

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

Classification Standard

Occ. Code 2455100

Program Research Specialist 1, Grade 18
Program Research Specialist 2, Grade 23
Program Research Specialist 3 (All Parenthetics), Grade 25
Program Research Specialist 4, Grade 27

Brief Description of Class Series

Program Research Specialists plan studies; collect, analyze, and summarize 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.

Distinguishing Characteristics

Program Research Specialist 1: full performance level; performs various tasks in the data collection and manipulation, analysis, evaluation, and reporting on smaller, less difficult operating programs, or carries out segments of larger projects as assistants to higher level specialists.

Program Research Specialist 2: first supervisory level; performs the full range of program research activities, including the planning, conducting, evaluation, interpretation, and reporting of study findings; and supervises Program Research Specialists 1 and clerical staff.

Program Research Specialist 3 (All Parenthetics): second supervisory level; performs the full range of program research activities; functions as project leaders over Program Research Specialists 2 and lower-level professional staff on the larger, more complex research projects and develops the agency's research program with higher level staff; classified as parenthetic title only.

Program Research Specialist 4: managerial level; plans, organizes, and directs all program research, analysis, and evaluation activities for a major and significant program area, or for an entire agency; and supervises Program Research Specialists 2 or higher.

Related Classes

Research Scientists perform research involving the formulation, conduct, analysis, interpretation, and reporting of scientific investigations of phenomena or problems with application in specialized subject matter in the medical, biological, and behavioral sciences. Such research includes, but is not limited to, theoretical and experimental investigations.

Economists apply economic theories to the collection and analysis of economic information and data, and prepare interpretative reports. Incumbents 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.

Statisticians plan and design statistical studies, gather and interpret numeric data, and provide technical assistance and advice in the application of statistical methods and in the interpretation of statistical results.

Data Analysts develop and implement techniques and analytics applications to transform raw data into intelligence using data-oriented programming languages, statistical and mathematical computations, and visualization software; apply data mining, data engineering, data modeling, natural language processing, and machine learning to extract and analyze information from structured and unstructured datasets; and visualize, summarize, interpret, and report data findings.

Illustrative Duties

Program Research Specialist 1

Evaluates data sources to determine any limitations in terms of reliability or usability.

Recommends, prepares, monitors, and disseminates performance measures.

Selects the appropriate methods to follow in analyzing and evaluating data, considering the character and sources of data and the statistical tools to be used.

Pre-tests questionnaires and other documents and methods developed for the study to ensure their accuracy, reasonableness, and relevance.

Collects and processes data utilizing survey and/or non-survey instruments, published and unpublished agency statistics and records, on-site investigations, discussions with operating officials, and similar materials and sources.

Synthesizes empirical research and prepares literature reviews; makes recommendations based on best practices.

Performs data manipulation tasks with quantitative data, such as data construction, merging data files, and data cleaning.

Analyzes and interprets data following analytical methods prescribed by plan.

Evaluates various program areas including policy, procedure, legislation, objective, and cost effectiveness.

Identifies actual or potential problem areas, trends, program accomplishments, and additional key factors in the program being studied.

Identifies new program needs, considering agency goals and other relevant conditions and trends, and the effects of actual or proposed legislation.

Evaluates the effectiveness of alternative or corrective actions being considered for various programs.

Analyzes and interprets statistical data to identify significant differences in relationships among sources of information.

Assesses the statistical methods and procedures used to obtain data to ensure validity, applicability, efficiency, and accuracy.

Identifies relationships and trends in data, and any factors that could affect the results of the research or analysis.

Performs descriptive and multivariate statistical analyses of data, using computer software.

Performs data extraction, data linkages, and data queries using computer software.

Prepares tables, graphs, fact sheets, and written reports summarizing research and analysis results.

Prepares forecasts of factors directly related to and affecting agency program operations for use in program planning activities.

Presents results of studies, analyses, or investigations to agency management, covering conclusions and recommendations based on the evaluations made.

Develops specifics regarding the planning, development of analytical methods, study or analysis of procedures, and methods of presentation.

Prepares written technical reports containing the analysis and interpretation of study findings along with recommended courses of action based on study or analysis of findings.

Assesses the content of data systems to ensure that they support the analytic needs of the agency.

Conducts programmatic discussions and conferences and prepares written directives that outline broad study objectives.

May participate in defining and refining data infrastructure requirements and consult with information technology staff in developing and maintaining the agency's infrastructure necessary to carry out research functions.

Program Research Specialist 2 and 3

Performs all the duties of a Program Research Specialist 1.

Plans the study or investigation and develops and issues instructions covering the steps to be followed in carrying out the plan.

Determines the kinds of information needed and the data sources and collection methods to follow.

Plans data collection methods for specific projects and determines the types and sizes of sample groups to be used.

Develops and recommends objectives for proposed programs.

Provides technical advice, consultation, and guidance on operating programs to staff, agency officials, and others.

Develops and recommends changes in objectives, policies, and procedures to improve program effectiveness.

Prepares comprehensive finished reports covering all phases of the study, the interpretation of results and recommended courses of action. May disseminate results at statewide or national level.

Provides consulting service, monitors and evaluates program effectiveness, and initiates or recommends new program studies or analyses.

May assist a Program Research Specialist 4 or other staff in studies of major agency programs that have statewide implications and interrelate with other programs.

Performs the full range of supervisory responsibilities over lower-level Program Research Specialists (various parenthetics) and staff.

Program Research Specialist 4

Performs all the duties of a Program Research Specialist 2 and 3.

Conducts programmatic discussions, conferences, and prepares written directives that outline broad study objectives. Collaborates with stakeholders on a statewide or national level.

Directs all program research, analysis, and evaluation activities for a major and significant program area, or for an entire agency.

Leads initiatives to synthesize and understand best practices and relevant empirical research.

Leads efforts to define and refine data infrastructure requirements; direct consultation with information technology staff in developing and maintaining the agency's infrastructure necessary to carry out research functions.

Develops and recommends changes in policies, and procedures based on study or analysis findings.

Leads collaboration with program and executive management to outline specific data needs for each analysis project and manage resources accordingly.

Supervises Program Research Specialists 2 and 3.

Independence of Operation

Program Research Specialists 1 carry out their assignments following standard work procedures and plans. Employees complete most assignments without assistance from supervisors although such assistance and advice are usually available. Changes in study plans or variations in work procedures are approved before being undertaken. Incumbents keep their supervisors informed of problems and progress of studies. Or analyses. Completed work is reviewed by the supervisor for compliance with instructions and procedures, technical accuracy, soundness of approach, and for adequacy of results.

Program Research Specialists 2 work independently and refer only problems of a highly sensitive nature with major policy implications to the supervisor for review and advice. Incumbents are usually supervised by a Program Research Specialist 4 or a bureau administrator with responsibilities for program evaluation and planning activities.

Completed work assignments are reviewed for soundness of approach and for conformance with study objectives.

Program Research Specialists 3 (Criminal Justice) function as project leaders over professional staff on the larger, more complex research and analysis projects and develop the agency's research program with higher level staff; classified as parenthetic title primarily at Division of Criminal Justice and the Office of Mental Health.

Program Research Specialists 4 work under general administrative direction. They review study and analysis results for compliance with study and analysis objectives. Incumbents develop new concepts, guides, and knowledge in the solution of problems, and develop or recommend new program studies.

Minimum Qualifications

Program Research Specialist 1

Open Competitive: a bachelor's degree including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling; and completion of a two-year traineeship.

Program Research Specialist 2

Promotion: one year of permanent service as a Program Research Specialist 1.

Program Research Specialist 4

Promotion: one year of permanent service as a Program Research Specialist 2.

* Courses in accounting, auditing, finance and epidemiology are considered mathematics courses.

Attachment

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 of the work that might be appropriately performed by a class. The minimum qualifications above are those which were 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.

Date: 1/2023

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Parenthetic Attachment

Program Research Specialists are assigned to various program areas, some of which require specialized knowledge in a field as evidenced by a parenthetic. Positions with parenthetics perform the same activities as the positions in the generic titles but within a specialized subject matter, requiring substantive and specific knowledge and experience in that field. The fields of research and minimum qualifications for the parenthetic titles are summarized below.

Program Research Specialist 1 and 2 (Agriculture): Incumbents perform research, evaluation and analytical studies relating to acreage, production of crops, livestock, commodities pricing, milk production, receipts and utilization of milk, prices and margins for milk, and organization and structure of the industry.

Program Research Specialist 1, 2, 3, and 4 (Criminal Justice): Incumbents perform research, evaluation, and analytical studies relating to crime and the impact of justice system or other forensic interventions. They assess crime trends, sex offender management, recidivism, risk assessment, quality and effectiveness of program implementation, impact of programming on crime factors or individual/offender outcomes, and evaluation research or performance indicators developed by State or local criminal justice or forensic mental health agencies.

Program Research Specialist 1, 2, and 4 (Economics Finance): Incumbents perform research, evaluation, and analytical studies relating to various economic and financial factors such as rate setting methodology, aid formulas, grants distribution, aid payment schedules to educational institutions, taxation, real property tax levy, and Medicaid reimbursement.

Program Research Specialist 1, 2, and 4 (Health Care Finance): Incumbents perform research, evaluation, and analytical studies relating to reimbursement mechanisms, funding methodology, health economics, healthcare financing, cost containment, and patient classification systems.

Program Research Specialist 1, 2, and 4 (Health Systems Analysis): Incumbents perform research, evaluation, and analytical studies relating to health care delivery systems, State and federal surveillance systems, health regulatory and policy analysis, quality assurance, best practices and clinical outcomes.

Program Research Specialist 1, 2, and 4 (Human Services): Incumbents perform research, evaluation, and analytical studies relating to issues surrounding various social programs, such as cash assistance, nutrition assistance, child support, child protective and preventive services, disease management, disease prevention, employment and unemployment services, workforce development, and labor exchange.

Program Research Specialist 1, 2, and 4 (Medical Assistance): Incumbents perform research, evaluation, and analytical studies relating to Medicaid and other State and federal medical assistance programs.

Program Research Specialist 1, 2, and 4 (Public Health): Incumbents evaluate public health programs; conduct applied research and analysis of the causes, occurrence or control of diseases or other health conditions, health behaviors or health care system utilization, including the impact that payment methodologies have on population health.

Program Research Specialist 1, 2, and 4 (Transportation): Incumbents perform research, evaluation, and analytical studies relating to highway safety, traffic management, accident reduction, accident surveillance, mass transit, and motor carrier safety.

Minimum Qualifications

Program Research Specialist 1 (Agriculture)

Open Competitive: A bachelor's degree or higher including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Agriculture)

Promotion: one year of permanent service as a Program Research Specialist 1 (Agriculture).

Program Research Specialist 1 (Criminal Justice)

Open Competitive: A bachelor's degree or higher in criminal justice, criminology, economics, political science, psychology, public policy, public administration, sociology, or statistics including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience related to criminal justice system topics including crime; criminal justice trends, adult and youth case processing; incarceration and community supervision; risk assessment; sex offender management; recidivism; and impact of programming and treatment performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of

quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Criminal Justice)

Promotion: one year of permanent service as Program Research Specialist 1 (Criminal Justice).

Program Research Specialist 3 (Criminal Justice)

Promotion: one year of permanent service as Program Research Specialist 2 (Criminal Justice).

Program Research Specialist 4 (Criminal Justice)

Promotion: one year of permanent service as Program Research Specialist 3 (Criminal Justice).

Program Research Specialist 1 (Economics Finance)

Open Competitive: A bachelor's degree or higher including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Economics Finance)

Promotion: one year of permanent service as a Program Research Specialist 1 (Economics Finance).

Program Research Specialist 4 (Economics Finance)

Promotion: one year of permanent service as a Program Research Specialist 2 (Economics Finance).

Program Research Specialist 1 (Health Care Finance)

Open Competitive: A bachelor's degree or higher including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience in ** health care financing performing the collection, manipulation (e.g., data construction, merging data files, data cleaning,

working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Health Care Finance)

Promotion: one year of permanent service as a Program Research Specialist 1 (Health Care Finance).

Program Research Specialist 4 (Health Care Finance)

Promotion: one year of permanent service as a Program Research Specialist 2 (Health Care Finance).

** Health care financing may include managed care financing, and the health care financing experience must have involved experience in any of the following areas: 1) planning, developing, designing or modifying health care payment mechanisms; 2) collecting, analyzing, summarizing and assessing health care fiscal and statistical data; 3) conducting cost impact analysis of various health care financing payment models, 4) review and analysis of provider or managed care organization financial statements; 5) independent responsibilities for the development of narrative reports and/or position papers that include health care financing policy recommendations.

Program Research Specialist 1 (Health Systems Analysis)

Open Competitive: A bachelor's degree or higher including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND an additional nine semester credit hours in epidemiology AND two years of professional research experience in health care administration, public health or health care evaluation performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Health Systems Analysis)

Promotion: one year of permanent service as a Program Research Specialist 1 (Health Systems Analysis).

Program Research Specialist 4 (Health Systems Analysis)

Promotion: one year of permanent service as a Program Research Specialist 2 (Health Systems Analysis).

Program Research Specialist 1 (Human Services)

Open Competitive: A bachelor's degree or higher including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Human Services)

Promotion: one year of permanent service as a Program Research Specialist 1 (Human Services).

Program Research Specialist 4 (Human Services)

Promotion: one year of permanent service as a Program Research Specialist 2 (Human Services).

Program Research Specialist 1 (Medical Assistance)

Open Competitive: A bachelor's degree including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience in Medicaid or other State or federal medical assistance programs performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Medical Assistance)

Promotion: one year of permanent service as a Program Research Specialist 1 (Medical Assistance).

Program Research Specialist 4 (Medical Assistance)

Promotion: one year of permanent service as a Program Research Specialist 2 (Medical Assistance).

Program Research Specialist 1 (Public Health)

Open Competitive: A bachelor's degree or higher in health care administration or public health including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, or data modeling AND two years of professional research experience in health care administration or public health performing the collection, manipulation (e.g., data

construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review and analysis and presentation related to program operations.

Program Research Specialist 2 (Public Health)

Promotion: one year of permanent service as a Program Research Specialist 1 (Public Health).

Program Research Specialist 4 (Public Health)

Promotion: one year of permanent service as a Program Research Specialist 2 (Public Health).

Program Research Specialist 1 (Transportation)

Open Competitive: A bachelor's degree or higher including or supplemented by nine semester credit hours in statistics, biostatistics, economics, econometrics, *mathematics, research methods, data analysis, data science, or data modeling AND two years of professional research experience performing the collection, manipulation (e.g., data construction, merging data files, data cleaning, working with data files containing different levels of data) and evaluation of quantitative data directed toward review, analysis, and presentation related to program operations.

Program Research Specialist 2 (Transportation)

Promotion: one year of permanent service as a Program Research Specialist 1 (Transportation).

Program Research Specialist 4 (Transportation)

Promotion: one year of permanent service as a Program Research Specialist 2 (Transportation).

* Courses in accounting, auditing, finance and epidemiology are considered mathematics courses.