INFORMATION TECHNOLOGY ANALYST TRAINEE/I/II
Applications/Web Development and Support
(Deep Class)

DEFINITION

Under general supervision, performs a variety of professional, technical and analytical duties in the development, implementation, and support of web, enterprise, and/or departmental computer applications and systems; analyzes customer and systems requirements; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a multi-level deep class in which incumbents may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on experience and proficiency gained in this specialty classification. In the Information Technology Analyst Trainee class, incumbents receive training on the day-to-day tasks associated with this classification series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class. Information Technology Analyst II is the journey level in the class series; incumbents are technically proficient in executing assigned duties. Incumbents in the Information Technology Analyst II classification may be assigned as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of Information Technology Analyst Trainee/I/II. The Information Technology Analyst II level is distinguished from the Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized professional, technical and analytical duties.

EXAMPLES OF DUTIES (Illustrative Only)

NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.

- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex department or countywide systems.
- Coordinates and collaborates with counterparts in other classifications in the integration of information systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, technical support and departments to resolve system problems; coordinates and implements corrective measures.
- Models changes against hardware and software configurations to optimize the utilization of resources.
- Determines needs and develops plans and proposals to meet the needs of customers.
- Researches to determine feasibility, advises and recommends appropriate uses of information technology.
- Develops and implements comprehensive test plans to ensure that information technology components are tested and debugged.
- Monitors and enforces security policies and procedures.
- Installs third party software; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Determines proper installation parameters for software/hardware for smooth integration, transition and efficiency.
- Provides assistance and training for County staff as needed.
- Monitors and collects data on system performance.
- Plans, develops and implements backup and recovery procedures.
- Determines and adjusts thresholds for system resources.
- Participates in projects related to assigned specialty field.
- May function as a leader of a project team assigned to projects covering multiple platforms and/or specialty fields; provides leadership and mentoring to other Information Technology staff assigned to the project team.
- Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.
- Provides data for justification of unit budget in relation to assigned projects.
- May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.

QUALIFICATIONS

NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.

General Knowledge:
- Principles of computer and information processing.
- Business systems applications.
- Computer operations.
- Software systems development life cycles.
- Database management systems.
- Programming languages, utilities and tools.
- Website design and development concepts.
- Design, development, installation and maintenance of mainframe, client/server, and desktop computer applications.
- Restart and recovery concepts.
- Principles and techniques of software and systems quality assurance and control.
- Principles and practices of technical problem solving.
- Principles, processes, techniques of project management and related software.
- Principles and practices of producing effective project and technical documentation.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Basic supervisory practices and principles.
- Team dynamics and team building.

Specific Knowledge:
- Definition of technical specifications from user and business requirements.
- Business systems analysis and business planning process.
- Practices of effective communication of technical issues to user and client community.
- Software systems development life cycles.
- Systems and applications design and analysis.
- Principles and techniques of programming.
- Programming languages, tools, and techniques.
- Website design concepts and standards.
- Website development languages, tools, and techniques.
- Web based application design, development, tools and techniques.
- Database design.
- Database/file management utilities and tools.
- Database/file security methods and techniques.
- Development and use of proper test plans and procedures.
- Customer acceptance testing.
- Principles and practices of training, instructing, and supporting customers.

Skill In:
- Understanding information technology applications/systems and issues.
- Integrating information technology applications and systems.
- Recognizing application and/or web related problems, developing recommendations and solutions, and managing corrections.
- Design, development, installation and maintenance of mainframe, web, client/server, and desktop computer applications.
- Website design, development and support.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Making technical oral presentations to technical and non-technical audiences.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.

- Planning, assigning and reviewing the work of others.
- Training others in work procedures.
- Promoting and maintaining a team environment.

Special Requirements:

May be required to work on-call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:

Information Technology Analyst Trainee

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in application and/or web development.

OR   (2) Equivalent to an Associate of Arts degree in Computer Science or MIS and completion of a certificate program with an emphasis in application and/or web development.

OR   (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

OR   (4) Two years of experience equivalent to the County's classification of Information Technology Technician II.

Information Technology Analyst I

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in application and/or web development
AND
One year verifiable, paid experience working in this specialty.

OR   (2) One year of experience equivalent to the County's class of Information Technology Analyst Trainee-Applications/Web Development and Support.

OR   (3) Completion of a certificate program in Computer Science, MIS or a closely related field with an emphasis in application and/or web development
AND
Two years verifiable, paid experience working in this specialty.

Information Technology Analyst II

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with an emphasis in application and/or web development
AND
(a) Three years experience working in the field of systems analysis or application and/or web development
OR
(b) Two years experience equivalent to the County's class of Information Technology Analyst I-Applications/Web Development and Support.

OR   (2) Completion of a certificate program in Computer Science, MIS, or a closely related field with an emphasis in application and/or web development
AND
Four years experience working in the field of systems analysis or application and/or web development in a multi-platform information systems environment.

NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.

DEFINITION

Under general supervision, performs a variety of professional, technical and analytical duties in the operation of enterprise network and information security administration, design and/or engineering; analyzes customer and enterprise infrastructure network and/or information security systems requirements; develops and maintains department and enterprise infrastructure network architectures; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a multi-level deep class in which incumbents may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on experience and proficiency gained in this specialty classification. In the Information Technology Analyst Trainee class, incumbents receive training on the day-to-day tasks associated with this classification series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class. Information Technology Analyst II is the journey level in the class series; incumbents are technically proficient in executing assigned duties. Incumbents in the Information Technology Analyst II classification may be assigned as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of Information Technology Analyst Trainee/I/II. The Information Technology Analyst II level is distinguished from Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized professional, technical and analytical duties.

EXAMPLES OF DUTIES (Illustrative Only)

NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.

- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex enterprise infrastructure network and/or security systems.
- Integrates information systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, technical support and departments to resolve system, network or telecommunication problems; coordinates and implements corrective measures.
- Models changes against hardware and software configurations to optimize the utilization of resources.
- Determines needs and develops plans and proposals to meet the needs of customers.
- Researches to determine feasibility, advises and recommends appropriate uses of network and/or security technologies.
- Develops and implements comprehensive test plans to ensure that network information technology components are tested and debugged.
- Monitors and enforces security policies and procedures.
- Installs third party network and security software/hardware/appliances; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Resolves problems related to Network application software, operating system, hardware, router and switches, printing and networks.
- Provides assistance and training for County staff as needed.
- Monitors and collects data on department and/or enterprise infrastructure network system performance.
- Determines and adjusts network performance thresholds for system resources.
- Participates in projects related to assigned specialty field.
- May function as a leader of a project team assigned to projects covering multiple platforms and/or specialty fields; provides leadership and mentoring to other Information Technology staff assigned to the project team.
- Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.
- Provides data for justification of unit budget in relation to assigned projects.
- May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.

QUALIFICATIONS

NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.

General Knowledge:
- Principles of enterprise infrastructure network topologies and architectures
- Principles of computer information security and privacy practices.
- Design, installation and maintenance of enterprise infrastructure network and/or security systems.
- Network and PC operating systems.
- Principles and practices of technical problem solving.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Principles and practices of producing effective project and technical documentation.
- Restart and recovery concepts.
- Basic supervisory practices and principles.
- Team dynamics and team building.

Specific Knowledge:
- Logical and physical network design, implementation, testing and maintenance.
- Network and/or security hardware and software vendors, products and pricing structures.
- Data communication and network concepts and principles.
- Various networking services and protocols such as DNS, DHCP, WINS, etc.
- Internet and Intranet architecture and vendor offerings.
- Network security policies, techniques and procedures.
- Network and/or security documentation, configuration, maintenance and diagnostic procedures and techniques.
- Network, server, LAN/WAN, router and switch configuration and administration
- Use of network diagnostic systems and tools.
- Conducting comprehensive information technology forensics as needed.
- Diagnosing and resolving problems with network devices and interface systems.
- Installing, configuring, modifying and maintaining network operating systems, network and security applications and remote access appliances and/or software.

Skill In:
- Recognizing network problems, developing recommendations and solutions, and managing corrections.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Understanding complex enterprise infrastructure network and/or security systems and issues.
- Integrating department and/or enterprise networked and/or security systems.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, assigning and reviewing the work of others.
- Training others in work procedures.
- Promoting and maintaining a team environment.

Special Requirements:

May be required to work on-call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:

Information Technology Analyst Trainee:

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with an emphasis in enterprise infrastructure network administration, design or engineering.

OR (2) Equivalent to an Associate of Arts degree in Computer Science and completion of a certificate program in Computer Science with emphasis in enterprise infrastructure network administration, design or engineering.

OR (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

OR (4) Two years of experience equivalent to the County's classification of Information Technology Technician II.

Information Technology Analyst I:

EITHER (1) Equivalent to graduation from a four-year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure network administration, design or engineering
AND   One year paid experience working in Information Technology.

OR (2) One year of experience equivalent to the County's class of Information Technology Analyst Trainee-Networking.

OR (3) Completion of a certificate program in Computer Science with emphasis in enterprise infrastructure network administration, design or engineering and two years experience working in this specialty.

OR (4) One year of experience equivalent to the County's class of Supervising Information Technology Technician
AND   Completion of a certificate program that is equivalent to the major course work for an Associate of Arts degree in computer science, or completion of a certificate program with emphasis in enterprise infrastructure network administration, design or engineering.

Information Technology Analyst II:

EITHER (1) Equivalent to graduation from a four-year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure network administration, design or engineering,
AND: (a) Three years experience working in the field of enterprise infrastructure network administration, design or engineering within an enterprise environment.

OR   (b) two years experience equivalent to the County's class of Information Technology Analyst I - Networking.

OR   (2) Completion of a certificate program in Computer Science with emphasis in enterprise infrastructure network administration, design or engineering and four years experience working in enterprise infrastructure network administration, design or engineering or a similar field in an enterprise information environment.

NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.

County of El Dorado

February 2009

INFORMATION TECHNOLOGY ANALYST TRAINEE/I/II
Office Systems
(Deep Class)

DEFINITION

Under general supervision, performs a variety of professional, technical and analytical duties in the installation, operation and maintenance of desktop computer systems; analyzes customer and systems requirements; installs, modifies and maintains third party desktop computer system software; installs, modifies and configures desktop computer system hardware and peripherals; and performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a multi-level deep class in which incumbents may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on experience and proficiency gained in this specialty classification. In the Information Technology Analyst Trainee level, incumbents receive training on the day-to-day tasks associated with this classification series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class. Information Technology Analyst II is the journey level in the class series; incumbents are technically proficient in executing assigned duties. Incumbents in the Information Technology Analyst II classification may be assigned as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of Information Technology Analyst Trainee/I/II. The Information Technology Analyst II level is distinguished from Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized professional, technical and analytical duties.

EXAMPLES OF DUTIES (Illustrative Only)

NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.

- Plans, determines requirements, builds, tests, implements, maintains and enhances department or enterprise desktop computer systems.
- Coordinates and collaborates with counterparts in other classifications in the integration of desktop computer systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, technical support and departments to resolve department or enterprise desktop computer systems or network problems; coordinates and implements corrective measures.
- Models changes against desktop hardware and software configurations to optimize the utilization of resources.
- Determines needs and develops plans and proposals to meet the needs of customers.
- Researches to determine feasibility, advises and recommends appropriate uses of desktop computer technologies.
- Develops and implements comprehensive test plans to ensure that department or enterprise desktop computer system components are tested and debugged.
- Monitors and enforces security policies and procedures.
- Installs, modifies and maintains third party desktop computer system software; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Determines proper desktop computer system installation parameters for software/hardware for smooth integration, transition and efficiency.
- Provides assistance and training for customers as needed.
- Monitors and collects data on desktop computer system performance.
- Determines and adjusts desktop thresholds for system resources.
- Participates in projects related to assigned specialty field.
- May function as a leader of a project team assigned to projects covering multiple platforms and/or specialty fields; provides leadership and mentoring to other Information Technology staff assigned to the project team.
- Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.
- Provides data for justification of unit budget in relation to assigned projects.
- May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.

QUALIFICATIONS

NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.

General Knowledge:
- Design, installation and maintenance of department or enterprise desktop computer systems.
- Third party desktop computer system and client/server applications.
- Methods of operation and interaction of desktop computer systems hardware components.
- Interaction with third party software and desktop/network operating systems.
- Principles of networking technologies.
- Principles of computer data processing.
- Computer operations and facilities.
- Principles and practices of technical problem solving.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Principles and practices of producing effective project and technical documentation.
- Restart and recovery concepts.
- Basic supervisory practices and principles.
- Team dynamics and team building.

Specific Knowledge:
- Fundamentals and concepts of designing desktop customer system hardware, software, and connectivity solutions.
- Concepts of installation, configuration, and testing of internal desktop computer system hardware components.
- Planning required for installation and testing of desktop computer systems in diverse customer environments.
- Desktop computer systems maintenance, monitoring and troubleshooting methodologies.
- Architecture of desktop/server/network operating systems.
- Monitoring and troubleshooting office systems hardware and software.
- Installing and configuring desktop/network operating systems software.
- LAN/WAN logical and physical design.
- Desktop computer systems software internal functions and customer interfaces.
- Department or enterprise desktop computer systems standards, policies and procedures.
- Principles and practices of training, instructing and supporting customers.
- Communication techniques to convey hardware and software issues to customers.

Skilled In:
- Recognizing desktop computer system problems, developing recommendations and solutions, and managing corrections.
- Integrating desktop computer systems technologies.
- Understanding complex desktop computer systems and issues.
- Understanding activities requiring interaction with desktop computer system software and operating systems to diagnose and resolve unique, non-recurring problems.
- Distinguishing the interaction of numerous computer platforms in a multi-layered client/server environment.
- Interconnecting desktop computer systems with diverse systems including file/email/application servers, mainframe systems and/or databases.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Communicating effectively, orally and in writing, with Information Technology management, professional and support staff, department computer system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, assigning and reviewing the work of others.
- Training others in work procedures.
- Promoting and maintaining a team environment.

Special Requirements:

May be required to work on-call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:

Information Technology Analyst Trainee:

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in desktop computing administration and/or support.

OR (2) Equivalent to an Associate of Arts degree in Computer Science and completion of a certificate program in Computer Science with emphasis in desktop computing administration and/or support.

OR (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

OR (4) Two years of experience equivalent to the County's classification of Information Technology Technician II.

Information Technology Analyst I:

EITHER (1) Equivalent to graduation from a four-year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in desktop computing administration and/or support.
AND One year paid experience working in Information Technology.

OR (2) One year of experience equivalent to the County's class of Information Technology Analyst Trainee - Office Systems.

OR (3) Completion of a certificate program in Computer Science with emphasis in desktop computing administration and/or support and two years experience working in this specialty.

OR (4) One year of experience equivalent to the County's class of Supervising Information Technology Technician
AND Completion of a certificate program that is equivalent to the major course work for an Associate of Arts degree in Computer Science, or completion of a certificate program with emphasis in desktop computing administration and/or support.

Information Technology Analyst II:

EITHER 1) Equivalent to graduation from a four-year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in desktop computing administration and/or support.
AND (a) Three years experience working in the field of desktop computing administration and/or support within an enterprise environment.
OR (b) Two years experience equivalent to the County's class of Information Technology Analyst I – Office Systems.

OR (2) Completion of a certificate program in Computer Science with emphasis in desktop computing administration and/or support and four years experience working in desktop computing administration and/or support or a similar field in an enterprise information systems environment.

NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.

INFORMATION TECHNOLOGY ANALYST TRAINEE/I/II
Operating Systems
(Deep Class)

DEFINITION

Under general supervision, performs a variety of professional, technical and analytical duties in the operation of mainframe (enterprise server), computer systems; analyzes customer and systems requirements; develops and maintains enterprise applications, systems and networks; performs database administration functions; and performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a multi-level deep class in which incumbents may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on experience and proficiency gained in this specialty classification. In the Information Technology Analyst Trainee level, incumbents receive training on the day-to-day tasks associated with this classification series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class. Information Technology Analyst II is the journey level in the class series; incumbents are technically proficient in executing assigned duties. Incumbents in the Information Technology Analyst II classification may be assigned as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of Information Technology Analyst Trainee/I/II. The Information Technology Analyst II level is distinguished from Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized professional, technical and analytical duties.

EXAMPLES OF DUTIES (Illustrative Only)

NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.

- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex enterprise operating systems.
- Coordinates and collaborates with counterparts in other classifications in the integration of information systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, technical support and departments to resolve enterprise system or database problems; coordinates and implements corrective measures.
- Models changes of hardware and software configurations to optimize the utilization of resources.
- Determines needs and develops plans and proposals to meet the needs of the enterprise.
- Researches to determine feasibility, advises and recommends appropriate uses of information technology.
- Develops and implements comprehensive test plans to ensure that enterprise information technology components and changes thereto are tested and debugged prior to implementation.
- Monitors and enforces security policies and procedures.
- Installs third party enterprise software; modifies software as necessary to meet specific enterprise requirements; installs vendor supplied maintenance and enhancements.
- Determines proper installation parameters for enterprise software/hardware for smooth integration, transition and efficiency.
- Provides assistance and training for County staff as needed.
- Monitors and collects data on enterprise system performance.
- Plans, develops and implements backup and recovery procedures.
- Determines and adjusts performance thresholds for enterprise system resources.
- May participate in enterprise projects.
- May function as a leader of a project team assigned to projects covering multiple platforms and/or specialty fields; provides leadership and mentoring to other Information Technology staff assigned to the project team.
- Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.
- May provide data for justification of unit budget in relation to assigned projects.
- May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.

QUALIFICATIONS

NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.

General Knowledge:
- Software systems development life cycles.
- Principles of computer data processing.
- Computer operations and facilities.
- Business systems applications.
- Principles and techniques of software and systems quality assurance and control.
- Principles and practices of technical problem solving.
- Principles, processes, techniques of project management and related software.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Design, installation and maintenance of enterprise, distributed, client/server, telecommunications and desktop computer systems.
- Principles and practices of producing effective project and technical documentation.
- Programming languages scripting and job control language.
- Restart and recovery concepts.
- Basic supervisory practices and principles.
- Team dynamics and team building.

Specific Knowledge:
- Database management systems (DBMS).
- Database utilities.
- Database design.
- Methods and techniques of file and data recovery.
- Logical data schema.
- Database security methods and techniques.
- Database tools.
- Physical control standards and procedures.
- Data/file management tools.

- Fundamentals and concepts of computer operating systems.
- Computer systems configurations.
- Operating systems architecture.
- Operating systems and systems utilities version control principles.
- Operating system structure, operations and utilities.

Skill In:
- Recognizing system problems, developing recommendations and solutions, and managing corrections.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Understanding complex information technology systems and issues.
- Integrating enterprise information technology systems.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, assigning and reviewing the work of others, when required.
- Training others in work procedures.
- Promoting and maintaining a team environment.

Special Requirements:

May be required to work on-call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:

Information Technology Analyst Trainee:

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration or a closely related field with emphasis in operating systems and/or database administration .

OR (2) Equivalent to an Associate of Arts degree in Computer Science and completion of a certificate program in Computer Science with emphasis in operating systems and/or database administration.

OR (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

OR (4) Two years of experience equivalent to the County's classification of Information Technology Technician II.

Information Technology Analyst I:

EITHER 1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in operating systems and/or   database administration .

AND   One year verifiable, paid experience working in an enterprise information technology environment.

OR 2)   One year of experience equivalent to the County's class of Information Technology Analyst Trainee –Operating Systems.

OR 3)   Completion of a certificate program in Computer Science, with emphasis in operating systems and/or database administration, and two years of verifiable experience working in this specialty.

OR 4)   One year of experience equivalent to the County's class of Supervising Information Technology Technician
AND   Completion of a certificate program equivalent to the major course work for an Associate of Arts degree in computer science, or completion of a certificate program with emphasis in operating systems and/or database administration

Information Technology Analyst II:

EITHER 1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in operating systems and/or database administration .
AND: (a) Three years experience working in the field of operating systems and/or database administration in an enterprise environment.
OR   (b) two years experience equivalent to the County's class of Information Technology Analyst I – Operating Systems.

OR 2)   Completion of a certificate program in Computer Science with emphasis in operating systems and/or database administration and four years experience working in operating systems and/or database administration or a similar field in an IBM or equivalent enterprise information systems environment.

NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.

INFORMATION TECHNOLOGY ANALYST TRAINEE/I/II
Server Administration
(Deep Class)

DEFINITION

Under general supervision, performs a variety of professional, technical and analytical duties in the operation of server administration, maintenance, design and engineering; analyzes customer and enterprise infrastructure client/server systems requirements; develops and maintains department and enterprise infrastructure client/server architectures; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a multi-level deep class in which incumbents may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on experience and proficiency gained in this specialty classification. In the Information Technology Analyst Trainee level, incumbents receive training on the day-to-day tasks associated with this classification series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class. Information Technology Analyst II is the journey level in the class series; incumbents are technically proficient in executing assigned duties. Incumbents in the Information Technology Analyst II classification may be assigned as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of Information Technology Analyst Trainee/I/II. The Information Technology Analyst II level is distinguished from Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized professional, technical and analytical duties.

EXAMPLES OF DUTIES (Illustrative Only)

NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.

- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances complex department or enterprise infrastructure client/server systems.
- Coordinates and collaborates with counterparts in other classifications in the integration of client/server systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, technical support and departments to resolve client/server system impairments; coordinates and implements corrective measures.
- Models changes to hardware and software configurations to optimize the utilization of resources.
- Determines needs and develops plans and proposals to meet the needs of department or enterprise infrastructure client/server users.
- Researches to determine feasibility, advises and recommends appropriate uses of department or enterprise infrastructure client/server technology.
- Develops and implements comprehensive test plans to ensure that department or enterprise infrastructure client/server technology components are tested and debugged.
- Monitors and enforces security policies and procedures.
- Installs third party department or enterprise infrastructure client/server software; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Determines proper installation parameters for client/server software/hardware for smooth integration, transition and efficiency.
- Provides assistance and training for County staff as needed.
- Monitors and collects data on department or enterprise infrastructure client/server system performance.
- Plans, develops and implements backup and recovery procedures.
- Determines and adjusts thresholds for client/server system resources.
- Participates in enterprise projects.
- May function as a leader of a project team assigned to projects covering multiple platforms and/or specialty fields; provides leadership and mentoring to other Information Technology staff assigned to the project team.
- Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.
- Provides data for justification of unit budget in relation to assigned projects.
- May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.

QUALIFICATIONS

NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.

General Knowledge:
- Principles and techniques of client/server architectures and methodologies.
- Design, installation and maintenance of department or enterprise infrastructure client/server systems.
- Various networking services and protocols such as DNS, DHCP, WINS, etc.
- Remote administration of department or enterprise infrastructure client/server systems.
- Server virtualization and various data storage fundamentals (NAS, SAN, SAS)
- Computer operations and facilities.
- Business systems applications.
- Principles and practices of technical problem solving.
- Principles, processes, techniques of project management and related software.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Principles and practices of producing effective project and technical documentation.
- Restart and recovery concepts.
- Basic supervisory practices and principles.
- Team dynamics and team building.

Specific Knowledge:
- Fundamentals and concepts of client/server and desktop computer operating systems
- Enterprise infrastructure client/server systems configurations.
- Client/server hardware/software and operating system resource requirements.
- Planning and implementation of client/server hardware/software installation/upgrades.
- Development of utility programs and shell scripts.
- Use of server diagnostic systems and tools.
- Managing and monitoring server performance.
- Managing disk storage arrays
- Management of department or enterprise infrastructure client/server application deployments.
- Enterprise backup administration including pool creation and tape management.

Skill In:
- Recognizing server problems, developing recommendations and solutions, and managing corrections.
- Integrating department and/or enterprise infrastructure client/server systems.
- Administration and maintenance of centralized directory, file and print services.
- Client/server user permission and account management.
- Enforcement of server security policies and procedures through the use of account, directory and file rights filters.
- Making technical oral presentations to technical and non-technical audiences.
- Evaluating, installing, testing and implementing new servers, server operating systems.
- Installing new versions, releases or maintenance levels of existing server and desktop operating systems and related components through centralized resource.
- Coordinating activities with vendors, clients and staff.
- Understanding complex information technology systems and issues.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, assigning and reviewing the work of others, when required.
- Training others in work procedures.
- Promoting and maintaining a team environment.

Special Requirements:

May be required to work on-call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:

Information Technology Analyst Trainee:

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.

OR (2) Equivalent to an Associate of Arts degree in Computer Science and completion of a certificate program in Computer Science with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.

OR (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

OR (4) Two years of experience equivalent to the County's classification of Information Technology Technician II.

Information Technology Analyst I:

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.
AND One year verifiable, paid experience working in an information technology environment.

OR (2) One year of experience equivalent to the County's class of Information Technology Analyst Trainee – Server Administration.

OR (3) Completion of a certificate program in Computer Science, with emphasis in enterprise infrastructure server administration, maintenance, design and engineering, and two years of verifiable experience working in this specialty.

OR (4) One year of experience equivalent to the County's class of Supervising Information Technology Technician
AND Completion of a certificate program that is equivalent to the major course work for an Associate of Arts degree in computer science, or completion of a certificate program with emphasis in enterprise infrastructure server administration, maintenance, and design and engineering.

Information Technology Analyst II:

EITHER 1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Business Administration, or a closely related field with emphasis in enterprise infrastructure server administration, maintenance, design and engineering.
AND: (a) Three years experience working in the field of enterprise infrastructure server administration, maintenance, design and engineering.
OR (b) Two years experience equivalent to the County's class of Information Technology Analyst I – Server Administration.

OR (2) Completion of a certificate program in Computer Science with emphasis in enterprise infrastructure server administration, maintenance, design and engineering and four years of verifiable experience working in enterprise infrastructure server administration, maintenance, design and engineering or a similar field in an information systems environment similar to that of the County.

NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.

County of El Dorado

February 2009

<u>**INFORMATION TECHNOLOGY ANALYST TRAINEE/I/II**</u>
Telecommunications
(Deep Class)

DEFINITION

Under general supervision, performs a variety of professional, technical and analytical duties in the operation of enterprise infrastructure telecommunications administration, design and/or engineering; analyzes customer and systems requirements; develops and maintains enterprise infrastructure telecommunications systems and networks; installs and maintains telecommunications equipment for use by County staff throughout the County; and performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

This is a multi-level deep class in which incumbents may receive training as an Information Technology Analyst Trainee, or may be assigned to one of two levels depending on experience and proficiency gained in this specialty classification. In the Information Technology Analyst Trainee level, incumbents receive training on the day-to-day tasks associated with this classification series. At the Information Technology Analyst I level, incumbents, initially under close supervision, perform the more routine duties of the class. Information Technology Analyst II is the journey level in the class series; incumbents are technically proficient in executing assigned duties. Incumbents in the Information Technology Analyst II classification may be assigned as leader of a project team involving technically difficult and complex work on multiple platforms, systems and/or networks. Lead direction may include the classifications of Information Technology Analyst Trainee/I/II. The Information Technology Analyst II level is distinguished from Sr. Information Technology Analyst in that the latter performs the more difficult, complex and specialized professional, technical and analytical duties.

EXAMPLES OF DUTIES (Illustrative Only)

NOTE: The level and scope of the job duties listed below are assigned as defined under Distinguishing Characteristics.

- Plans, determines requirements, designs, builds, tests, implements, maintains and enhances department or enterprise infrastructure telecommunications systems.
- Integrates telecommunications information systems for operability over multiple platforms and technologies.
- Acts as liaison between vendors, technical support and departments to resolve telecommunications problems; coordinates and implements corrective measures.
- Models changes against telecommunications hardware and software configurations to optimize the utilization of resources.
- Determines needs and develops plans and proposals to meet the needs of customers.
- Researches to determine feasibility, advises and recommends appropriate uses of telecommunications technology.
- Develops and implements comprehensive test plans to ensure that telecommunications technology components are tested and debugged prior to implementation.
- Monitors and enforces security policies and procedures.
- Installs third party telecommunications software; modifies software as necessary to meet specific customer requirements; installs vendor supplied maintenance and enhancements.
- Determines proper installation parameters for telecommunications software/hardware for smooth integration, transition and efficiency.
- Provides assistance and training for customers as needed.
- Monitors and collects data on telecommunications system performance.
- Plans, develops and implements backup and recovery procedures.
- Determines and adjusts telecommunications thresholds for system resources.
- Participates in projects related to assigned specialty field.
- May function as a leader of a project team assigned to projects covering multiple platforms and/or specialty fields; provides leadership and mentoring to other Information Technology staff assigned to the project team.
- Plans, coordinates and oversees project team activities; identifies deliverables and establishes schedules and time lines; identifies and allocates project resources.
- May provide data for justification of unit budget in relation to assigned projects.
- May provide input into selection decisions, performance evaluations and disciplinary matters related to assigned project teams.
- Installs and maintains telecommunications equipment, networks and services throughout the County.

QUALIFICATIONS

NOTE: The level and scope of the knowledge and skills listed below are related to job duties as defined under Distinguishing Characteristics.

General Knowledge:

- Principles of structured cabling systems and installation techniques.
- Principles of enterprise telephony systems and/or architecture.
- Principles of enterprise voice mail platforms.
- Design, installation and maintenance of enterprise infrastructure telecommunications systems.
- Data communications, concepts and principles.
- Principles and practices of technical problem solving.
- Principles, processes, techniques of project management and related software.
- Methods of long-term technology assessment and deployment.
- Principles, practices and techniques of providing customer service.
- Principles and practices of producing effective project and technical documentation.
- Restart and recovery concepts.
- Basic supervisory practices and principles.
- Team dynamics and team building.

Specific Knowledge:

- Design, build, manage and maintain traditional and Internet Protocol (IP) telephony systems.
- Data and voice network design, maintenance and management.
- Architecture and design of telecommunications switches and voicemail systems.
- Programming of telephony switches/call processors and voicemail systems.
- Global communications systems and local carriers.
- Trouble shooting and repair of telecommunications equipment.
- Telecommunications vendor operating policies, procedures and pricing structures.
- Telecommunications Distribution systems
- Telecommunications codes, standards and regulations

Skill In:

- Recognizing telecommunications problems, developing recommendations and solutions, and managing corrections.
- Understanding complex enterprise infrastructure telecommunications systems and issues.
- Integrating enterprise infrastructure telecommunications systems.
- Administering telephony switches, call processors and/or voice mail systems to make additions, disconnects and changes to the customer environment.
- Determining telecommunications facilities and environmental control requirements.
- Modifying existing structured or customer cabling to meet industry standards.
- Making technical oral presentations to technical and non-technical audiences.
- Coordinating activities with vendors, clients and staff.
- Interpreting, applying rules and explaining policies and procedures.
- Using sound independent judgment within established guidelines.
- Preparing clear and concise reports, correspondence, documentation and other written materials.
- Communicating effectively, orally and in writing, with Information Technologies management, professional and support staff, department system users and vendors.
- Establishing and maintaining effective working relationships with those contacted in the course of the work.
- Planning, assigning and reviewing the work of others.
- Training others in work procedures.
- Promoting and maintaining a team environment.

Special Requirements:

May be required to work on-call, weekends and irregular hours. Applicants must pass a criminal history and background check which may include contact of prior employers and personal references, and fingerprinting for purposes of searching local, state and national fingerprint files through the Department of Justice and Federal Bureau of Investigations to disclose any criminal record.

Education and Experience:

Information Technology Analyst Trainee:

EITHER (1) Equivalent to graduation from a four year college or university with major coursework in Computer Science, MIS, Electrical Engineering, Business Administration, or a closely related field with emphasis in enterprise infrastructure telecommunications administration, design or engineering.

OR (2) Equivalent to an Associate of Arts degree in Computer Science or Electrical Engineering and completion of a certificate program in Computer Science or Electrical Engineering with emphasis in enterprise infrastructure telecommunications administration, design or engineering.

OR (3) One year of experience equivalent to the County's classification of Senior Information Technology Technician.

OR (4) Two years of experience equivalent to the County's classification of Information Technology Technician II.

Information Technology Analyst I:

EITHER (1) Equivalent to graduation from a four-year college or university with major coursework in Computer Science, MIS, Electrical Engineering, Business Administration or a closely related field with emphasis in enterprise infrastructure telecommunications administration, design or engineering.
AND One year verifiable, paid experience working in Information Technology.

OR (2) One year of experience equivalent to the County's class of Information Technology Analyst Trainee-Telecommunications.

OR (3) Completion of a certificate program in Computer Science or Electrical Engineering with emphasis in enterprise infrastructure telecommunications administration, design or engineering and two years experience working in this specialty.

OR (4) One year of experience equivalent to the County's class of Supervising Information Technology Technician
AND Completion of a certificate program that is equivalent to the major course work for an Associate of Arts degree in computer science, electrical engineering or completion of a certificate program with emphasis in enterprise infrastructure telecommunications administration, design or engineering.

Information Technology Analyst II:

EITHER 1) Equivalent to graduation from a four-year college or university with major coursework in Computer Science, MIS, Electrical Engineering, Business Administration or a closely related field with emphasis in enterprise infrastructure telecommunications administration, design or engineering.
AND (a) Three years experience working in the field of enterprise infrastructure telecommunications administration, design or engineering and/or support within an enterprise environment.
OR (b) two years experience equivalent to the County's class of Information Technology Analyst I – Telecommunications.

OR (2) Completion of a certificate program in Computer Science or Electrical Engineering with emphasis in enterprise infrastructure telecommunications administration, design or engineering and four years experience working in enterprise infrastructure telecommunications administration, design or engineering or a similar field in an enterprise information systems environment.

NOTE: The level at which initial appointments to the classes of Information Technology Analyst Trainee/I/II are made, advancement from the lower to higher levels of this class series, and designation as a project team leader are based upon the duties assigned and are at the discretion of the appointing authority, providing the minimum qualifications are met.