

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

Tentative Classification Standard

Occ. Code 6162000

Assistant Research Scientist, Grade 14	6162000
Research Scientist 1, Grade 18	6162201
Research Scientist 2, Grade 22	6162202
Research Scientist 3, Grade 25	6162203
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Research Scientist 6, Grade 35	6162216
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This classification standard's format is modified to accommodate the unique character of the classes in this title series.

Brief Description of Class Series

Research Scientists perform basic research involving the formulation, conduct, analysis, interpretation, and reporting of scientific investigations of phenomena or problems, and perform research in specialized fields, such as the medical, biological, or behavioral sciences at various State agencies. Work typically results in publishable contributions to the scientific field under study, and is typically subject to peer review.

Distinguishing Characteristics

All titles in this series are non-competitive.

Research Scientists perform specialized scientific research that involves the systematic, controlled, and empirical investigation of theoretical or programmatic issues for the identification and development of new or complete knowledge, or the restructuring of existing knowledge for application to new problems. The research process generally consists of problem exploration, definition, and formulation; planning research approaches and step sequences; conducting experiments or studies, including collection and processing of data; interpreting findings, involving classification, analysis, synthesis, and evaluation of data; and reporting findings.

Research Scientists typically specialize in one scientific field. Factors that determine the level of Research Scientist classified include the researcher's qualifications as outlined below, research situations or assignments, guidance available

and the originality of work performed, and supervision received by higher-level scientific or administrative staff.

Each State agency with a research function has a panel of senior research scientists and administrators that represent specialized scientific fields. The panel reviews and evaluates a candidate's knowledge, personal qualities, achievements, and contributions as they relate to a job vacancy, and recommends classification based on findings. The factors considered in the panel's review include the candidate's educational achievements; professional research experience; authored publications and reports; level of professional recognition; number and size of grants received; and supervisory experience.

Illustrative Duties

Assistant Research Scientist

Research activities are characterized by having clear and specified objectives, a limited number of variables, and develop the employee for work at a higher level.

Research precedents are available in the form of studies on related subjects, and standard methods presented in literature. Assignments may require the researcher to adopt methods to specific problems.

Activities are primarily focused on data collection, and support the work of higher-level Research Scientists.

Work is planned and carried out under supervision of a higher-level Research Scientist, objectives and intended outcomes are indicated by the supervisor, and work is reviewed for accuracy, completeness, and conclusions.

Research Scientist 1

Performs activities that have clear precedents and are of limited scope, but involve all phases of the research process, including problem definition, planning, execution, analysis, interpretation, and reporting.

Performs activities that may require application of experimental techniques involving a limited amount of innovation, or modification of existing methods, procedures, and techniques.

Performs routine testing methods, analysis, and examination activities.

Receives general guidance on objectives, approaches, and intended outcomes from supervisors, and when unusual problems present, supervisors suggest specific research methods and relevant literature to address situations.

Research Scientist 2

Conducts research projects that are broad in nature, require considerable independence in determining methods and interpreting research results, and may require the development of new research methods and protocols.

Activities may involve work on segments of larger studies involving problems of limited scope, and may require a broad range of scientific techniques. Projects require drafting sections of or complete research papers.

Presents research findings to supervisors and higher-level staff.

Recognizes unusual events during experiments, and keep supervisors informed through occasional work decisions. Supervisors provide little immediate guidance, and primarily review work to evaluate overall results.

Projects may result in professional publications authored singly or jointly.

Research Scientist 3

Performs independent original research. Activities typically include performance of all phases of the research process.

Serve as a principal source of information for their own research projects, whether inside of the State research environment, or with researchers from other organizations.

Projects may involve new fields where objectives are not clear, and where conventional research methods may not be effective.

Projects are expected to result in publishable work products in professional papers, journals, or reports, based on interpretation and evaluation of results.

Supervisors provide general instructions regarding project scope and study objectives.

May direct a small team of lower-level Research Scientists that work with the Research Scientist 3 in supporting roles.

Research Scientist 4

Functions as a full member of a research team, and has major responsibility for all phases of a research project.

Defines problems, performs necessary research, develops and executes research plans, organizes and evaluate results, and prepares reports of findings with only occasional assistance from their supervisor.

Publications are of a greater scope when compared to publications produced by lower-level Research Scientists.

Work results in authorship or co-authorship of papers and reports, and work is presented at professional conferences.

May direct a small team of lower-level Research Scientists that work with the Research Scientist 4 in supporting roles.

Research Scientist 5

Formulates and carries out complete research plans. Findings are accepted as technically authoritative, and impact an agency's approach to problems addressed by the research project.

Projects require systematic research on problems that have been recognized as exceptionally difficult and unyielding to research analysis, and require unconventional or novel research approaches and use of sophisticated research techniques.

Identifies and explores high impact research areas in relation to an agency's programs, needs, and the state of science involved.

Projects result in a series of publishable contributions that answer important questions in a scientific field, account for previously unexplained phenomena, and open significant new avenues for further study.

Works under broad supervision, which is generally limited to approval of staffing, funds, and facilities.

Directs lower-level Research Scientists and other staff engaged in research projects.

Research Scientist 6

Performs systematic research on problems that have been recognized as so exceedingly difficult and resistive to analysis that success cannot be positively stipulated, however, there is an expectation of fruitful work.

Exercises leadership in the advancement of research programs, the understanding of a scientific field, and the coordination of research work with scientists from other governmental units, academic institutions, or private industry.

Demonstrates an outstanding level of knowledge in a broad field of research, or an authoritative level of knowledge in a narrow and specialized field as illustrated by projects' scope.

Authors numerous publications that have a significant impact in the field, contributions move the field forward, and other researchers must take note of projects to proceed with their research interests.

Provides consultative services to colleagues and speak authoritatively at professional conferences, and work is widely cited through favorable literary reviews and citations.

Works under broad supervision, which is generally limited to approval of staffing, funds, and facilities.

Directs lower-level Research Scientists and other staff engaged in research projects.

Research Scientist 7

Performs systematic research on problems of such fundamental interest, difficulty, and resistance to analysis that there have been numerous attempts by top-level scientists to explore the area and gain a fundamental understanding of processes or phenomena.

Develops new hypotheses, concepts, techniques, and interpretations for projects. Completed projects lead to major modification or important extension of existing theories and methodologies.

Projects have a major impact on matters of great urgency and significance and are furnished to other agencies and the scientific community. Projects are nationally recognized, and the researcher is sought out nationally as an advisor and consultant.

Works under broad supervision, which is generally limited to approval of staffing, funds, and facilities.

May assist a Research Scientist 8 in the direction of a research department or major research program, and direct lower-level Research Scientists and other staff engaged in research projects.

Research Scientist 8

In addition to performing research comparable to that of a Research Scientist 7, directs a research department or a major research program of unusual size and complexity. Departments or programs include multiple research units or divisions responsible for significant projects.

Manages operations to efficiently achieve goals and objectives, and administratively oversees lower-level Research Scientists and other research staff.

Performs staffing functions, short- and long-range planning activities, and establishes internal operating policies and procedures.

Allocates resources, resolves operational problems, and optimizes trade-offs between managerial and technical considerations.

Minimum Qualifications

Assistant Research Scientist

Non-Competitive: bachelor's degree and one year of professional research experience in an appropriate field.

Substitution: 30 graduate hours leading to an advanced degree in an appropriate field may be substituted for the required experience.

Research Scientist 1

Non-Competitive: bachelor's degree and two years of professional research experience in an appropriate field.

Substitution: master's degree in an appropriate field may substitute for one year of the experience.

Research Scientist 2

Non-Competitive: bachelor's degree and three years of professional research experience in an appropriate field.

Substitutions: master's degree in an appropriate field may substitute for one year of experience, and Ph.D. in an appropriate field may substitute for an additional year of experience.

Research Scientist 3

Non-Competitive: bachelor's degree and four years of professional research experience in an appropriate field.

Substitutions: master's degree in an appropriate field may substitute for one year of experience, and Ph.D. in an appropriate field may substitute for an additional year of experience.

Research Scientist 4

Non-Competitive: bachelor's degree and five years of professional research experience in an appropriate field.

Substitutions: master's degree in an appropriate field may substitute for one year of experience, and Ph.D. in an appropriate field may substitute for an additional year of experience.

Research Scientist 5

Non-Competitive: master's degree and six years of professional research experience in an appropriate field.

Substitution: Ph.D. in an appropriate field may substitute for one year of experience.

Research Scientist 6

Non-Competitive: Ph.D. and seven years of professional research experience in an appropriate field.

Research Scientist 7

Non-Competitive: Ph.D. and eight years of professional research experience in an appropriate field.

Research Scientist 8

Non-Competitive: Ph.D. and nine years of professional experience, including specific research and teaching assignments in an appropriate field.

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 qualification requirements for appointment or examination.

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