CLASS SPECIFICATION
Research Systems Analyst II
Research Systems Analyst I

FLSA Status: Nonexempt
EEOC Job Category: Professionals
Union Representation: Represented

GENERAL PURPOSE
Under direction, at the I level, participates in the design, development, maintenance and enhancement of the District's college-wide data warehouse; using software tools, develops queries and extracts data for use in institutional research projects; at the II level, designs, develops, maintains and enhances the college-wide data warehouse; serves as development lead and key resource person in providing the analysis and delivery of data; trains and provides technical support to business analysts, committees/work groups and faculty in various departments on use of the data warehouse; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS
Research Systems Analysts lead or participate in design, development and maintenance of the District's college-wide data warehouse which provides data support for institutional research, institutional evaluation and improvement and College planning and decision-making through cost-effective technology-based information solutions. Incumbents in these classes are responsible for management and enhancement of data models and documentation of meta-data, development and deployment of access/business intelligence tools, data warehouse security practices and other systems administration responsibilities. Work requires a sound knowledge of database design and data management concepts, systems and tools and the ability to identify and document user data and analytical support needs.

Research Systems Analyst I is the entry-level class in the research systems analyst class series. An incumbent participates in the development and administration of the data warehouse and assists in ongoing analysis of data requirements and report generation to meet customer requirements.

Research Systems Analyst II is the journey- to advanced journey-level class in the research systems analyst class series. An incumbent in this class serves as the development lead and key resource person for design, development and use of the data warehouse, performs the more complex assignments and trains other District staff in use of the data warehouse to meet data and research needs.

Research Systems Analyst I is distinguished from Research Systems Analyst II in that an incumbent in the latter class is responsible for providing District-wide information services through the data warehouse to support campus strategic goals and educational and fiscal policies.
ESSENTIAL DUTIES AND RESPONSIBILITIES

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to this class.

1. Participates in development of enterprise-level direction and strategy for data management, data storage and business intelligence technologies and systems applicable to the District's college-wide data warehouse; researches and evaluates current and emerging technologies and methodologies for data warehousing, data mining and business intelligence reporting and makes recommendations on technology initiatives to meet District data management needs.

2. Participates in or administers the data warehouse data dictionary, including naming conventions and other rules and standards; refines and updates data models; documents Meta data in the data dictionary; assists or participates in setup and maintenance of tables and codes and in design and administration of validation methods and reports to ensure data integrity and quality.

3. Participates in or interviews and consults with customers, including executives, deans, business area managers, faculty and system users, to assess data and other requirements to meet their business, operating and research requirements; develops and refines data architectures and recommends applications development and enhancement projects to meet their information requirements; assists in or provides technical information, guidance and consulting support to customers as required.

4. Using established query and other tools, generates data requested by the user community; works with data stewards and business analysts to define data sets and reporting formats desired by end users; assists in or designs business views and packages to make data available to business analysts for on-demand reporting purposes.

5. Assists in or performs processes to ensure the accuracy and integrity of data submitted in the California Community College Chancellor's Office Management Information System (MIS); assists in or develops technology tools to identify and resolve data quality problems; may assist in preparation of federal Integrated Postsecondary Education Data System reports.

6. Assists in or trains business analysts in various business areas, as well as deans, department heads and other staff, on processes and procedures for accessing and using data in the data warehouse.

Research Systems Analyst II

In addition to the above:

1. Serves as project lead, oversees and participates in the design, development, maintenance and enhancement of the District college-wide data warehouse; participates in development and recommends changes and enhancements to underlying data models; ensures the documentation of applicable Meta data; maintains and updates warehouse architecture, mapping and business view documentation; administers data warehouse security processes and procedures; recommends and implements security protocols, including rights, permissions and privileges.
2. Designs, implements, modifies, maintains and administers strategic enrollment management software; performs highly complex systems management functions at the enterprise level; configures, integrates, tests, maintains and administers business intelligence system software.

3. Confers with District executives, deans, business area managers, major systems users and committees regarding current and anticipated information systems requirements and the feasibility of alternative conceptual approaches to meeting requirements; provides expert technical information, guidance and consulting support as needed.

4. Develops complex query and reporting tools to meet customer information needs; provides training and advice on design logic for developing reports and data interpretation; provides high level functional and technical problem analysis, troubleshooting and resolution for data warehouse systems and software.

5. Develops and presents staff training and development activities.

6. Represents the Office of Institutional Effectiveness on internal and external committees and projects; serves on or leads a variety of task forces and committees.

OTHER DUTIES

1. Participates in various regional and state forums and organizations dealing with institutional research in community colleges.

2. As a Research Systems Analyst II, may act for the Associate Dean, Institutional Effectiveness in that individual's absence; may assist in supervising staff of the Institutional Effectiveness Office as assigned.

QUALIFICATIONS

Knowledge of:

1. Relational database theory, design rules and development practices, including data modeling, data flow and entity relationship analysis, data structure analysis, logical and physical database design, data access methods, storage capacity management and database recovery techniques.

2. Data mining and data warehousing principles and methods.

3. Database management systems and software, including architectures, diagnostic tools, commands and utilities.

4. Network architectures and theory and principles of network design and integration as they apply to data warehouse applications.

5. Operating system architecture, characteristics, commands and components applicable to District computer platforms.


7. Principles and practices of systems analysis and design.
8. Standard programming languages and utilities similar to those used by the District.
10. Project management tools and techniques.
11. Principles and practices of sound business communication.
12. Uses and operations of computers and standard business software including word processing, spreadsheet, database and presentation applications.

**Ability to:**

1. Understand the business and operational needs of multiple customers and ensure consideration of these needs in development of effective solutions to current and future data warehouse requirements.
2. Understand and apply the analysis of functional requirements to the development of proposals, specifications and recommendations for efficient, cost-effective data warehouse and other technology solutions.
3. Use tools and utilities to create complex queries and generate data analyses and reports to meet customer requirements.
4. Plan, organize and complete projects efficiently and in accordance with District quality standards.
5. Prepare clear, concise and accurate data warehouse and program documentation, reports of work performed and other written materials.
6. Make sound independent decisions within general policy guidelines.
7. Communicate clearly and effectively orally and in writing.
8. Work collaboratively and effectively as a project leader and team member.
9. Maintain the confidentiality of information.
10. Use tact, discretion, courtesy and patience in dealing with sensitive and difficult situations.
11. Understand and interact sensitively with the diverse academic, socio-economic, cultural, disability and ethnic backgrounds of staff, students and the community-at-large.
12. Establish and maintain effective working relationships with District managers, deans, department heads, academic support staff, other District staff, consultants and others encountered in the course of work.

**Education, Training and Experience:**

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from a four-year college or university with a major in computer science, management information systems or a closely related field; AND:
Research Systems Analyst I: Two years of progressively responsible experience in the design, development and administration of relational databases and database applications; or an equivalent combination of training and experience.

Research Systems Analyst II: Five years of progressively responsible database design, development and administration experience; or an equivalent combination of training and experience.

Licenses; Certificates; Special Requirements:
A valid California driver's license and the ability to maintain insurability under the District’s vehicle insurance policy.

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. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands
While performing the duties of this job, employees are regularly required to sit; talk or hear, both in person and by telephone; use hands repetitively to handle and feel computers and standard business equipment; and reach with hands and arms. The employee is frequently required to stand and walk.

Specific vision abilities required by this job include close vision and the ability to adjust focus.

Mental Demands
While performing the duties of this class, the employee is regularly required to use written and oral communication skills; read and interpret highly complex data and information; analyze and solve complex analytical and research problems; use mathematics and statistical concepts and formulae; learn and apply new information or skills; perform highly detailed work under deadlines with frequent interruptions; and interact with District managers, deans, department heads, academic support staff, other District staff, consultants, representatives of other institutions and others 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 the essential functions.

The employee works under typical office conditions and the noise level is usually quiet.