**  
DIVISION OF CLASSIFICATION & COMPENSATION

Classification Standard

**Occ. Code 0705300**

<b>Senior Statistician, Grade 18</b>	<b>0705300</b>
<b>Associate Statistician, Grade 23</b>	<b>0705400</b>
<b>Principal Statistician, Grade 27</b>	<b>0705500</b>

Brief Description of Class Series

Positions in this title series apply statistical theory and principles to the planning, execution, control, and analysis of statistical studies, and in providing technical assistance and advice in the application of statistical methods. Statistics is a body of theory and methods used in the collection, classification, and evaluation of numerical data. It represents a system for the collection, organization, analysis, interpretation, and presentation of numerical data. Statistical techniques such as sampling, regression, and correlation, analysis of time series, and analysis of variance are examples of the analytical and inferential tools used. Statisticians provide management with descriptive summaries and evaluations of numerical data developed through the application of statistical theory. Statisticians may also interrogate, compile, and analyze existing data sets using Statistical Analysis Software (SAS) and Structured Query Language (SQL). These activities are usually concerned with a specific program area or subject matter field and are initiated in response to program needs or reporting activities.

Statisticians are found in several State agencies with the greatest number of positions at the Department of Labor.

Distinguishing Characteristics

*Senior Statistician:* full performance level; applies professional knowledge of statistical theory and principles to the planning and design of surveys or the interpretation and analysis of pre-existing government surveys and studies that may require the adaptation or adjustment of established statistical methods; oversees larger recurring projects as well as special one-time studies; may supervise clerical staff.

*Associate Statistician:* supervisory level; directs a statistical program for a State agency or a division of a larger statistics program; plans, analyzes, and interprets new or existing statistical studies.

*Principal Statistician:* second-supervisory level; directs a subsection of the Research and Statistics Division at the Department of Labor; and acts as a technical

expert, advising management on the optimum use of statistics, as well as limitations of statistical methods in the solution to problems.

### Related Classes

Economists apply economic theories to the collection and analysis of economic information and data and prepare interpretative reports. These positions design and evaluate long-term simulations and econometric models for the purpose of forecasting which may include constructing and maintaining databases for use in conjunction with models. This analysis is used to interpret economic data. Activities related to the design and planning of economic studies are performed by the higher levels in the series.

Program Research Specialists plan studies; collect and analyze data; interpret and report findings on current or proposed programs, policies, and legislation related to such programs to determine the actual or potential effectiveness in achieving objectives; identify weaknesses in programs and make recommendations for modifications; and provide advice and consultation to agency management on program operations.

### Illustrative Duties

#### *Senior Statistician*

Plans statistical projects and surveys in response to programs or problems as defined by agency management.

- Applies statistical theory and methods in determining the appropriate statistical techniques to use.
- Prepares documents necessary to carry out the project such as written instructions, procedures, surveys, and forms.

Conducts statistical projects and surveys.

- Collects, organizes, and summarizes data. Reviews data for reliability, validity, consistency, completeness, accuracy, and comparability.
- Develops new statistical reports to meet the needs of program managers.
- Writes reports describing sources, limitations, and reliability of data.
- Revises procedures to ensure the collection of complete and accurate data according to established quality control standards.

- Identifies significant differences and relationships among sources of data and prepares conclusions, recommendations, and forecasts based on data summaries.
- Determines the cause of errors in data and makes appropriate corrections. If required, recommends changes in procedures to ensure the collection of useable data.

Assists in the evaluation of results and analyzes and presents data in written form, tables, graphs, and charts.

Provides technical assistance to program staff and others in the application of statistical techniques and methods for a specific project or statistical study.

- Provides updates on the status of projects and the statistical methods and procedures used.
- Advises program managers on statistical procedures, methods, and plans.
- Interprets study results indicating factors such as the reliability of the data, the significance of relationships, and the significance and meaning of the study findings.

May supervise a staff of clerical positions assisting on a statistical project.

- Schedules and assigns work to subordinate staff.
- Assists in training staff.
- Reviews completed work for accuracy and completeness, resolves discrepancies, and answers questions from staff

#### *Associate Statistician*

May perform any of the duties of a Senior Statistician.

Develops plans for statistical projects and surveys based on program needs.

- Discusses proposed study with management to determine specific requirements and objectives, background information, and problems related to the project.
- Develops quality control procedures to ensure the accuracy, completeness, and statistical reliability of the data produced.
- Coordinates with program staff by providing schedules, statistical plans, and the specific needs and data requirements of the study.

- Modifies plans including the statistical techniques utilized, data sources, and methods of analysis to ensure the study objectives are met.
- Participates in the development of data model structures or databases.

Supervises a staff of professional and clerical positions performing various activities in a statistical program.

- Evaluates staff performance.
- Provides training to staff on procedures and techniques.

Prepares written reports of statistical studies including narrative reports, summaries, and evaluations of study results, along with supporting graphic presentations.

Provides statistical information in response to requests from individuals and groups within and outside of the agency.

- Contacts individuals for information, including State and federal agencies, industry representatives, and subject matter experts.
- Reviews materials prepared by staff suggesting changes or additions.
- Maintains communication between individuals regarding the application and usage of statistical surveys and other federal data programs.

Participates in meetings and conferences with professional statistical associations and societies to discuss mutual problems and possible solutions; and keeps up with developments in the field of applied and theoretical statistics.

May perform certain administrative functions such as budgeting and providing recommendations on staffing needs.

#### *Principal Statistician*

May perform any of the duties of a lower-level Statistician.

Plans and directs the development of statistical projects related to Department of Labor programs.

Supervises the establishment and ongoing operation of data systems.

Develops statistical models and techniques to optimize allocation of resources.

Responds to complicated technical or statistical questions by providing estimates and interpretations of data.

Reviews and approves the release of major statistical reports that analyze and interpret results for the public.

Informs staff of the technical standards for labor market and demographic data.

Supervises the development of special analytical reports and working papers on labor statistics and economic issues.

### Minimum Qualifications

#### *Senior Statistician*

Open-Competitive: bachelor's degree in statistics or a bachelor's degree including or supplemented by 24 semester credit hours in statistics, biostatistics, computer science, economics/econometrics, mathematics, operations research, or research methods, and completion of a two-year traineeship.

#### *Associate Statistician*

Promotion: one year of service as a Senior Statistician.

#### *Principal Statistician*

Promotion: one year of service as an Associate Statistician.

**Note:** Classification Standards illustrate the nature, extent, and scope of duties and responsibilities of the classes they describe. Standards cannot and do not include all the work that might be appropriately performed by a class. The minimum qualifications above are those required for appointment at the time the Classification Standard was written. Please contact the Division of Staffing Services for current information on minimum requirements for appointment or examination.

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