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| **DATA WAREHOUSE SYSTEMS DEVELOPER**  |
| **Reports to:**  | Dean of Research, Planning and Institutional Effectiveness and Dean, Academic Information Services |
| **Dept:** | RPIE and AIS | **Range:** | 37 |
| **FLSA:** | Exempt | **EEO:** | Professional Non-faculty |

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are not intended to reflect all duties performed by individual positions.*

### BASIC FUNCTION:

Under general supervision, work independently to coordinate and perform complex program­ming in the analysis of systems requirements and the preparation of computer programs. This involves making independent decisions for providing computer solutions within and across divisions through designing, creating or modifying computer programs, researching applicable regulations and policies, writing documentation and working with users within and across divisions, and performing related duties as assigned.

### DISTINGUISHING CHARACTERISTICS*:*

The Data Warehouse Systems Developer works in a team environment with other Academic Infor­mation Services and district staff to implement and support business intelligence solutions and develop techniques to integrate and transform data effectively. This position uses data mappings, native languages and/or ETL tools and integrates data appropriate for the data ware­house. The developer must be able to successfully identify sources of data and to work with subject-matter experts to effectively standardize and QA data content. The incum­bent utilizes advanced techniques and functions, including data management and query soft­ware, to develop, administer and maintain institutional research databases, automated reporting systems and complex queries to access the district’s general enterprise databases.

### ESSENTIAL DUTIES & 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. Working independently and with little direction, develop statement of systems, scope and objectives based on functional requirements; utilize editors, form design tools and database query languages to solve users' needs; prioritize workload with current requests, problems and department needs.
2. Debug, correct and maintain systems and programs developed by other programmers or oneself.
3. Assume overall responsibility for the technical phases of an entire project, providing work­load direction, as appropriate, to other programmers.
4. Assess workload implications and feasibility of new system requirements; analyze existing systems performance in relation to specified requirements to ensure proper integration of new programs.
5. Develop logical data models using entity relationships and data flow diagrams; identify new data elements needed within the systems data dictionary and their relationship to existing data structures.
6. Perform database modifications and complex applications programming to develop new information systems modules; prototype applications to ensure production of desired outputs.
7. Adapt purchased software as needed to ensure compatibility and proper interoperations with existing systems and applications.
8. Coordinate and participate in the analysis of user data, creation of data organization models and development and maintenance of complex data storage structures; QA, troubleshoot and resolve data accuracy problems.
9. Anticipate a changing environment, future needs and possible sources of trouble; prepare solutions that fit available and anticipated resources; review, redesign or modify existing systems to improve efficiency; learn and implement new languages and technology, as required.
10. Develop and implement guidelines for extraction, analysis, transformation, loading, report­ing, documenting and naming conventions of institutional data.
11. Develop and maintain a cross-functional reporting environment based on quality and inte­gration; develop informational reports to facilitate decision making by senior-level institu­tional administrators; edit and verify reports and data.
12. Coordinate the development and maintenance of tools to optimize data quality and access; create and maintain summary descriptions of all data warehouse elements.
13. Conduct feasibility studies and prepare feasibility definition and design reports; prepare and give oral and written presentations.
14. Participate in selecting new systems.
15. Consult with users within and across divisions to establish priorities, solve problems, provide input and receive feedback.
16. Serve as project manager, leading other developers/analysts on a regular or project devel­opment basis; divide and prioritize large studies and assign various segments to others; review reports of project segments and recommendations.
17. Communicate with district users and Technical Services staff to ensure information needs are being met; serve as a resource person to the district with users and vendors; answer questions and deal with complex data issues and system design; establish relationships to ensure information is accessible; coordinate flow of information.

### OTHER DUTIES:

1. Perform related duties as assigned.

### KNOWLEDGE AND ABILITIES:

### KNOWLEDGE OF:

1. Comprehensive concepts, principles, techniques and applications of computer systems analysis, design and programming.
2. Programming and operation of the district's computer systems and related equipment, including applicable programming and query languages.
3. Relational database engines, client-server tools, online analytical processing, report writing, multidimensional and tabular data models, data mining and object-oriented databases.
4. Data file organization, structure and access methodology that supports data warehouse modeling, techniques, standards and procedures.
5. Principles and techniques of program planning, job scheduling and related control require­ments.
6. Capabilities and limitations of the operating and application systems.
7. District organization, operations, policies and objectives.
8. Interpersonal skills using tact, patience and courtesy.
9. Applicable sections of the state education code, MIS mandates and other applicable laws.
10. Written and oral communication skills including correct English usage, grammar, spell­ing, punctuation and vocabulary.
11. Safety policies and safe work practices applicable to the work.

### ABILITY TO:

1. Consolidate information, develop the most advantageous path, persuade others, implement it, plan for inevitable change and modify original plan.
2. Demonstrate proficiency in several computer languages as dictated by the district’s needs.
3. Analyze situations accurately and adopt effective courses of action.
4. Prepare flow charts and diagrams.
5. Apply principles and techniques of computer programming to specific user problems.
6. Perform complex analyses on an individual task and project basis.
7. Determine source data, processing requirements, output formats and time and cost esti­mates.
8. Read, interpret, apply and explain rules, regulations, policies and procedures, as well as technically written data processing material and software packages.
9. Detect errors in data and/or program structure, logic and coding; understand the relational nature of program structure, logic and coding.
10. Communicate effectively, both orally and in writing.
11. Demonstrate sensitivity to and understanding of diverse academic, socioeconomic, cultural, ethnic and disability issues.
12. Work independently with little direction.
13. Work confidentially with discretion.
14. Prioritize, plan and organize work.
15. Operate a computer and standard business software.
16. Demonstrate sensitivity to and understanding of diverse academic, socioeconomic, cultural, ethnic and disability issues.
17. Establish and maintain effective working relationships with all those encountered in the course of work.

### EDUCATION AND EXPERIENCE:

Graduation from an accredited four-year college or university with a major in information systems, computer science or a related field, and three years of increasing responsible data warehouse experience; or an equivalent combination of education and experience.

### LICENSES AND OTHER REQUIREMENTS:

A valid California driver’s license and the ability to maintain insurability under the district’s vehicle insurance program.

**WORK DIRECTION, LEAD AND SUPERVISORY RESPONSIBILITIES:**

Function as project manager, leading other Application Developers and Business Analysts on a regular or project-related basis. Divide and prioritize large studies and assign segments to others.

**CONTACTS:**

Coworkers, other developers/analysts; department and division heads; vendors; designers of externally purchased software and systems.

**PHYSICAL EFFORT:**

*The physical efforts described here are representative of those that must be met by employees to successfully perform the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

Primarily sedentary with intermittent standing, walking, bending and stooping; occasional light lifting and carrying of objects weighing up to 25 pounds; ability to travel to a variety of locations on and off campus as needed to conduct district business.

**EMOTIONAL EFFORT:**

Ability to develop and maintain effective working relationships involving interactions and com­munications personally, by phone and in writing with a variety of individuals and/or groups from diverse backgrounds on a regular, ongoing basis; ability to work effectively under pressure on a variety of tasks concurrently while meeting established deadlines and changing priorities.

**WORKING CONDITIONS:**

Primarily business office environment; subject to frequent contact and inter­ruption; inter­mittent exposure to individuals acting in a disagreeable fashion; may work at any district location or authorized facility with occasional evenings and/or week­ends on an as-needed basis. Occa­sional local travel may be requested.