New Mexico State Personnel Office
2600 Cerrillos Road
Santa Fe, New Mexico 87505-0127

Classification Description

OPERATIONS RESEARCH ANALYSTS

Class Title	Class Code	Pay Band	Alt Pay Band*
Operations Research Analysts-B	D2031B	55	60
Operations Research Analysts-O	D2031O	60	65
Operations Research Analysts-A	D2031A	65	70

In accordance with SPB Rule 1.7.4.10 NMAC, the assignment to alternative pay bands shall be reviewed annually to determine their appropriateness.

Occupation Description
Formulate and apply mathematical modeling and other optimizing methods using a computer to develop and interpret information that assists management with decision making, policy formulation or other managerial functions.

Nature of Work
Operations Research Analysts may develop related software, service or products. They frequently concentrate on collecting and analyzing data and developing decision support software. They develop and supply optimal time, cost or logistics networks for program evaluation, review or implementation.

Distinguishing Characteristics of Levels
Note: Examples of Work are intended to be cumulative for each progressively higher level of work. The omission of specific statements does not preclude management from assigning other duties which are reasonably within the scope of the duties.

Basic
- Employees in this Role assist the organization in efficient use of materials, equipment, and people, coordinate a variety of elements to achieve specified goals, and apply mathematical principles to organizational problems.
- Employees may formally define, and study the problem and gather data for resolution of the problem; assign values to different components, and determine relationships between them; work with others in the organization to ensure successful implementation of plans.

Recommended Education and Experience for Full Performance
Associates degree and four (4) years of experience in research, statistics, computer science, data analysis, accounting, auditing, finance, economics, business, public administration, budgeting, management and/or systems analysis.

Minimum Qualifications
High School diploma or Equivalency and two (2) years of experience in research, statistics, computer science, data analysis, accounting, auditing, finance, economics, business, public administration, budgeting, management and/or systems analysis.

Operational

- Employees in this Role apply quantitative techniques to make decisions and solve problems.
- Employees apply economic, systems, and mathematical formulas along with research techniques to address problems; will carry out analysis to support management's quest for performance improvement; select appropriate analytical techniques for problem solving and use simulation, linear and non-linear optimization, discrete and random variables methods, dynamic programming, queuing models and other stochastic-process models; may also modify computer programs to create solutions and use computer programming based on different assumptions to select the best recommendation.

Recommended Education and Experience for Full Performance*

Bachelor's degree and two (2) years of experience in research, statistics, computer science, data analysis, accounting, auditing, finance, economics, business, public administration, budgeting, management and/or systems analysis.

Minimum Qualifications

Associates degree and two (2) years of experience in research, statistics, computer science, data analysis, accounting, auditing, finance, economics, business, public administration, budgeting, management and/or systems analysis. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling four (4) years may substitute for the required education and experience.

Advanced

- Employees in this Role propose alternative solutions to management, who then will choose the course of action that best meets their goals.
- Employees work closely with senior managers to identify and solve a variety of problems; use econometric methods, data envelopment analysis, neural networks, genetic algorithms, decision analysis, and the analytic hierarchy process; construct mathematical models and use advanced statistical methodologies that attempt to describe the system in use; present management with recommendations based on the results of the analysis.

Recommended Education and Experience for Full Performance

Bachelor's degree and four (4) years of experience in research, statistics, computer science, data analysis, accounting, auditing, finance, economics, business, public administration, budgeting, management and/or systems analysis.

Minimum Qualifications

Bachelor's degree and two (2) years of experience including research, statistics, computer science, data analysis, accounting, auditing, finance, economics, business, public administration, budgeting, management and/or systems analysis. Any combination of education from an accredited college or university in a related field and/or direct experience in this occupation totaling six (6) years may substitute for the required education and experience.

Knowledge and Skills

*Note: This information has been produced by compiling information and documentation provided by O*NET. O*NET[TM] is a trademark of the U.S. Department of Labor, Employment and Training Administration.*

Knowledge

Mathematics — Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Computers and Electronics — Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.

Engineering and Technology — Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.

English Language — Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.

Administration and Management — Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.

Production and Processing — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.

Skills

Critical Thinking — Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

Mathematics — Using mathematics to solve problems.

Complex Problem Solving — Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.

Reading Comprehension — Understanding written sentences and paragraphs in work related documents.

Judgment and Decision Making — Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Systems Analysis — Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.

Systems Evaluation — Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.

Active Learning — Understanding the implications of new information for both current and future problem-solving and decision-making.

Speaking — Talking to others to convey information effectively.

Writing — Communicating effectively in writing as appropriate for the needs of the audience.

Statutory Requirements: N/A

Conditions of Employment: Working Conditions for individual positions in this classification will vary based on each *agency's utilization*, *essential functions*, and the *recruitment needs* at the time a vacancy is posted. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

Default FLSA Status: Exempt. FLSA status may be determined to be different at the agency level based on the agency's utilization of the position.

Bargaining Unit: This position may be covered by a collective bargaining agreement and all terms/conditions of that agreement apply and must be adhered to.

Established: 07/07/2001   **Revised:** 9/20/2011, 12/10/2015 (Min Quals)

*Adapted from the United States Bureau of Labor Statistics and are intended to illustrate the typical education and experience required for this occupation.

Note: Classification description subject to change. Please refer to the SPO website www.spo.state.nm.us to ensure this represents the most current copy of the description.