

Iowa Department of Administrative Services – Human Resources Enterprise  
Job Classification Description

## Information Technology Specialist 4

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### Definition

Under general supervision, performs advanced professional analytical and modification responsibilities in supporting business applications processes, application development and database management, system and network administration, technical training and reporting, project management, product management, system testing and quality assurance, mainframe/platform administration, and/or information technology security; performs related work as required.

*The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.*

### Work Examples

Assists a supervisor by performing such duties as instructing employees about tasks, answering questions, distributing and balancing the workload and checking work; may make occasional suggestions on appointments, promotions, and reassignments.

Serves as lead analyst for major projects, gathering and validating requirements for enterprise applications; facilitates workshops with business units to document processes and identify improvement opportunities; translates business needs into detailed functional and technical specifications, coordinates with developers and architects to ensure solutions meet requirements and comply with security and compliance standards, and provides training and documentation for end-users and technical teams.

Leads application development projects, ensuring compliance with architecture and security standards; oversees database design and optimization for large-scale systems; acts as technical lead, providing direction to project teams and reviewing deliverables for quality and adherence to standards.

Develops and enforces policies for LAN/WAN administration, security, and data protection; provides training and documentation for technical staff and end-users.

Leads administration of systems and network infrastructure; configures and maintain servers, virtualization environments, and LAN/WAN connectivity; develops and enforces policies for network security, disaster recovery, and data protection; acts as technical lead for major infrastructure projects, providing guidance to team members and ensuring compliance with standards; provides training and documentation for technical staff.

Prepares and presents technical training sessions for staff on standard applications, systems, and processes; assists in developing user guides and help modules; generates routine reports on system performance and service delivery metrics; supports data analysis for compliance and operational improvements; participates in knowledge-sharing activities within project teams; designs and delivers advanced technical training for enterprise systems, network security, and application platforms; develops formal and informal courses for technical staff and end-users.

Manages IT procurement processes for major IT projects, including drafting specifications, evaluating proposals, and coordinating vendor selection; negotiates pricing and contract terms to ensure cost-

effective solutions; monitors vendor performance and compliance with contractual obligations; prepares detailed reports and recommendations for leadership on purchasing decisions and vendor relationships.

Serves as project leader for large-scale IT initiatives; develops detailed project schedules, assigns tasks, and monitors progress; coordinates cross-functional teams and manages communications with stakeholders; identifies risks and implements mitigation strategies; ensures adherence to technical standards, security requirements, and organizational policies throughout the project lifecycle.

Manages testing activities for large-scale IT projects; develops comprehensive test plans, scripts, and automation strategies; coordinates user acceptance testing and performance validation; ensures adherence to enterprise standards and documents results for leadership review; provide training and guidance to technical teams on best practices for quality assurance.

Administers mainframe and platform environments for large-scale applications; configures and maintains operating systems, storage, and system utilities; develops and enforces policies for system security, backup, and recovery; acts as technical lead for major upgrades and migrations; provides documentation and training for technical teams.

Manages security tools across complex systems such as firewalls, intrusion detection/prevention systems, and encryption technologies; oversees implementation of multi-factor authentication and privileged access management solutions; develops and enforces policies for access control, data protection, and disaster recovery; provides training and guidance to technical teams on security best practices and emerging threats.

Analyzes system management processes/systems (availability, change, configuration, problem, project, network and storage management, capacity planning, system performance, data modeling, charge back, information services, disaster recovery, systems security and skills planning).

Coordinates the availability/allocation of system resources; evaluates impact of workload on resource availability; prepares written/oral instructions for the operation of a major component of an information system; defines/maintains appropriate backup and recovery procedures for critical information and develops procedures for distribution of computing system output.

Coordinates system outages with customers and establishes/monitors system service level agreements and performance/availability goals.

Manages one or more system management processes including availability/allocation of system storage space, system resources (e.g., network, data, programs and objects) and system access.

Recommends standards, policies and procedures for mainframe and PC based applications; develops short term performance requirements, establishes operational procedures, evaluates impact of new/changed software and monitor performance; analyzes output and makes required changes.

Installs/upgrades system components (e.g., hardware and software) and develops installation plans, configuring, tuning, placing, testing and training users.

Analyzes more complex agency operations/procedures and studies components to determine feasibility of adapting to automation; evaluates potential changes in operations/procedures and prepares cost estimates/time lines for completion.

Prepares data flow diagrams; designs documents, forms, record layouts, etc., to generate, transmit or gather data; adjusts time lines and cost estimates based on design.

Prepares program specifications, develops data bases or files for testing and tests system using sample data; prepares system documentation and develops program code.

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Coordinates implementation of the systems; develops, coordinates and administers customer training; provides system enhancements and maintenance as required.

Consults with less-experienced Information Technology Specialists, suggesting solutions to complicated technical programming problems and program logic; trains less-experienced staff in programming techniques, file organization methods, job control language, and programming.

### **Competencies Required**

Knowledge:

- Customer and Personal Service – Principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.
- Computers and Electronics – Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- English Language – The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Engineering and Technology – The practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Telecommunications – Transmission, broadcasting, switching, control, and operation of telecommunications systems.
- Education and Training – Principles and methods for curriculum and training design, teaching and instruction for individuals and groups, and the measurement of training effects.
- Mechanical – Machines and tools, including their designs, uses, repair, and maintenance.

Abilities:

- Oral Expression – Communicate information and ideas in speaking so others will understand.
- Written Comprehension – Read and understand information and ideas presented in writing.
- Written Expression – Communicate information and ideas in writing so others will understand.
- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning – Combine pieces of information to form general rules or conclusions.
- Oral Comprehension – Listen to and understand information and ideas presented through spoken words and sentences.
- Information Ordering – Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Selective Attention – Concentrate on a task over a period of time without being distracted.

- Category Flexibility – Generate or use different sets of rules for combining or grouping things in different ways.
- Originality – Come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.

**Skills:**

- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Active Listening – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Reading Comprehension – Understanding written sentences and paragraphs in work related documents.
- Active Learning – Understanding the implications of new information for both current and future problem-solving and decision-making.
- Systems Analysis – Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- Programming – Writing computer programs for various purposes.
- Service Orientation – Actively looking for ways to help people.
- Speaking – Talking to others to convey information effectively.
- Writing – Communicating effectively in writing as appropriate for the needs of the audience.
- Troubleshooting – Determining causes of operating errors and deciding what to do about it.

**Minimum Qualification Requirements**

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) Graduation from an accredited four-year college or university with a degree in any field, and experience equal to two years of full-time work in application development and database management, business analysis, systems and network administration, technical training and reporting, IT vendor and purchasing management, IT project management, IT product management, system testing and quality assurance, mainframe and platform administration, and/or information technology security.
- 2) Graduation from an accredited four-year college or university with a degree in computer science, computer applications, software engineering, computer engineering, management information systems, business analytics, or cyber security, and experience equal to one year of full-time work in application development and database management, business analysis, systems and network administration, technical training and reporting, IT vendor and purchasing

management, IT project management, IT product management, system testing and quality assurance, mainframe and platform administration, and/or information technology security.

- 3) All of the following (a and b):
  - a. Two years of full-time work experience in application development and database management, business analysis, systems and network administration, technical training and reporting, IT vendor and purchasing management, IT project management, IT product management, system testing and quality assurance, mainframe and platform administration, and/or information technology security; and
  - b. A total of four years of education and/or full-time experience (as described in part a), where thirty semester hours of accredited college or university coursework in any field equals one year of full-time experience.
- 4) All of the following (a and b):
  - a. Four years of full-time work experience in application development and database management, business analysis, systems and network administration, technical training and reporting, IT vendor and purchasing management, IT project management, IT product management, system testing and quality assurance, mainframe and platform administration, and/or information technology security; and
  - b. Either of the following:
    - i. Certification from an authorized educational institution/major computer or software producer in one or more of the specialty areas listed in part a; or
    - ii. Eighteen semester hours from an accredited college or university in one or more of the specialty areas listed in part a.
- 5) Current, continuous experience in the state executive branch that includes six months of full-time work as an Information Technology Specialist 3.

*Effective date: 02/26 SA*