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| **Systems and Database Architect** | **Class Code: 1366**<br>**Work Days: 225** |

### GENERAL PURPOSE

Assess requirements for organization's hardware infrastructure; plan, design, and upgrade software, operating systems, systems hardware, and database projects; create and enforce policies, norms, and baselines; establish and maintain version-control; manage and support OCDE's database environment; manage capacity planning, disaster recovery, and performance analysis; troubleshoot software, operating systems, systems hardware, and databases, make recommendations for system fixes and enhancements; and make recommendations for leveraging technology.

### SUPERVISION RECEIVED AND EXERCISED

1. Receives general supervision from higher level management staff.
2. May exercise direct supervision over professional and technical staff.

### ESSENTIAL DUTIES AND RESPONSIBILITIES

*This position description is intended to describe the general nature and level of work 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. Provide Enterprise technology development, design, implementation, and management of the OCDE systems infrastructure.

3. Manage, plan, and organize systems and database services within the Information Technology Division.

4. Provide detailed design and specification documentation for all systems and databases.

5. Develop and maintain database standards and naming conventions.

6. Possess extensive knowledge of multiple database systems, and is capable of working in all phases of database design and management.

7. Install and configure servers to meet functional specifications.

8. Provide technical expertise to resolve issues and restore service following system failures and outages.

**ESSENTIAL FUNCTION STATEMENTS (cont.):**

9. Perform ongoing hardware and software maintenance operations, including installing or upgrading hardware or software.

10. Install updates and patches as necessary to resolve problems or as prerequisites for upgrades or other projects.

11. Ensure system stability and performance by exploiting new functions enabled by software upgrades.

12. Evaluate existing systems to determine effectiveness and suggest changes to meet organizational requirements.

13. Verify stability, interoperability, portability, security, or scalability of system architecture.

14. Research, test, and verify proper functioning of software patches and fixes.

15. Exercise security and data privacy best practices across systems and databases.

16. Maintain and upgrade all Storage Area Networks to include installation, configuration, upgrades, and performance monitoring.

17. Administer and maintain an enterprise wide backup solution.

18. Participate in strategy sessions.

19. Advise on new product feasibility and cost.

20. Research new features, software, and tools.

21. Generate documentation for staff and training.

22. Prepare, oversee, and coordinate database designs.

23. Create and enforce database standards and procedures.

24. Collaborate and coordinate systems and software implementation with vendors.

25. Create and enforce security standards.

26. Keep up-to-date on emerging database architectures, technologies, and methodologies, and attend training classes as necessary.

27. Must demonstrate attendance sufficient to complete the duties of the position as required.

28. Perform related duties similar to the above in scope and function as required.

**Advanced Knowledge (Thorough) of:**

1. Windows Operating Systems.

2. MS SQL Server databases.

3. MS Exchange.

4. VMWare desktop, server, storage, and network infrastructure.

5. F5 application delivery.

**Advanced (Thorough) Knowledge of (cont.):**

6.  Symantec's Netbackup and Veeam products.

7.  Security/data privacy best practices.

8.  Business continuity solutions and best practices.

9.  Performance tuning and database troubleshooting.

10. Database design and support.

11. Replication and data partitioning techniques.

12. Query optimization, database indexes, and schema design.

13. Upgrade and patch processes.

14. Storage Area Network devices.

**Ability and Skill to:**

1.  Interpret the organizational and division strategic plan and create relevant goals and plans for assigned areas.

2.  Manage multiple competing priorities efficiently and effectively.

3.  Interpret the organizational and division strategic plan and create relevant goals and plans for assigned areas.

4.  Establish and maintain effective working relationships with various constituencies.

5.  Understand, interpret, and explain laws, codes, contracts, regulations, policies, and procedures.

6.  Prepare clear and concise correspondence, reports, and other written materials.

7.  Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.

8.  Communicate clearly and concisely, both orally and in writing, in English; 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 Bachelor's degree from an accredited college or university with major course work in a computer related field and four years of recent extensive experience in the areas of software, operating systems such as Windows server solutions, systems hardware, data storage solutions, Business intelligence solutions, databases, and security/data privacy.

**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 bend, stoop, push, pull, grasp, squat, twist, kneel, walk, sit, and reach to access materials or equipment and complete other tasks as assigned; lift and/or move up to 50 pounds; and lift up to 75 pounds with assistance from ground, waist, chest, shoulder, and above shoulder level.   The position may include occasional need to traverse uneven surfaces.

Employees in this classification are to be able to travel countywide to a variety of sites within a reasonable time frame; read written and electronic materials; communicate clearly in person, on the phone, and via email; and operate all required equipment.

**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 the essential functions.*

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

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