



**Orange County Department of Education  
Human Resources Department  
Classified Management Class Specification**

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**Data Scientist, Educational Services**

**Class Code: 1562**

**Work Days: 225**

**GENERAL PURPOSE**

Gather and evaluate data across multiple, diverse sources in order to create innovative and scalable learning solutions aimed at improving educational opportunities and outcomes for students at all levels; and provide assistance to higher level management staff.

**SUPERVISION RECEIVED AND EXERCISED**

1. Receives direction from higher level management staff.
2. May exercise direct supervision over professional, technical, and/or clerical staff.

**ESSENTIAL DUTIES AND RESPONSIBILITIES**

*This position description is intended to describe the general nature and level of work being performed by an employee assigned to this position. This description is not an exhaustive list of all duties, responsibilities, knowledge, skills, abilities, and working conditions associated with this position. All requirements are subject to possible modification to reasonably accommodate individuals with a disability.*

1. Recommend and assist in the implementation of goals, objectives, and strategic plan; establish schedules and methods for providing specialized services; implement policies and procedures.
  2. Apply mathematical statistics, algorithm design, modeling, optimization, and business acuity to support and drive the development of data-driven educational products and services for the Department, local districts, and charter schools.
  3. Perform highly complex research and collaborate with technology and software development resources to create, troubleshoot, and implement solutions related to public education and student achievement.
  4. Collaborate with local, regional, statewide, and nationwide educational, policy, business, and technology contacts to gather and analyze big data and apply predictive analytics with a focus on creating dynamic adaptive learning resources for students.
  5. Drive the collection of new data and refine existing data sources to ensure a robust and comprehensive data set on which to base findings and recommendations; obtain, clean, and convert data sources, ensuring that all operations comply with local, state, and federal data security laws and regulations regarding student information.
  6. Collaborate with the Information Technology team to design, implement, secure, and maintain data architecture strategies around the enterprise data warehouse and the use of management and business intelligence tools.
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7. Communicate findings to a variety of stakeholders at differing levels of technical proficiency; share data analysis results, gather feedback, and create momentum to adopt new and improved learning solutions.
  8. Collaborate with others to publish findings for a variety of audiences, including scientific papers, data extracts, articles for industry publications, etc.
  9. Attend and/or present at local, regional, statewide, and nationwide meetings and events.
  10. Provide leadership to the county's student data system network to build a collective understanding of the system and its impact on funding and accountability, promote collaboration, best practices, problem-solving strategies, and share resources.
  11. Develop and maintain records and information dashboards to track and report on project, statuses, outcomes, and a variety of student measurements and progress.
  12. Must demonstrate attendance sufficient to complete the duties of the position as required.
  13. Perform related duties similar to the above in scope and impact as required.

#### **QUALIFICATIONS (KNOWLEDGE, SKILL, ABILITY REQUIREMENTS)**

##### **Knowledge of:**

1. Advanced data mining and analysis techniques and student data security protocols.
2. Complex mathematical calculations and projections.
3. Administrative and technical expertise with Customer Relationship Management (CRM) platforms.
4. Trends and innovations in the field of data science.
5. Data warehouse tools; machine learning techniques, including classification and outlier detection of data; business process improvement tools (e.g., LEAN/Six Sigma or similar); personnel processes and research-based strategies to analyze and improve student achievement.
6. Procedures, methods, and techniques of project and workflow management and organization.
7. Pertinent federal, state, and local laws, education and health codes, regulations, and standards/principles.

##### **Ability and Skill to:**

1. Gather, collate, and/or classify, analyze, connect/integrate, and automate data and related processes.
2. Apply program evaluation and assessment techniques; and conduct, interpret, and apply statistical analysis.
3. Interpret the organizational and division strategic plan and create relevant goals and plans for assigned areas.
4. Effectively adapt and adjust program services to meet changing priorities and customer-specific needs.
5. Establish and maintain effective working relationships with various constituencies.
6. Interpret and explain laws, codes, contracts, policies, and procedures.
7. Develop and present training materials.

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8. Prepare clear and concise correspondence, reports, and other written materials.
  9. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.
  10. Communicate clearly and concisely, both orally and in writing, in English; and present information effectively in front of both large and small groups.

#### **Education, Training, and Experience:**

A typical way of obtaining the knowledge, skills, and abilities outlined above is a bachelor's degree in mathematics, education, social science, or a related field and three (3) years of experience in data mining/analysis, including conducting large-scale data analyses.

#### **PHYSICAL AND MENTAL DEMANDS**

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class.

##### **Physical Demands**

Employees must be able to perform the essential functions of the position with or without accommodation. Employees in this classification must be able to travel countywide to a variety of sites within a reasonable time frame, read written and electronic materials, and communicate clearly with those contacted through the course of work (typically in person, on the phone, and via email); perform deskwork for extended periods; and access and operate all required equipment for job duties. The position may include occasional need to traverse uneven surfaces and move items weighing up to 25 pounds.

##### **Mental Demands**

While performing the duties of this class, employees are regularly required to use written and oral communication skills; read and interpret information; analyze and solve problems; use mathematical reasoning; make observations; learn and apply new information or skills; perform highly detailed work; work on multiple, concurrent tasks with frequent interruptions; work under intensive deadlines and meet productivity requirements; and interact successfully with various groups of people encountered in the course of work.

#### **WORK ENVIRONMENT**

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform essential functions.

Employee typically works in an office environment that is fast-paced with high pressure.