JOB SUMMARY.

The Information Services Systems Engineer is responsible for designing, installing, maintaining, and troubleshooting a variety of technologies in order to support the District’s information technology infrastructure on the main campus and at satellite locations. Areas of responsibility include server hardware, storage systems, server virtualization, directory services, data center security, business applications such as email services, and disaster recovery services.

DISTINGUISHING CHARACTERISTICS.

The Information Systems Engineer is distinguished from other classifications within the Network and Data Center unit of Information Services by its responsibility for performing the most advanced duties of classified staff within the unit and providing guidance and training as a lead to lower-level Network and Data Center staff.

ESSENTIAL AND MARGINAL FUNCTION STATEMENTS. Essential responsibilities and duties may include, but are not limited to, the following:

1. Assists the Information Services Manager, Network and Technical Services in designing and managing the District’s enterprise data center, including the daily operation of each assigned technology and ensuring the availability of data center services and communications.

2. Designs, develops, implements, troubleshoots, and maintains mid- to large-scale enterprise technologies, including virtualized servers, storage systems, data center networks, backup systems, and disaster recovery; mid-to large-scale enterprise email and database environments; enterprise directory services; file and print, web, distributed file system (DFS), common Internet file system (CIFS), and network file system (NFS) services; and server operating systems, including Microsoft, UNIX, Linux, and Apple.

3. Identifies the impact of changes in systems and applications to the enterprise data center; assesses and resolves complex systems engineering and administration issues; determines potential solutions to resolve and prevent service interruptions; implements and follows policies and procedures for change and incident management; documents technical problems, resolutions, and processes.

4. Participates in the development of and implements District-wide technical strategies and initiatives for the data center environment, including adoption of new tools and procedures; participates in strategic planning development for the Network and Data Center area.

5. Conducts and leads lower-level staff in system performance trending and problem root cause analysis; performs complex analysis of server, storage, backup, and disaster recovery environments.
6. Implements and monitors enterprise disaster recovery standards, including audit and legal requirements, risk analysis, recovery strategies, and the setup and maintenance of fault-tolerant hardware and data backup systems.

7. Serves as a lead to lower-level classified and hourly staff in Network and Data Center, including coordinating work and assuming training responsibilities.

8. Establishes and maintains effective professional relationships with those contacted in the course of work.

9. Maintains currency in knowledge of products and technologies used in the data center and relevant industry trends and new technologies for recommendation of future data center projects.

Marginal Functions:

1. Participates in/on a variety of committees, meetings, trainings, seminars, and/or other related groups in order to receive and/or convey information.

2. Performs related duties and responsibilities as required.

QUALIFICATIONS.

Knowledge of:

1. Operations, services, technologies, policies, and procedures of an enterprise data center.

2. Data center technologies, including virtualization technologies such as VMware or Citrix; computer technologies such as Cisco or Dell server platforms; storage technologies such as EMC storage area network, network-attached storage, replication, and backup; networking technologies such as switches, routers, and load balancers; and security technologies such as firewalls, intrusion detection and intrusion prevention.

3. Enterprise operating systems such as Microsoft, UNIX, Linux, and Apple; enterprise directory services such as Microsoft Active Directory; and enterprise business applications such as PeopleSoft, Oracle, Microsoft Exchange, Microsoft SQL, and Blackboard.

4. Scripting and programming languages such as Cisco, Linux, and Windows.

5. Principles and practices of data communications design and planning utilizing Institute of Electrical and Electronics Engineers (IEEE) specifications and Request for Comments (RFC) standards.

6. Principles and concepts of establishing and documenting baseline systems performance.

7. Principles and practices of disaster recovery design and planning, including audit and legal requirements, risk analysis, and recovery strategies.

8. Methods, operational characteristics, and techniques used in the installation and troubleshooting of software applications and peripheral equipment.

9. Workflow applications such as Remedy.


11. Methods of developing written specifications, standards, and operating procedures.

12. Use of word processing, spreadsheet, database, and other standard office software to create documents and materials.

13. Correct English usage, including spelling, grammar, and punctuation.

14. Basic mathematical principles.

15. Principles of serving as a lead to lower-level staff, including training.

Skill in:

1. Understanding and maintaining server virtualization technologies and storage systems and related technologies.
2. Understanding and applying Open Systems Interconnection (OSI) model layer networking technologies and concepts.
3. Understanding and applying knowledge of product lines and technologies utilized in performing functions of the position.
4. Specifying server virtualization requirements for system environments.
5. Understanding and defining internal business processes relevant to assigned area of responsibility and gathering project information from external business and teams.
6. Developing and writing specifications, standards, and operating procedures;
7. Configuring complex data center equipment correctly and moving equipment safely.
8. Organizing, setting priorities, and taking initiative on multiple assignments within area of responsibility.
9. Researching, analyzing, and applying difficult concepts in complex technical literature relevant to assigned area of responsibility.
10. Independently preparing documents and materials for assigned areas of responsibility; formatting, proofreading, and preparing a variety of written materials.
11. Establishing and maintaining a customer-focused workflow for a data center; supporting and responding to requests and inquiries from system users efficiently and accurately.
12. Analyze and recommend solutions for software and hardware needs.
13. Operating office equipment including computers and supporting word processing, spreadsheet, and database applications.
15. Interpreting and applying applicable Federal, State, and local laws, codes, and regulations and administrative policies and procedures.
16. Working independently in the absence of supervision.
17. Providing lead oversight and training to assigned lower-level staff.
18. Communicating clearly and concisely, both orally and in writing.
19. Establishing and maintaining cooperative working relationships with those contacted in the course of work.

Experience and Training Guidelines:

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Experience:

Five years of increasingly responsible, closely related experience in the design, development, implementation, troubleshooting, and maintenance of enterprise technologies in a mid- to large-scale data center.

Education/Training:

A Bachelor’s degree from an accredited college or university with major coursework in computer science, information systems, or a related field.

Licenses/Certificates:

One or more of the following certificates is required at time of application: Cisco Certified Architect (CCAr), Cisco Certified Internetwork Expert (CCIE), Microsoft MCSM, Microsoft MCSE, EMC Data Center Architect (EMCDCA),
EMC Cloud Architect (EMCCA), EMC Platform Engineer (EMCPE), VMware Certified Design Expert 5 - Data Center Virtualization (VCDX5-DCV), VMware Certified Design Expert – Cloud (VCDX-Cloud)

Possession of, or ability to obtain, an appropriate, valid California Driver’s License by time of appointment.

**WORKING CONDITIONS.**

**Environmental Conditions:**

Office environment; exposure to computer screens; frequent interruptions; extensive contact with faculty and staff. Data center environment; low temperatures and high decibel levels. Occasional evening, weekend, and holiday hours are required due to 24-7 data center operations.

**Physical Conditions:**

Essential and marginal functions require maintaining physical condition necessary for ambulating, stooping, bending, kneeling, crouching, crawling, and climbing for extended periods of time and performing required duties; extensive operation of computer equipment; visual acuity to read printed materials and computer screens; moderate to heavy lifting (up to 100 pounds).