NOTICE OF PROPOSED CLASSIFICATION ACTIONS BY
THE HUMAN RESOURCES DIRECTOR

The following actions are being posted in accordance with Civil Service Rule 109. In the absence of a protest addressed to the Human Resources Director, the proposed changes will become final seven (7) calendar days from the posting date.

Posting No:	22
Fiscal Year:	2023/2024
Posted Date:	10/27/2023
Reposted Date:	N/A

*AMEND THE FOLLOWING JOB SPECIFICATION(S)***:**
(Job specification(s) attached)

Item #	Job Code	Title
1	1041	IS Engineer – Assistant
2	1042	IS Engineer – Journey
3	1043	IS Engineer – Senior
4	1044	IS Engineer – Principal

Protests on an item should be addressed to the Human Resources Director and can be submitted by mail to the City and County of San Francisco, Department of Human Resources, 1 South Van Ness Ave, 4th Floor, San Francisco, CA 94103 or by email to **DHR.ClassificationActionPostings@sfgov.org**. All protests must be received in writing no later than close of business seven (7) calendar days from the posting date, and must include the posting and item number(s), the basis on which the protest is submitted and identify the affected parties.

Copies of this notice may be obtained from the Department of Human Resources or from the website at: **http://sfdhr.org/index.aspx?page=109**. Copies of Civil Service Rule 109 may be obtained from the Department of Human Resources, the office of the Civil Service Commission at 25 Van Ness Ave, Suite 720, San Francisco, CA 94102 or from the website at: **Rule 109 Position Classification and Related Rules | Civil Service Commission**.

cc: All Employee Organizations
All Departmental Personnel Officers
DHR – Class and Comp Unit
DHR – Client Services Unit
DHR – Employee Relations Unit
DHR – Recruitment and Assessment Unit
DHR – Client Services Operations
Carol Isen, DHR
Sandra Eng, CSC
Erik Rapoport, SFERS
Theresa Kao, Controller/ Budget Division
E-File

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Assistant
Job Code: 1041

DEFINITION

Under general supervision, assists in analyzing, planning, implementing, maintaining, trouble-shooting and enhancing large complex systems or networks consisting of a combination that may include mainframes, mini-computers, LANS, WANs and the physical and logical components that integrate these systems together as an enterprise networking backbone. Serves as assistant technical architect and systems integrator for large complex systems or networks.

DISTINGUISHING FEATURES

The Assistant IS Engineer is the entry level in the Engineer series. The class is distinguished from the Journey level by the complexity of the systems or networks supported. Positions at this level perform a significant portion of the work assigned to the journey level, but without the independence or full responsibility expected of positions at the journey level. Assignments are generally limited in scope and are set within procedural frameworks established by higher level positions. As experience accrues, the incumbent performs with increasing independence. Work requires incumbents to exercise some judgement in selecting appropriate established guidelines to follow. Significant deviations require prior approval. Interpretation of general administrative or operational policies is sometimes necessary.

SUPERVISION EXERCISED

None.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

According to Civil Service Commission Rule 109, the duties specified below are representative of the range of duties assigned to this job code/class and are not intended to be an inclusive list.

1. Assist in determining requirements for the development or enhancement of large complex systems or networks that serve as a data processing backbone for the City and County of San Francisco's information technologies infrastructures.

2. Assist in the designing, planning, integration, testing, implementation, documentation and enhancement of the physical and logical components of a large complex system or network.

3. Assist in performing systems integration for interoperability over dissimilar platforms md technologies. This may involve the integration of various protocols, systems software, hardware and communications platforms.

4. Determine the proper installation parameters for software and hardware for smooth integration and efficiency in relation to the enterprise system and network.

5. Assist in writing "user exits" to customize large systems software which may involve specialized programming languages.

6. Assist in analyzing, detecting, identifying and connecting complex systems software or hardware deficiencies.

7. Provide 24-hour on-call support to ensure rapid recovery from software or hardware problems for mission-critical systems and networks.

Title: IS Engineer - Assistant
Job Code: 1041

8. Assist in the resolution of technical problems through telephone calls to vendors, other IS professionals and departments.

9. Assist in planning, implementing and maintaining upgrades/updates/fixes for core operating systems and their related components, without negative impact to the overall availability and reliability of the enterprise systems/networks.

10. Document procedures and troubleshooting techniques related to systems/networks software and hardware; develop and review documentation prior to general distribution.

11. May assist in planning, developing and implementing backup and disaster recovery procedures for large systems and networks.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of: the functions of the core hardware and software components that comprise a large system or enterprise network. Analysis and evaluation techniques for troubleshooting large systems or networks.

Ability or Skill to: solve problems with minimal disruption or impact to the system or network. Exercise judgement, decisiveness and creativity in designing, planning, troubleshooting and integration of large systems or networks based on the potential benefits and/or consequences. Communicate effectively; establish good working relationships with other IS professionals, vendors, management and departments. Read and understand professional journals, manuals and literature. Prioritize competing requests for service.

MINIMUM QUALIFICATIONS

These minimum qualifications establish the education, training, experience, special skills and/or license(s) which are required for employment in the classification. Please note, additional qualifications (i.e., special conditions) may apply to a particular position and will be stated on the exam/job announcement.

Education:

An associate degree in computer science**, computer engineering, information systems**, or a closely related field from an accredited college or university OR its equivalent in terms of total course credits/units [i.e., at least sixty (60) semester or ninety (90) quarter credits/units with a minimum of twenty (20) semester or thirty (30) quarter credits/units in ~~computer science~~ **one of the fields above** or a closely-related field].

Experience:

License and Certification:

Substitution:

Experience in analyzing, installing, configuring, enhancing and/or maintaining the components of an enterprise network may be substituted for the required degree on a year-for-year basis (up to a maximum of two (2) years). One (1) year is equivalent to thirty (30) semester

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units/ forty-five (45) quarter units with a minimum of 10 semester / 15 quarter units **one of the fields above** in computer science or a closely related field.

Completion of the 1010 Information Systems Trainee Program may be substituted for the required degree.

SUPPLEMENTAL INFORMATION

Essential duties require the following physical skills and work requirements: Some positions may require sufficient strength and coordination for lifting, pushing, pulling and/or carrying the weight of computer systems equipment. May require bending, stooping and/or crawling in order to install or repair computer systems hardware. May require hand/eye coordination and manual dexterity for taking apart casings, installing parts and reconnecting computer systems hardware. May involve extensive VDT exposure.

PROMOTIVE LINES

ORIGINATION DATE: 05/17/1997

AMENDED DATE: 06/27/16; 09/09/16; **XX/XX/XX**

REASON FOR AMENDMENT: *To accurately reflect the current tasks, knowledge, skills & abilities, and minimum qualifications.*

BUSINESS UNIT(S): COMMN SFMTA SFCCD SFUSD

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Journey
Job Code: 1042

DEFINITION

Under direction, analyzes, plans, designs, implements, maintains, troubleshoots and enhances large complex systems or networks consisting of a combination that may include mainframes, mini-computers, LANs, WANs and the physical and logical components that integrate these systems together as an enterprise networking backbone. Serves as the technical architect and systems integrator for large complex systems or networks.

DISTINGUISHING FEATURES

The IS Engineer is the journey level position in the Engineer series. The class is distinguished from the Senior level by the complexity of the systems or networks supported, and is more independent than the Assistant level. This classification performs a wide range of complex analytical, design, planning, implementation, enhancement and problem resolution tasks on large complex systems and networks. It works within a framework of established procedures and interprets policies, procedures and guidelines. This level may formulate recommendations consistent with directives, policies, standards and regulations. Incumbents require only occasional instruction or assistance. Work is reviewed upon completion and for overall results.

SUPERVISION EXERCISED

May provide direction to subordinate Engineer staff and other technical staff. May provide consultation and guidance to all other IS job families. Such responsibilities are ancillary to the main intent and focus of the position.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

According to Civil Service Commission Rule 109, the duties specified below are representative of the range of duties assigned to this job code/class and are not intended to be an inclusive list.

1. Determine requirements for the development or enhancement of large complex systems or networks that serve as a data processing backbone for City and County of San Francisco's information technologies infrastructures. May research and conduct feasibility studies on new technologies.

2. Design, plan, integrate, test, implement, document and enhance the physical and logical components of a large complex system or network. This may involve the analysis and evaluation of systems software, hardware and communications strategies.

3. Perform systems integration for interoperability over dissimilar platforms and technologies. This may involve the integration of various protocols, systems software, hardware and communications platforms.

4. Determine the proper installation parameters for software and hardware for smooth integration and efficiency in relation to the enterprise system and network.

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5. Write "user exits" to customize large systems software which may involve specialized programming languages.

6. Analyze, detect, identify and correct complex systems software or hardware deficiencies.

7. Provide 24-hour on-call support to ensure rapid recovery from software or hardware problems for mission-critical systems and networks.

8. Act as the liaison between vendors, technical support hot-lines and departments to resolve complex systems or network problems. Assist in the coordination and implementation of corrective measures; this may involve site visits, telephone assistance, remote systems or network management, and participation in technical committees.

9. Facilitate the demonstration and training of staff in the use of new hardware or software products.

10. Plan, implement and maintain upgrades/updates/fixes for core operating systems and their related components, without negative impact to the overall availability and reliability of the enterprise systems/networks.

11. Document procedures and troubleshooting techniques related to systems/networks software and hardware; develop and review documentation prior to general distribution.

12. May plan, develop and implement backup and disaster recovery procedures for large systems and networks.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of: the functions of the core hardware and software components that comprise a large system or enterprise network. Analysis and evaluation techniques to plan, design, integrate, implement, maintain and troubleshoot large complex systems or networks across similar and dissimilar technology platforms.

Ability or Skill to: determine the systems or networking requirements to plan for or enhance the core data processing needs for the Enterprise system or network. Solve problems with minimal disruption or impact to the system or network. Exercise judgement, decisiveness and creativity in designing, planning, troubleshooting and integration of large complex systems or networks based on the potential benefits and/or consequences. Develop alternative solutions within established guidelines and standards. Communicate effectively; establish good working relationships with other IS professionals, vendors, management and departments. Read and understand professional journals, manuals and literature. Prioritize competing requests for service.

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Journey
Job Code: 1042

MINIMUM QUALIFICATIONS

These minimum qualifications establish the education, training, experience, special skills and/or license(s) which are required for employment in the classification. Please note, additional qualifications (i.e., special conditions) may apply to a particular position and will be stated on the exam/job announcement.

Education:

An associate degree in computer science, **computer engineering, information systems**, or a closely related field from an accredited college or university OR its equivalent in terms of total course credits/units [i.e., at least sixty (60) semester or ninety (90) quarter credits/units with a minimum of twenty (20) semester or thirty (30) quarter credits/units in **one of the fields above** ~~computer science~~ or a closely-related field].

Experience:

One (1) year of experience analyzing, installing, configuring, enhancing, and/or maintaining the components of an enterprise network.

License and Certification:

Substitution:

Additional experience as described above may be substituted for the required degree on a year-for-year basis (up to a maximum of two (2) years). One (1) year is equivalent to thirty (30) semester units/r forty-five (45) quarter units with a minimum of 10 semester / 15 quarter units in **one of the fields above** ~~computer science~~ or a closely related field.

Completion of the 1010 Information Systems Trainee Program may be substituted for the required degree.

SUPPLEMENTAL INFORMATION

Essential duties require the following physical skills and work requirements: Some positions may require sufficient strength and coordination for lifting, pushing, pulling and/or carrying the weight of computer systems equipment. May require bending, stooping and/or crawling in order to install or repair computer systems hardware. May require hand/eye coordination and manual dexterity for taking apart casings, installing parts and reconnecting computer systems hardware. May involve extensive VDT exposure.

PROMOTIVE LINES

ORIGINATION DATE:	05/17/1997
AMENDED DATE:	06/27/16; 09/09/16; **XX/XX/XX**
REASON FOR AMENDMENT:	*To accurately reflect the current tasks, knowledge, skills & abilities, and minimum qualifications.*
BUSINESS UNIT(S):	COMMN SFMTA SFCCD SFUSD

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Senior
Job Code: 1043

DEFINITION

Under general direction, analyzes, plans, designs, implements, maintains, troubleshoots and enhances large complex systems or networks consisting of a combination that may include mainframes, mini-computers, LANS, WANs and the physical and logical components that integrate these systems together as an enterprise networking backbone. Serves as the senior technical architect and systems integrator for large complex systems or networks.

DISTINGUISHING FEATURES

The Senior IS Engineer is the advanced journey level in the Engineer series. The class is distinguished from the journey level by the complexity and size of the systems or network supported. It is also distinguished from the Journey level by the amount of discretion exercised over technical issues, problems and resolutions, and that it possesses a significant level of specialized technical and functional expertise beyond that expected at the Journey level. This level is distinguished from the Principal level in that Senior level exercises no or limited supervisory responsibilities or the lower technical leadership displayed. Positions at this level require highly specialized knowledge, abilities, skills and experience and often exercise independent judgement in the performance of their duties. The Senior level formulates recommendations consistent with directives, policies, standards and regulations. Work is judged primarily on overall results with great latitude in determining work methods and assignment requirements. The Senior has greater authority over assignments and decisions required to complete the work than lower level classifications.

SUPERVISION EXERCISED

May provide supervision to subordinate Engineer staff or other technical staff. May serve as the lead technical person in a work unit. May provide consultation and guidance to other IS job families. Supervisory responsibilities are ancillary to the main intent and focus of the position.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

According to Civil Service Commission Rule 109, the duties specified below are representative of the range of duties assigned to this job code/class and are not intended to be an inclusive list.

1. Determine requirements for the development or enhancement of large complex systems or networks that serve as a data processing backbone for the City and County of San Francisco's information technologies infrastructures. May research and conduct feasibility studies on new technologies.

2. Design, plan, integrate, test, implement, document and enhance the physical and logical components of large complex systems or networks. This may involve the analysis and evaluation of systems software, hardware and communications strategies.

3. Perform complex systems integration for interoperability over dissimilar platforms and technologies. This may involve the integration of various protocols, systems software, hardware and communications platforms.

Title: IS Engineer - Senior
Job Code: 1043

4. Determine the proper installation parameters for software and hardware for smooth integration and efficiency in relation to the enterprise system and network.

5. Write complex "user exits" to customize large systems software which may involve specialized programming languages.

6. Analyze, detect, identify and correct complex systems software or hardware deficiencies.

7. Provide 24-hour on-call support to ensure rapid recovery from software or hardware problems for mission-critical systems and networks.

8. Act as the liaison between vendors, technical support hot-lines and departments to resolve complex systems or network problems. Coordinate and implement corrective measures; this may involve site visits, telephone assistance, remote systems or network management, and participation in technical committees.

9. Facilitate the demonstration and training of staff in the use of new hardware or software products.

10. Plan, implement, maintain and coordinate upgrades/updates/fixes for core operating systems and their related components, without negative impact to the overall availability and reliability of the enterprise systems/networks.

11. Document procedures and troubleshooting techniques related to systems/networks software and hardware; develop and review documentation prior to general distribution.

12. Plan, develop and implement backup and recovery procedures for large systems and networks.

13. Ensure that management procedures do not negatively impact users or system performance; communicate with managers regarding system performance and operational issues. Suggest improvements to management.

14. Monitor daily systems performance and execute corrective measures.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of: the basic and advanced functions for the core hardware and software components that comprise complex large systems or enterprise networks. Analysis and evaluation techniques to plan, design, integrate, implement, maintain and troubleshoot large complex systems or networks across similar and dissimilar technology platforms.

Ability or Skill to: determine the systems or networking requirements to plan for or enhance the core data processing needs for the Enterprise system or network. Solve problems with minimal

Title: IS Engineer - Senior
Job Code: 1043

disruption or impact to the system or network. Exercise judgement, decisiveness and creativity in designing, planning, troubleshooting and integration of large complex systems or networks based on the potential benefits and/or consequences. Develop alternative solutions within established guidelines and standards. Communicate effectively; establish good working relationships with other IS professionals, vendors, management and departments. Read and understand professional journals, manuals and literature. Prioritize competing requests for service.

MINIMUM QUALIFICATIONS

These minimum qualifications establish the education, training, experience, special skills and/or license(s) which are required for employment in the classification. Please note, additional qualifications (i.e., special conditions) may apply to a particular position and will be stated on the exam/job announcement.

Education:

An associate degree in computer science**, computer engineering, information systems,** or a closely related field from an accredited college or university OR its equivalent in terms of total course credits/units [i.e., at least sixty (60) semester or ninety (90) quarter credits/units with a minimum of twenty (20) semester or thirty (30) quarter credits/units in **one of the fields above** ~~computer science~~ or a closely-related field].

Experience:

Three (3) years of experience analyzing, installing, configuring, enhancing, and/or maintaining the components of an enterprise network.

License and Certification:

Substitution:

Additional experience as described above may be substituted for the required degree on a year-for-year basis (up to a maximum of two (2) years). One (1) year is equivalent to thirty (30) semester units/ forty-five (45) quarter units with a minimum of 10 semester / 15 quarter units in **one of the fields above** ~~computer science~~ or a closely related field.

Completion of the 1010 Information Systems Trainee Program may be substituted for the required degree.

SUPPLEMENTAL INFORMATION

Essential duties require the following physical skills and work requirements: Some positions may require sufficient strength and coordination for lifting, pushing, pulling and/or carrying the weight of computer systems equipment. May require bending, stooping and/or crawling in order to install or repair computer systems hardware. May require hand/eye coordination and manual dexterity taking apart casings, installing parts and reconnecting computer systems hardware. May involve extensive VDT exposure.

PROMOTIVE LINES

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Senior
Job Code: 1043

ORIGINATION DATE:	05/17/1997
AMENDED DATE:	06/27/16; 09/09/16; **XX/XX/XX**
REASON FOR AMENDMENT:	*To accurately reflect the current tasks, knowledge, skills & abilities, and minimum qualifications.*
BUSINESS UNIT(S):	COMMN SFMTA SFCCD SFUSD

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Principal
Job Code: 1044

DEFINITION

Under general direction, provides direct ongoing supervision to other IS Engineers. and/or provides technical leadership and direction and assumes technical responsibility for completion of major projects, or serves as the top technical authority for one or more related specialties. Performs and reviews complex work involving analysis, planning, designing, implementation, maintenance, troubleshooting and enhancement of complex large systems or networks consisting of a combination that may include mainframes, mini-computers, LANS, WANs and the physical and logical components that integrate these systems together as an enterprise networking backbone. Serves as the lead technical architect and systems integrator for large complex systems or networks.

DISTINGUISHING FEATURES

The Principal IS Engineer is the highest level in the Engineer series and may be assigned to function as a supervisor, expert or project leader. When assigned as a supervisor, develops, coordinates and executes policies, methods and procedures, and supervises' personnel.; when assigned as an expert, performs work requiring a very high level of technical knowledge of a specific area or ability to integrate at a high level the knowledge of several areas (this is -not considered to be a part of the normal career path for employees in this series; rather it is reserved for those employees with a mastery of specific technologies or a particular expertise): when as signed as a project leader, manages and provides technical leadership of projects involving large-scale, complex and highly analytical tasks. Positions at this level are distinguished from Senior IS Engineers, in that the latter performs more specific and small-scale, though complex, analytical tasks. Work is performed within a broad framework of general policy and requires creativity and resourcefulness to accomplish goals and objectives, and in applying concepts, plans and strategies which may deviate from traditional methods and practices.

SUPERVISION EXERCISED

May supervise subordinate Engineers and technical staff in the assigned work unit; or as a Project leader, coordinate a team of workers within the assigned work unit or jointly with other units. May be expected to provide consultation and guidance to IS professionals and non-IS professionals.

EXAMPLES OF IMPORTANT AND ESSENTIAL DUTIES

According to Civil Service Commission Rule 109, the duties specified below are representative of the range of duties assigned to this job code/class and are not intended to be an inclusive list.

1. Analyze and evaluate systems software, hardware and communications strategies. Research and conduct feasibility studies on new hardware and software. Provide cost and time allocation estimates. Make recommendations based on these studies.

2. Establish hardware and software standards. Participate in technical committees.

3. May monitor, coordinate and assist in developing the work unit's budget.

Title: IS Engineer - Principal
Job Code: 1044

4. Analyze and recommend procedures consistent with departmental directives, policies and regulations.

5. Develop strategic plans to meet data processing and technology needs; conduct capacity planning studies to project hardware and software needs.

6. Direct and monitor technical support activities related to complex large systems or networks. Troubleshoot and support the system or network in order to maintain the system or network's integrity and reliability. Contact software and hardware vendors when necessary.

7. Provide problem determination, corrective measures and technical support to anyone utilizing services and functions provided by the system or network. This includes but is not limited to applications programmers, business analysts, operations staff, help desk staff, technicians, administrators, end users- and managers.

8. Oversee data backup and recovery; ensure that sufficient generations of backup are available for data restoration.

9. Determine requirements for the development or enhancement of large complex systems or networks that serve as a data processing backbone for the City and County of San Francisco's information technologies infrastructures. May research and conduct feasibility studies on new technologies.

10. Design, plan, integrate, test, implement, document and enhance the physical and logical components of large complex systems or networks. This may involve the analysis and evaluation of systems software, hardware and communications strategies.

11. Perform very complex systems integration for interoperability over dissimilar platforms and technologies for large systems or networks. This may involve the integration of various protocols, systems software, hardware and communications platforms.

12. Determine the proper installation parameters for software and hardware for smooth integration and efficiency in relation to the enterprise system and network.

13. Write highly complex "user exits" to customize large systems software. This may involve specialized programming languages.

14. Analyze, detect, identify and correct complex systems software or hardware deficiencies.

15. Provide 24-hour on-call support to ensure rapid recovery from software or hardware problems for mission-critical systems and networks.

16. Act as the liaison between vendors, technical support hot-lines and departments to resolve complex systems or network problems. Coordinate and implement corrective measures;

Title: IS Engineer - Principal
Job Code: 1044

this may involve site visits, telephone assistance, remote systems or network management, and participation in technical committees.

17. Train and demonstrate technologies and systems to IS professionals and non-IS professionals.

18. Implement and maintain upgrades/updates/fixes for core operating systems and their related components, without negative impact to the overall availability and reliability of the enterprise systems/networks.

19. Prepare specifications and procedures documentation.

20. Plan, develop and implement backup and disaster recovery procedures for large systems and networks.

21. May supervise, assign, review and may participate in the work of subordinates in assigned unit., Perform as project lead in major projects. Monitor, coordinate and review project tasks and resources, providing technical assistance and guidance.

22. May review and recommend personnel actions in areas of performance, evaluation, training, selection and disciplinary measures. Ensure that appropriate policies and procedures are followed by subordinates.

23. May supervise and coordinate the analysis, planning, installation, integration, maintenance, customization and enhancement of hardware and software for complex large systems or networks that serve as a data processing backbone for the City and County of San Francisco's information technologies infrastructure.

24. May perform as project lead in major projects. Monitor and coordinate project task resources.

25. May act as a project lead to plan, implement and maintain upgrades/updates/fixes for core operating systems and their related components, without negative impact to the overall availability and reliability of the enterprise systems/networks.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of: advanced functions for the core hardware and software components that comprise complex large systems or enterprise networks. Analysis and evaluation techniques to plan, design, integrate, implement, maintain and troubleshoot large complex systems or networks across similar and dissimilar technology Platforms. Techniques and practices of supervision, project management and training.

Ability or Skill to: determine the systems or networking requirements to plan for or enhance the core data processing needs for the Enterprise system or network; solve problems. with minimal

**Title: IS Engineer - Principal
Job Code: 1044**

disruption or impact to the system or network; exercise judgement, decisiveness and creativity in designing, planning, troubleshooting and integration of large complex systems or networks based on the potential benefits and/or consequences; develop alternative solutions within established guidelines and standards; communicate effectively; coordinate, schedule and orchestrate the installation, maintenance and enhancements of large complex systems or enterprise networks; establish good working relationships with employees, other IS professionals, departmental end users and vendors: prioritize competing requests for service; read and understand professional journals and literature; manage and direct a group of workers; advise and interpret policies, procedures and standards.

MINIMUM QUALIFICATIONS

These minimum qualifications establish the education, training, experience, special skills and/or license(s) which are required for employment in the classification. Please note, additional qualifications (i.e., special conditions) may apply to a particular position and will be stated on the exam/job announcement.

Education:

An associate degree in computer science**, computer engineering, information systems,** or a closely related field from an accredited college or university OR its equivalent in terms of total course credits/units [i.e., at least sixty (60) semester or ninety (90) quarter credits/units with a minimum of twenty (20) semester or thirty (30) quarter credits/units in **one of the fields above** ~~computer science~~ or a closely-related field].

Experience:

Five (5) years of experience analyzing, installing, configuring, enhancing, and/or maintaining the components of an enterprise network.

License and Certification:

Substitution:

Additional experience as described above may be substituted for the required degree on a year-for-year basis (up to a maximum of two (2) years). One (1) year is equivalent to thirty (30) semester units/ forty-five (45) quarter units with a minimum of 10 semester / 15 quarter units in **one of the fields above** ~~computer science~~ or a closely related field.

Completion of the 1010 Information Systems Trainee Program may be substituted for the required degree.

SUPPLEMENTAL INFORMATION

Essential duties require the following physical skills and work requirements: Some positions may require sufficient strength and coordination for lifting, pushing, pulling and/or carrying the weight of computer systems equipment. May require bending, stooping and/or crawling in order to install or repair computer systems hardware. May require hand/eye coordination and manual dexterity for taking apart casings, installing parts and reconnecting computer systems hardware. May involve extensive VDT exposure.

CITY AND COUNTY OF SAN FRANCISCO
DEPARTMENT OF HUMAN RESOURCES

Title: IS Engineer - Principal
Job Code: 1044

PROMOTIVE LINES

ORIGINATION DATE:	05/17/1997
AMENDED DATE:	06/27/16; 09/09/16; **XX/XX/XX**
REASON FOR AMENDMENT:	*To accurately reflect the current tasks, knowledge, skills & abilities, and minimum qualifications.*
BUSINESS UNIT(S):	COMMN SFMTA SFCCD SFUSD