INFORMATION TECHNOLOGY SERIES ALLOCATION GUIDELINES

INTRODUCTION

The following are allocation guidelines for nine information technology (IT) classifications found within state service. These guidelines are to be used in conjunction with the SPB Job Specifications for these classifications and are intended to supplement and clarify their use.

Allocation factors supplement and clarify the class specification, as needed.
Differentiate between the various working levels in a class series.
Assure consistency of how a particular class or classes are allocated and used in various State departments.

Allocation factors are used to help define the level descriptions that indicate the work that is expected to be performed in each of the respective classifications. When applying the guidelines, the reader should keep in mind:

1. The level description applies to a position if it covers 50 percent or more of the position's time.

2. The level description applies to a position if it covers 50 percent or more of the position's responsibilities within the typical domains.

3. A position allocation is based on the position meeting the corresponding level descriptions of almost all of the allocation factors.

The IT series specification describes nine classifications used to perform a variety of tasks in support of systems and services in the following six domains or closely related, emerging IT fields:

BUSINESS TECHNOLOGY MANAGEMENT

The management of IT resources according to an organization's priorities and needs including activities such as IT policy and program development, IT portfolio management, IT budgeting and procurement, service performance management, process reengineering, business analysis, research and development, strategic planning, digital service user experience engagement, content design, and product and delivery strategy. Major responsibilities in the Business Technology Management Domain include:

Policy and Program Development - Formulate policies and programs related to IT while ensuring compliance with State laws and policies, including IT governance.

Budgeting, Procurement and Purchasing - Manage and process IT budgeting, procurement and purchasing activities.

Business Analysis and Performance Management - Perform analysis on processes, workloads, operational services, customer relations, and communicate with members of one or more IT and/or business units to identify issues, problems, and opportunities. Perform research related to technology trends and best practices. Using industry-standard methodologies to perform analysis.

Contract Administration - Manage IT contract processes, including vendor performance.

Asset Management - Manage IT hardware and software assets and coordinate their lifecycle through ITAM (IT Asset Management) standards. This specifically includes asset acquisition, asset receiving, software licensing, hardware and software deployment, hardware and software inventory, warehousing, and asset retirement.

Technical Writing - Produce technical documentation that helps people understand and use a product or service. Documentation can include online help and manuals (system, end-user, and training). Technical writing explains technologies, processes, and products.

Legislative Management (IT) - Perform impact analysis on proposed legislation with an IT component.

IT Strategic Planning - Perform research related to technology trends and best practices. Develop strategic plans that are aligned with business and organizational goals.

CLIENT SERVICES

The full lifecycle of end user device solutions including evaluation, configuration, provisioning, training, security, tracking and support for an end user computing environment. Major responsibilities in the Client Services Domain include:

Application Support - Deploy, patch and troubleshoot sanctioned client-side applications.

End User Device Support - Address all aspects of end user devices including provisioning, tracking, security, troubleshooting, and decommissioning.

Help Desk / Service Desk - First point of contact for end users providing support and information related to IT products and services provided to the Department.

IT Training - Formulate training materials and conducting training related to information technology.

INFORMATION SECURITY ENGINEERING

The security aspects of the initiation, design, development, testing, operation and defense of IT environments in order to address sources of disruption, ranging from natural disasters to malicious acts. Major responsibilities in the Information Security Engineering Domain include:

Asset Protection - Development, review and execution of programs associated with the protection of assets that includes personnel, information, software and hardware.

Contingency Planning - The interim measures to recover information system services after a disruption that may include relocation of information systems and operations to an alternate site, recovery of information system functions using alternate equipment, or performance of information system functions using manual methods.

Incident Management - The development and application of an incident management program for efficiently and effectively responding to, investigating, and reporting information security incidents within an organization. The incident management program defines the policies, processes, procedures, and resources required to prepare for and prevent incidents; detect, report, and analyze possible or known incidents; contain and eradicate discovered incidents; recover from incidents; and apply process improvements based on lessons learned from incidents.

Policy & Procedure Development & Training - Develops security policies, procedures and training to translate the organization's values into operation, ensure compliance with legal and statutory requirements and provide the framework for action.

Privacy - The application of appropriate safeguards to protect against and mitigate the risks associated with the unauthorized use or disclosure of an individual's private and personally identifiable information in accordance with applicable laws, policies, regulations and guidelines.

Security Compliance - Ensure compliance with all security and privacy laws, regulations, rules, and standards specific to and governing the administration of their programs.

Security Engineering and Architecture - The design, architecture and implementation application of security principles, policies, controls, and procedures to design, architect, and implement systems with the focus on protecting the assets within the system.

Security Operations - The ongoing application of principles, policies and procedures to maintain, monitor, control, and protect cyber infrastructure in order to ensure the confidentiality, integrity and availability of production systems and applications.

Security Risk Management - Risk management, incorporates threat and vulnerability analyses and considers mitigations provided by security controls planned or in place to protect the mission, functions, image, or reputation of the organization.

Security Testing & Assessment - Evaluations and validations of the effectiveness of an organization's security controls, including but not limited to those that pertain to all operations, projects, programs, networks, and systems.

IT PROJECT MANAGEMENT
The management or oversight of all phases of the project management and system development life cycles to ensure efficient and effective delivery of a unique IT product, service, or system. Major responsibilities in the IT Project Management Domain include:

Communications Management - Timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information. Communications must be accurate, forthright, timely, and properly distributed.

Contract Management – Development, monitoring, and management of one or more contracts for services or goods by ensuring that quality products and services are delivered in compliance with contractual terms and obligations.

Cost Management - Plan, estimate, budget, finance, fund, manage, and control costs so that the project can be completed within the approved budget.

Human Resource Management - Plan, organize, manage, train, document, and lead the project team. Adhere to organizational values, policies, guidelines, and procedures. Determine roles and responsibilities, reporting relationships, and staffing management.

Integration Management - The processes and activities needed to identify, define, combine, unify, and coordinate the various project processes and activities.

Organizational Change Management - Work closely with teams and organizations as part of a planned transition to a desired future state. Use industry standard Organizational Change Management methodologies and techniques to perform defined activities and tasks.

Planning - Create and document a forecast, or estimate, of how resources will be applied to tasks resulting in goods and services which fulfill project goals and objectives.

Portfolio Management - The coordinated management of multiple projects that make up the organizational portfolio to achieve specific organization objectives. Provides a governing body the opportunity to make decisions that control or influence the direction and achieve specific outcomes. Tools and techniques are used to identify, select, prioritize, govern, monitor, and report the contributions of the components to, and their relative alignment with, organization objectives.

Process Engineering / Reengineering - Understand, facilitate and communicate changes to processes to deliver desired value and goals of the business. Use industry standard methodologies to perform process analysis and to achieve project objectives.

Procurement Management - Determine and manage the best procurement approach to efficiently purchase or acquire products or services.

<u>Quality Management</u> - The processes and activities needed to ensure that project products and artifacts meet pre-defined standards or metrics including proactively establishing quality standards and monitoring project processes and activities for quality outcomes.

<u>Risk Management</u> - The processes that identify, assess, mitigate, and prioritize unforeseen events or conditions that could impact the schedule, cost, scope or quality of project outcomes.

<u>Scope Management</u> - The processes required to ensure that a project only includes the work required to successfully deliver the intended product, service or result with the specified features and functions. This includes controlling changes to the project scope.

<u>Stakeholder Management</u> - Identify the people, groups, or organizations that could impact or be impacted by the project. Analyze stakeholder expectations and their impact on the project. Develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution.

<u>Time/Schedule Management</u> - The processes required to define and sequence the tasks and resources necessary to execute and manage the timely completion of the project.

SOFTWARE ENGINEERING
The architecture, development, operation, and maintenance of software systems including user research, user centric design, development or configuration, testing, and implementation of the business application services. Major responsibilities in the Software Engineering Domain include:

<u>Data Administration</u> - Manage data functions, including: define, extract, transform, load, sync, and archive data.

<u>Data Architecture</u> - Analyze business information and develop standards, analytics, data models, and conceptual database designs. Governing methods in which data is collected, stored, arranged, integrated, and utilized in data systems and organizations.

<u>Database Development</u> - Develop database strategy, structure, system monitoring, performance, capacity, and planning for expansion requirements.

<u>Product Management</u> - Manage lifecycles associated with IT products using tools and techniques for deployment, release planning, documentation, and maintenance of software and systems.

<u>Quality Assurance </u>- Work to minimize defects in IT products while delivering quality solutions and services.

<u>Software Architecture </u>– Design standards and high level structures for software systems.

<u>Software Development</u> - Gather, document, and analyze technical requirements and specifications using best practices/methodologies to develop detailed software designs. Program, document, test, and maintain software in accordance with requirements.

<u>Software Integration</u> - Combine software and system components, while ensuring interoperability and efficiency.

SYSTEM ENGINEERING

The architecture, design, configuration, operation, and maintenance of systems. Discovery plan, design, configure, administer, and sustain operation of a defined system. System elements can include network, server, storage, operating system, database, program, hardware, and software. Major responsibilities in the System Engineering Domain include:

Database Administration - Monitor the execution environment (operating system to the hardware) the database is in, system monitoring and improve database structure, performance, and capacity, and planning for future expansion requirements. The function of managing and maintaining database management systems software.

Enterprise Architecture - Hardware/software standards, bridging the gap between business needs and business systems, portfolio management, and rules for integrating outside programs.

Identity Management - Services that relate to authentication (who you are), audit control (what you did), and access (what you can have access to).

Network Architecture - A framework for the specification of a network's physical components and their functional organization and configuration, its operational principles and procedures, as well as protocol formats used in its operation.

Network Operations - Monitor and control, or network management, exercised over a computer, communication, messaging or satellite network.

Solution Design - Examine the business requirements and then define how the IT solution would address those requirements. (One of the functions of Enterprise Architecture)

Storage - Store data in electromagnetic or other forms for use by a computer or device. (Includes backup and recovery)

System Administration - May acquire, install, or upgrade computer components and software; provide routine automation; maintain security policies; troubleshoot; upkeep, configuration, and reliable operation of computer systems; especially multi-user computers, such as servers, clouds. Ensures that the uptime, performance, resources, and security meet the needs of the users.

System Architecture - Defines the architecture of a system composed of software and hardware in order to fulfill requirements. Optimization of the entire computing infrastructure – processing, storage, and network resources.

System Integration - The process of bringing together the component subsystems into one system and ensuring that the subsystems function together as a system.

Virtualization - Refers to the act of creating a virtual version of something, including virtual computer hardware platforms, operating systems, storage devices, and computer network resources.

The nine classifications typically perform duties in the following domains:

Proposed IT Structure	Business Technology Management	Client Services	Software Engineering	Information Security	IT Project Management	System Engineering
Information Technology Manager II						
Information Technology Manager I						
Information Technology Supervisor II						
Information Technology Supervisor I				Not Typical	Not Typical	Not Typical
Information Technology Specialist III	Not Typical	Not Typical				
Information Technology Specialist II	Not Typical	Not Typical				
Information Technology Specialist I						
Information Technology Associate				Not Typical	Not Typical	Not Typical
Information Technology Technician				Not Typical	Not Typical	Not Typical

VARIETY AND SCOPE OF RESPONSIBILITY

The number of tasks which make up a position. As the level of difficulty of the tasks making up the combination increases, variety and number may become less significant.

Information Technology Technician

The Technician level is very limited in scope. Typically, work performed at this level is to facilitate the work of others with limited impact beyond the immediate organizational unit or timely delivery of limited services. The Technician level performs tasks which are largely routine and predictable and provides a broad foundation of general and technological knowledge.

Typical tasks performed within each domain may include:

Business Technology Management	• Notify appropriate parties of any actual or suspected compromise of personal, sensitive, and confidential information. • Analyze information and evaluate results to choose the best solution and solve problems. • Ensure the maintenance and operations procedures and processes are documented and in place to support production systems. **Not Tech** • Receive IT assets, validate assets against purchase invoice and complete IT assets stock received reports.
Client Services	• Install or repair hardware, or peripheral equipment • Deploy desktop images. • Develop Client Services documentation. • Ensure software/hardware complies with security policies. • Manage client technology asset inventories. • Perform user account management. • Resolve and respond to client incidents or requests. • Configure and/or modify software programs. • Perform end-of-life assets management. • Troubleshoot, track, and conduct root cause analysis of system/database/operational issues utilizing standard procedures until resolved or escalated. • Provide consultation, resources, reference material, technical assistance, and training to the organization on all applicable State, Federal, and standards, rules, regulations, and public laws.
Software Engineering	• Monitor IT systems using modelers, profilers, scripts, log outputs, and automated testing tools to ensure integrity and tune the system to meet performance requirements. • Perform data import and export activities. • Troubleshoot software system issues to identify causes of IT system failures and service interruptions using monitors, logs, user input, debugging processes, etc., to restore normal operations.

Information Security Engineering	Work in this domain is not typical at this level.
IT Project Management	Work in this domain is not typical at this level.
System Engineering	Work in this domain is not typical at this level.

Information Technology Associate
The work performed at the Associate level affects the design or operation of systems, programs, or equipment and affects a wide range of established activities, major activities of organizational concerns, or the operation of other organizations. The scope of the Associate is broad, commensurate with the breadth and depth of general and technical competencies. The Associate level is responsible for a definable portion of a project, or client services function and involves working on a piece of a plan or project from beginning to end. Assignments at this level involve multiple tasks, single significant functions, or multiple functions and may impact many users or customers at many locations.

Typical tasks performed within each domain may include:

Business Technology Management	• Analyze, develop and document business and technical requirements for technology solutions and enablers. • Formulate, analyze, and recommend policies, procedures, guidelines and standards to provide a common framework for technology governance utilizing various assessment, outreach and communication methods. • Track, monitor, and audit IT assets to maintain accountability using standard asset management tools and techniques in compliance with SAM and other applicable policies and regulations. • Analyze, develop and document business processes utilizing industry best practices and standard methodologies. • Formulate, deliver, and coordinate education and communication to optimize the use of applied technologies using various instructional aids and communication media. • Implement policies, procedures, guidelines and standards to ensure compliance with State and departmental rules and regulations utilizing various defined technology governance processes. • Coordinate project activities with other personnel or departments. • Schedule and facilitate meetings related to IT projects. • Manage and perform IT procurement and purchasing activities.
Client Services	• Conduct end user training related to client technologies. • Configure, deploy, and maintain end-user devices. • Develop end-user training for applications or end-user devices. • Install, configure, maintain, and troubleshoot desktop and mobile applications.

	• Perform problem and incident management related to client technologies. • Recommend incident control/problem management process improvements. • Conduct research and analysis of new client technologies. • Analyze data to identify trends or relationships among variables. • Install, configure, and/or maintain systems. Document design specifications, installation instructions, and other system-related information. • Install or repair hardware or peripheral equipment. • Test, maintain and deploy desktop images.
Software Engineering	• Gather, review, and document system requirements and specifications to ensure alignment with functional and non-functional requirements • Document design specifications, installation instructions, and other system-related information. • Test software systems using test cases and test data to meet defined functional and non-functional requirements. • Monitor Mission Critical and/or large complex IT systems using modelers, profilers, scripts, log outputs, and automated testing tools to ensure integrity and tune the system to meet performance requirements, • Code software components using industry standards and methodologies which adhere to organizational enterprise architecture standards. Ensuring secure, reliable, and accessible solutions. • Maintain software product documentation • Update standards, procedures and controls to ensure proper installation, configuration, maintenance, security, reliability, and availability of systems/databases.
Information Security Engineering	Work in this domain is not typical at this level.
IT Project Management	Work in this domain is not typical at this level.
System Engineering	Work in this domain is not typical at this level.

Information Technology Specialist I
The Specialist I demonstrates full competence in a specialized analytical role at this level of proficiency. The Specialist I take technical accountability for work done and decisions taken. The ability to give technical or team leadership is demonstrated with a high degree of technical versatility and broad industry knowledge. Work performed at the Specialist I level involves isolating and defining unknown conditions, using technologies to resolve critical problems, and developing new application of existing technologies. Work performed at the Specialist I level affects the work of other experts, the development of major aspects of technology projects, programs or missions, or the products and services of substantial numbers of users.

Work at this level is not domain specific and may be performed in various domains.
Typical tasks performed within each domain may include:

Business Technology Management	• Formulate business cases, feasibility studies and research analysis reports related to technology endeavors. • Provide IT consultation to business community to support business programs. • Coordinate and consult with users, administrators, and engineers to identify business and technical requirements for proposed system modifications or technology requirements.
Client Services	• Provide metrics on services to support service level agreements. • Install or repair hardware, or peripheral equipment. • Develop, implement, and maintain training. • Review data sharing agreements prior to release of confidential information. • Create, test, maintain, and deploy desktop images.
Software Engineering	• Perform software product deployment and release management activities. • Define and design software solutions using specification development industry standards and methodologies. • Design, develop, and implement software that adheres to organizational enterprise architecture ensuring secure, reliable, and accessible solutions. • Develop and maintain software documentation for each phase of the systems development life cycle to ensure maintainability. • Develop and maintain software product documentation. • Develop plans to execute IT systems relating to design, coding, testing, defect management, system integration, implementation, and documentation of software components by outlining tasks, and developing timelines and schedules. • Develop, update, and implement standards, procedures, and controls to ensure proper installation, configuration, maintenance, security, reliability, and availability of systems/databases.
Information Security Engineering	• Develop and/or review data sharing agreements prior to release of confidential information. • Investigate and report security incidents. • Analyze business impact and exposure, based on emerging security threats, vulnerabilities and risks to recommend IT solutions.
IT Project Management	• Monitor or track project milestones and deliverables to ensure that the project deliverables are on time, within budget and at the required level of quality. • Apply industry standards, principles, methods, and techniques to manage a project through all phases of the Project Management and System Development Life Cycles. • Create a detailed work plan which identifies and sequences the activities

	needed to successfully complete the project.
	• Define the scope of the project in collaboration with senior management.
	• Develop a schedule for project completion that effectively allocates the resources to the activities.
	• Develop and sustain cooperative working relationships with project stakeholders through all project phases.
	• Develop time and cost estimates and capture actual data for analysis and management.
	• Document lessons learned and Post Implementation Evaluation Reports.
	• Evaluate, monitor, and ensure compliance with laws, regulations, policies, standards, or procedures.
	• Keep abreast of changes in industry practices, technology trends, and emerging technology trends by reviewing current literature, talking with colleagues, participating in educational programs, attending meetings or workshops, or participating in professional organizations or conferences.
	• Lead and/or direct the documentation of business processes or operational activities.
	• Manage or oversee all aspects of one or more projects, including people, resources, and schedules.
	• Manage single or multiple projects ranging in complexity based on business and technical factors.
	• Meet regularly with the project team (state and vendor), project sponsor, project steering committee, governance, directorate, control agencies, and other external stakeholders to review project progress, discuss outstanding project issues and mitigation strategies, and communicate upcoming project activities.
	• Monitor the progress of the project and make adjustments as necessary to ensure the successful completion of the project.
	• Prepare project status reports by collecting, analyzing, and summarizing information and trends.
	• Review the quality of the work completed with the project team on a regular basis to ensure that it meets the project standards.
System Engineering	• Advise, create, or participate in the design of new system architecture, standards, and methods to support organizational needs. • Conduct research and perform analysis to recommend system upgrades, cost-effective solutions, and process improvements to meet current and future needs. • Consult with stakeholders to identify infrastructure system requirements and recommend technology, hardware, software, and plans installation. • Coordinate system installation, operations, maintenance, repairs, and/or upgrades. • Execute test plans for system upgrades or releases. • Install, configure, administer, test, and maintain communication infrastructure systems. • Troubleshoot, track, and conduct root cause analysis of system/database/operational issues utilizing standard procedures until resolved or escalated.

Information Technology Specialist II
The Specialist II clearly demonstrates team leadership competencies and models the organization values. The Specialist II responsibilities include project management or consultant or advisor where the implementation of advice or plans proposed have significant impact on the organization's business success. The Specialist II has defined responsibility and authority for decision making. Work performed at this level involves planning, developing, and implementing technological solutions that are essential to the mission of the overall organization or affect large numbers of users on a long-term or continuing basis.

Typical tasks performed within each domain may include:

Business Technology Management	Work in this domain is not typical at this level.
Client Services	Work in this domain is not typical at this level.
Software Engineering	• Debug software using various programming tools and systematic debugging methods. • Design and implement system access controls to maintain system security in accordance with information security best practices and standard IT operating procedures. • Architect, design, develop, and implement software that adheres to organizational enterprise architecture ensuring secure, reliable, and accessible salutations. • Review software architecture and make recommendations regarding technical and operational feasibility. • Create, enhance, and maintain IT software solutions using various programming languages to meet department requirements and expectations with regards to efficiency and effectiveness. • Design and implement data models using system specifications and requirements to provide for efficient data storage and retrieval in accordance with best practices. • Design testing methods, validation procedures, and execution plans to evaluate software functionality. • Plan, design, and implement the enterprise data models using standardized modeling tools to align technology solutions with business strategies. • Plan, develop, and maintain data strategies to support business analysis. • Review software code to ensure compliance with defined standards.

Information Security Engineering	• Analyze business impact and exposure, based on emerging security threats, vulnerabilities and risks to recommend IT solutions. • Provide procedures for incident handling, particularly for analyzing incident-related data and determining the appropriate response. • Assess, develop, implement, and maintain a security and privacy training and awareness program, ensuring consistency with the organizations risk management strategy and priorities. • Categorize the information system and the information processed, stored, and transmitted by that system. • Design new technologies, architectures, and secure solutions that will support security requirements and align with strategic planning for the enterprise and its customers, business partners and vendors. • Develop and ensure security solutions and technical artifacts are in place throughout all IT systems and platforms. • Develop and maintain the IT Contingency Planning Program including preliminary planning, business impact analysis, alternate site selection, recovery strategies, training and exercising to work within the overall Business Continuity Plan. • Monitor and assess security controls in the information system on an ongoing basis, documenting changes, conducting security impact analyses, and reporting system security statuses to the organization. • Perform vulnerability and risk assessments to identify security risks and recommend IT solutions.
IT Project Management	• Develop and manage work breakdown structure (WBS) of IT projects. • Develop or update project plans for IT projects including information such as project objectives, technologies, systems, information specifications, schedules, funding, and staffing. • Lead, mentor, and supervise project teams which may include business analysts, system engineers, system architects, subject matter experts, test coordinators, external entities, and users on the State and departmental project management methodologies to ensure project compliance with State policies. • Manage integration of information systems and/or subsystems. • Manage project(s) to ensure adherence to budget, schedule, and scope. • Perform risk assessments to develop response strategies in order to control or reduce risk. • Determine the resources (time, money, equipment, staffing, etc.) required to complete the project. • Develop implementation plans that take into consideration analyses such as cost-benefit or return on investment. • Direct the conduct of integrated change control. • Manage identification of infrastructure configuration and change management standards or requirements. • Manage or oversee all aspects of one or more IT projects applying industry standards, principles, guidelines, methods, techniques, using planning, monitoring, processes, and controlling principles tools to deliver an IT product, program solution, service, or system. • Prepare documentation using standard California Project Management

	Frameworks or Methodologies.
System Engineering	- Audit systems performance and serve as the escalation point for troubleshooting system components. - Contribute to the planning of the overall organizational IT strategy. - Communicate with stakeholders to determine organizational needs. - Create and implement backup and recovery strategies. - Conduct disaster and recovery analysis, planning, implementation, and administration for systems. - Provide system components capacity planning to ensure system sustainability. - Coordinate infrastructure system design, modification, upgrade, and implementation projects. - Develop and implement standards and controls that ensure the security, reliability, and availability of system components. - Monitor and conduct audits of system capacity, performance, and traffic analysis. - Perform configuration management and release management for system components. - Verify stability, interoperability, portability, security, or scalability of system architecture. - Design, implement, and maintain system architecture across multiple platforms to best align technology solutions with business strategies.

Information Technology Specialist III

The Specialist III possesses a wide and deep practical technical knowledge basis, which includes emerging, "cutting-edge" technologies. The Specialist III is recognized as an industry expert in their area of specialization. The Specialist III exhibits a mastery level of team leadership qualities and plays a major part in formulating technological strategy and policy. The Specialist III has extensive decision-making authority and directs the most critical/complex projects. The responsibilities at this level include development of enterprise architecture, providing strategic and tactical technical direction, and cross-domain expertise at a deep technical level.

Typical tasks performed within each domain may include:

Business Technology Management	Work in this domain is not typical at this level.
Client Services	Work in this domain is not typical at this level.
Software Engineering	- Design and implement system access controls to maintain system security in accordance with information security best practices and standard IT operating procedures. - Review software architecture and make recommendations regarding technical and operational feasibility. - Create, enhance, and maintain IT software solutions using various programming languages to meet department requirements and

	expectations with regards to efficiency and effectiveness. • Design and implement data models using system specifications and requirements to provide for efficient data storage and retrieval in accordance with best practices. • Design testing methods, validation procedures, and execution plans to evaluate software functionality. • Plan, design, and implement the enterprise data models using standardized modeling tools to align technology solutions with business strategies. • Plan, develop, and maintain data strategies to support business analysis. • Review software code to ensure compliance with defined standards.
Information Security Engineering	• Research and document cyber security defense techniques, guidance, and threats in order to proactively prepare for and prevent future incidents. • Advise the organization of its compliance status and make recommendations for courses of action to establish and ensure compliance. • Assess and Implement the security controls and describe how the controls are employed within the information system and its environment of operation. • Perform incident handling tasks (e.g., triage, forensic collections, intrusion correlation and tracking, threat analysis, and remediation) to take action against a cyber-security threat using cyber-security tools and analysis. • Provide consultation and expertise in multiple IT domains to ensure compliance with enterprise and IT security policies, industry regulations, and best practices.
IT Project Management	• Conduct presentations or briefings on aspects of the project(s) to executive team. • Negotiate with project stakeholders or suppliers to obtain resources or materials.
System Engineering	• Architect, design, implement, and maintain system architecture across multiple platforms to best align technology solutions with business strategies. • Perform IT asset analysis to evaluate and plan for future departmental needs using analytical tools and techniques per departmental policies and vendor support guidelines.

Information Technology Supervisor I

The Supervisor I supports performance management of IT staff. The Supervisor I ensures staff are meeting service level agreements and adhering to standard processes and procedures. The Supervisor I performs procurement and administrative functions. The Supervisor I provides training to staff, oversees short term functions (i.e.: upgrading desktops), provides progress updates toward strategic objectives, and supervises day-to-day operations.

Typical tasks performed within each domain may include:

Business Technology Management	• Maintain contract and purchase documentation related to IT goods and services in order to provide traceability and transparency using standard record management techniques and processes. • Develop, document, disseminate and update the policies and procedures which address effective governance and compliance of the organization's business and security programs. • Coordinate recruitment or selection of project personnel. • Determine the objectives and measures upon which the project will be evaluated at its completion. • Direct and/or conduct procurement planning and management. • Document findings of studies and prepare recommendations for implementation of new systems, procedures, or organizational changes. • Establish and execute a project communication plan. • Provide leadership, guidance, training, and support to project team members on the use of project and portfolio management methodologies, tools and methods. • Direct or coordinate duties, responsibilities, and spans of authority to project personnel. • Identify and analyze possible technology enablers to enhance business performance using industry best practices and standard methodologies. • Develop procurement solicitation documentation to acquire IT goods and services. • Formulate and perform organization change management to facilitate the acceptance and use of applied technologies utilizing various assessment, outreach, communication and education methods. • Perform IT compliance review to develop gap analysis recommendations utilizing standard analysis and auditing techniques per vendor requirements and State, departmental and other applicable government policies and regulations. • Provide input to the development, administration, and execution of Disaster Recovery Plans to protect State resources and continue to provide critical IT services in the event of a disaster, in compliance with State mandates. • Support compliance reviews performed by external entities to ensure adherence to State and departmental laws and regulations.
Client Services	• Provide metrics on services to support service level agreements. • Coordinate the implementation of security and privacy controls across multiple IT disciplines. • Develop, test, and implement counter cyber security measures to adapt to security threats. • Formulate materials related to technical operational procedures to sustain operations using industry standard techniques mandated by State, departmental and other applicable governmental policies and regulations.
Software Engineering	• Develop and modify technical specifications for software using standardized processes and stakeholder input, ensuring adherence to quality standards and procedures.

	• Test new database structures and database structural changes, using test case scenarios to ensure they meet business requirements, system requirements, and system specifications.
Information Security Engineering	Work in this domain is not typical at this level.
IT Project Management	Work in this domain is not typical at this level.
System Engineering	Work in this domain is not typical at this level.

Information Technology Supervisor II

In addition to the variety and scope of the Information Technology Supervisor I, the Supervisor II is responsible for supervising multiple operational groups. This level serves as second level manager over operational areas and contributes to workforce planning, budgeting, succession planning; multiple day-to-day operations in a single or multiple domains.

Typical tasks performed within each domain may include:

Business Technology Management	• Participate in vendor/product solution evaluation and selection. • Identify, document and monitor defined service levels and performance management standards to measure the performance and effectiveness of technology services using tools and methodologies. • Perform contract management to ensure the terms and conditions are met. • Perform vendor management to ensure the delivery of IT goods and services using applicable verification techniques in accordance with Contract terms, conditions and requirements. • Process procurement requests to acquire IT related goods and services. • Provide technology procurement oversight to verify compliance with IT policies and standards in compliance with State and departmental rules and regulations. • Mange IT hardware and software assets and coordinate their lifecycle through ITAM (IT Asset Management) standards.
Client Services	No domain specific tasks identified.
Software Engineering	No domain specific tasks identified.
Information Security Engineering	• Develop and maintain a monitoring, auditing, and feedback systems that ensure compliance and security of the organizations information assets. • Develop and maintain the Privacy Program including policies, standards, principles, practices and procedures, tools and training. • Review security logs, reports, and assessments to determine organizational compliance with policies and requirements and makes recommendations to improve the overall security.
IT Project Management	• Assess, evaluate, and audit the effectiveness of existing asset management security controls.

	• Direct project close out functions. • Work with Project Management Office (PMO) to ensure compliance to PMO standards. • Direct all stages of the Project Approval Lifecycle. • Direct the development of project feasibility analyses. • Manage and/or coordinate administrative functions including purchasing, budgeting, accounting, facilities, business services, Human Resources, etc.
System Engineering	• Develop scope of work and provide cost analysis and estimates for IT acquisitions.

Information Technology Manager I

In addition to the scope of Information Technology Supervisors, the Manager I manage multiple domains or disciplines; develops performance metrics; performs budgeting, contract management, policy formulation, and resource management; establishes service levels; and develops performance metrics over a single or multiple domains.

Typical tasks performed within each domain may include:

Business Technology Management	• Formulate, analyze, and make recommendations on the impact of legislation and plan for its implementation under the direction of State, departmental and other applicable government policies and regulations. • Facilitate IT strategic planning sessions and workshops.
Client Services	No domain specific tasks identified.
Software Engineering	• Develop and analyze performance and capacity reports related to software solutions to optimize efficiency.
Information Security Engineering	• Plan, develop, and document security testing and assessment policies, requirements, methodologies, and frequencies. • Develop and maintain asset management security controls throughout the lifecycle for all information assets. • Review and disseminate security related intelligence.
IT Project Management	• Guide the development and elaboration of plans and artifacts to obtain internal and external project approval. • Assist with metric collection and Project Portfolio analysis, project risk analysis, and project lessons learned collection and improvements. • Direct and/or manage the development and implementation of IT systems security plans and procedures. • Work with control agencies to comply with state administrative requirements.
System Engineering	No domain specific tasks identified.

Information Technology Manager II

In addition to Information Technology Supervisors and Information Technology Managers I, the Manager II develops policy and strategic plans; establishes strategic goals and longer range planning; and determines new enterprise-wide direction and policy decisions.

Typical tasks performed within each domain may include:

Business Technology Management	• Develop and maintain IT procurement related statistical reports to meet external reporting requirements in accordance with state regulation and policies. • Formulate, analyze, and make recommendations on the impact of legislation and plan for its implementation under the direction of State, departmental and other applicable government policies and regulations. • Facilitate IT strategic planning sessions and workshops.
Client Services	No domain specific tasks identified.
Software Engineering	No domain specific tasks identified.
Information Security Engineering	• Plan, develop, and document security testing and assessment policies, requirements, methodologies, and frequencies. • Consult with and advise other organizational entities related to the release of public records and data. • Review and disseminate security related intelligence.
IT Project Management	• Testify before committees, control agencies, review boards, and/or the legislature. • Assist with metric collection and Project Portfolio analysis, project risk analysis, and project lessons learned collection and improvements. • Direct and/or manage the development and implementation of IT systems security plans and procedures. • Work with control agencies to comply with state administrative requirements.
System Engineering	No domain specific tasks identified.

SUPERVISION AND GUIDELINES RECEIVED

A measurement of the extent to which tasks performed, actions taken, and decisions made are controlled or limited by supervision or by established law, policy, procedures, guidelines, or technical practices.

Information Technology Technician

This level receives clear, detailed, and specific instructions and understands what generally needs to be done, limitations, quality and quantity expected, deadlines, and priority of assignments. Uses initiative in carrying out recurring assignments independently without specific instruction. Work is closely reviewed and independence of action is limited. Refers deviations, problems, and unfamiliar situations not covered by instructions to the supervisor for decision or help. Works in strict adherence to the guidelines. Procedures have been established and guidelines available. Functions effectively across tasks using available tools, methodologies

and/or equipment without frequent reference to others. Situations in which the existing guideline cannot be applied, or significant proposed deviations from the guideline, are referred to the supervisor.

Information Technology Associate
This level receives generally defined objectives, priorities and deadlines, and assistance in unusual situations that do not have clear precedents within a clear accountability framework. Service level objectives are clearly defined and rigorous. Plans, executes, and handles problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices. Determines which of several established available alternatives/guidelines to use. Uses applicable methods procedures and standards effectively. Guidelines are available, but are not completely applicable to the work or have gaps in specificity. Uses judgment in interpreting and adapting guidelines such as policies, operations manuals, and work directions for application to specific cases or problems.

Information Technology Specialist I
This level receives direction with assignments in terms of broadly defined missions or functions. Plans, designs, and executes programs, studies, and other work independently. If the work should be reviewed, the review concerns such matters as fulfillment of program objectives, effect on the overall program, or the contribution to the advancement of technology. Administrative and technical policies and precedents are applicable, but are stated in general terms. Guidelines for performing the work are scarce or of limited use. Uses judgment and ingenuity in interpreting the intent of the guidelines that do exist and in developing applications to specific areas of work. Frequently recognized as a technical authority in the development and interpretation of guidelines. Recommendations for new project and alteration of objectives are usually evaluated for consideration of fund or other resources availability and broad program goals or priorities.

Information Technology Specialist II
This level receives broad administrative and policy direction and requires little or no direct supervision. Guidelines for performing the work are scarce or of limited use. Guidelines are broadly stated and nonspecific, such as broad policy statements requiring extensive interpretation. Uses initiative and resourcefulness in deviating from traditional methods or in researching emerging technologies to develop new methods, criteria, and/or new policies. Function as specialized consultant or advisor where the implementation of advice on plans proposed has a major impact on the effective use of IT in a significant undertaking. Plays a major role in the development and interpretation of guidelines that are often used to formulate strategy and policy across the organization.

Information Technology Specialist III
This level receives broad administrative and policy direction and requires little or no direct supervision. Guidelines for performing the work are scarce or of limited use. Uses initiative and resourcefulness to align the technical environment with strategic business needs. Functions as specialized consultant or advisor where the implementation of advice on plans proposed has a major impact on the effective use of IT in a significant undertaking. Plays a major role in the development and formation of policy, practices, and standards related to enterprise technology.

Information Technology Supervisor I
This level receives generally defined objectives, priorities and deadlines, and assistance in unusual situations that do not have clear precedents within a clear accountability framework.

Plans, executes, and handles problems and deviations in the work assignment in accordance with instructions, policies, previous training, or accepted practices.

Information Technology Supervisor II
This level receives administrative direction with assignments in terms of broadly defined missions or functions. Independently plans, designs, and executes programs, studies, and other work. If the work should be reviewed, the review concerns such matters as fulfillment of program objectives, effect on the overall program, or the contribution to the advancement of technology. Recommendations for new project and alteration of objectives are usually evaluated for consideration of fund or other resources availability and broad program goals or priorities.

Information Technology Manager I
This level receives broad administrative and policy direction and requires little or no direct supervision.

Information Technology Manager II
This level receives broad administrative and policy direction and requires little or no direct supervision.

SUPERVISION EXERCISED
A measurement of the nature and extent of the position's authority and responsibility for supervision of the other employees' work. This is reflected by the scope and variety of activities covered, the amount of planning, organizing, directing, assigning work, instructing, training, and disciplining of employees required. The number and level of employees supervised may be used as a guide to differentiate between different supervisory levels.

The number of long-term contract personnel overseen or directed may be a factor in determining classification levels.

Information Technology Technician
This level does not supervise.

Information Technology Associate
This level does not supervise.

Information Technology Specialist I
This level does not supervise, but may lead. The Specialist I has defined responsibility and authority for decision making related to projects or in an advisory function.

Information Technology Specialist II
This level does not supervise, but may lead. The Specialist II has defined responsibility and authority for decision making related to projects or in an advisory function.

Information Technology Specialist III
This level does not supervise, but may lead. The Specialist III provides technical and project management leadership. This level does not provide day-to-day operational management or supervision. The Specialist III has defined responsibility and authority for decision making related to projects or in an advisory function.

Information Technology Supervisor I
This level supervises at least three subordinate staff in the Information Technology Technician and/or Information Technology Associate classifications. Assures that finished work and methods used are technically accurate and in compliance with instructions, procedures, and policy. Reviews and directs staff work. Makes assignments by generally defining objectives, priorities, and deadlines.

Information Technology Supervisor II
This level supervises at least three subordinate staff in the Information Technology Technician, Information Technology Associate, Information Technology Specialist I, and/or Information Technology Supervisor I classifications. Provides administrative direction on assignments in terms of broadly defined missions or functions.

Information Technology Manager I
This level supervises a number of subordinate staff in the Information Technology Supervisor I, Information Technology Supervisor II, and/or Information Technology Specialist II classifications. Provides general administrative direction concerning assignments.

Information Technology Manager II
This level supervises subordinate staff in the Information Technology Supervisor I, Information Technology Supervisor II, Information Technology Manager I, and/or Information Technology Specialist III classifications. Provides general administrative direction concerning assignments.

COMPLEXITY OF WORK
Complexity of work elements are:
- status of work or state of development of problem when first presented to employee;
- selection of assignments for employee;
- analytical and problem solving requirements;
- the extent to which plans or actions must be initiated, developed, or decided upon by the employee; and
- variety and scope of work.

Information Technology Technician
Work at this level is routine in nature. Problems are fully developed and solutions are clearly defined. Tasks are process driven, limited in scope, and duration. The decision regarding what needs to be done involves various choices requiring the incumbent to recognize the existence of and differences among a few easily recognizable situations.

Information Technology Associate
Work at this level is generally routine in nature. The work includes various analytical duties involving different and unrelated processes and methods. Problems are fully developed and solutions are not clearly defined. The decision regarding what needs to be done depends upon the analysis of the subject, phase, or issues involved in each assignment, and the chosen course of action may have to be selected from many alternatives. Multiple tasks and deadlines become the routine. Work will also involve being familiar with the implication and uses of new technologies.

Information Technology Specialist I
Work at this level requires many different and unrelated processes and methods applied to a broad range of activities or substantial depth of analysis. The work requires originating new

techniques, establishing criteria, or developing new information within established parameters. The work also involves demonstrating leadership in identifying new issues and business opportunities and in assisting management with the most sensitive issues. Incumbents demonstrate an in-depth understanding of the relationship of their technical specialization and/or project responsibilities to the work as a whole. Incumbents are able to propose technical solutions within their scope of expertise which take into account the customer's business needs.

Information Technology Specialist II
Work at this level requires many different and unrelated processes and methods applied to a broad range of activities or substantial depth of analysis. Assignments require an advanced level of organizational understanding and support of innovative technical pursuits. Decisions regarding the work to be done include largely undefined issues and elements. The work requires extensive probing and analysis to determine the nature and scope of the problems and continuing efforts to establish concepts, theories, or programs; or to resolve problems generally without established guidance. Incumbents demonstrate all the necessary qualities of effective project or function leadership and play a key role in the success in the department's use of IT and to the business as a whole. Incumbents also possess the general and technical competencies needed to train/mentor organization staff and customers in a complex technical area or process.

Information Technology Specialist III
Work at this level requires continuing efforts to discover concepts and theories for enterprise architecture. Assignments require an advanced level of organizational understanding to bridge the strategic intent and practical technical application. Use master level knowledge and skills in one or more specific future technology, trends, technical components, interfaces, protocols, and architectures. Advise management on formulating IT strategy, policy, and governance throughout the organization and enterprise-wide. Work will span multiple disciplines to ensure the integration and interoperability of multiple architectural platforms and systems; to build technology blueprint for current and future organizational business needs; and to provide scalable architecture, solution, and design. Meets with executive level stakeholders to understand business constraints.

Information Technology Supervisor I
Work at this level is generally routine in nature. The work includes various analytical duties involving different and unrelated processes and methods. Problems are fully developed and solutions are not clearly defined. The decision regarding what needs to be done depends upon the analysis of the subject, phase, or issues involved in each assignment, and the chosen course of action may have to be selected from many alternatives. Multiple tasks and deadlines become the routine for this level. Work will also involve being familiar with the implication and uses of new technologies.

Information Technology Supervisor II
Work at this level requires many different and unrelated processes and methods applied to a broad range of activities or substantial depth of analysis. The work requires originating new techniques, establishing criteria, or developing new information within established parameters. The work also involves demonstrating leadership in identifying new issues and business opportunities and in assisting management with the most sensitive issues. Incumbents demonstrate an in-depth understanding of the relationship of their technical specialization and/or project responsibilities to the work as a whole. Incumbents are able to propose technical solutions within their scope of expertise which take into account the customer's business needs.

Information Technology Manager I
Work at this level requires many different and unrelated processes and methods applied to a broad range of activities or substantial depth of analysis. Assignments require an advanced level of organizational understanding and support of innovative technical pursuits. Decisions regarding the work to be done include largely undefined issues and elements. The work requires extensive probing and analysis to determine the nature and scope of the problems and continuing efforts to establish concepts, theories, or programs; or to resolve problems generally without established guidance. Incumbents demonstrate all the necessary qualities of effective project or function leadership and play a key role in the success in the department's use of IT and to the business as a whole. Incumbents also possess the general and technical competencies needed to train/mentor organization staff and customers in a complex technical area or process.

Information Technology Manager II
Work at this level requires continuing efforts to discover concepts and theories for enterprise architecture. Assignments require an advanced level of organizational understanding to bridge the strategic intent and practical technical application. Exercise master level knowledge and skills in one or more specific future technology, trends, technical components, interfaces, protocols, and architectures. Advise management on formulating IT strategy, policy, and governance throughout the organization and enterprise-wide. Work will span multiple disciplines to ensure the integration and interoperability of multiple architectural platforms and systems; to build technology blueprint for current and future organizational business needs; and to provide scalable architecture, solution, and design. Meets with executive level stakeholders to understand business constraints.

RESPONSIBILITY FOR DECISIONS AND ACTIONS
A measurement of the nature and extent of the position's authority and responsibility for recommendations, decisions, commitments, or actions. Subject matter, nature of review, and result of error are considered in evaluating positions in this factor.

Information Technology Technician
At the Technician level, incumbents are responsible for individual decisions and actions.

Information Technology Associate
At the Associate level, incumbents are responsible for individual decisions and actions.

Information Technology Specialist I
At the Specialist I level, incumbents are responsible for individual decisions and actions. As a subject matter expert, this level is responsible for actions that could have a serious detrimental effect on the operating efficiency of the undertaking or function.

Information Technology Specialist II
At the Specialist II level, incumbents are responsible for independent work within business constraints. This level is responsible for the recommendations to executives, decisions for projects, and outputs. As a subject matter expert, this level is responsible for actions that could have a serious detrimental effect on the operating efficiency of the undertaking or function.

Information Technology Specialist III

At the Specialist III level, incumbents are responsible for independent work within business constraints. This level is responsible for the recommendations to executives, decisions for projects, and outputs. As a subject matter expert, this level is responsible for actions that could have a serious detrimental effect on the operating efficiency of the undertaking or function.

Information Technology Supervisor I

At the Supervisor I level, incumbents are responsible for independent work within business constraints. This level is responsible for the recommendations to executives, decisions for projects, and outputs. This level is also responsible for staff decisions and actions.

Information Technology Supervisor II

At the Supervisor II level, incumbents are responsible for independent work within business constraints. This level is responsible for the recommendations to executives, decisions for projects, and outputs. This level is also responsible for program, project, and staff decisions and actions.

Information Technology Manager I

At the Manager I level, incumbents are responsible for independent work within business constraints. This level is responsible for the recommendations to executives, decisions for projects, and outputs. This level is also responsible for program, project, and staff decisions and actions.

Information Technology Manager II

At the Manager II level, incumbents are responsible for independent work within business constraints. This level is responsible for the recommendations to executives, decisions for projects, and outputs. This level is also responsible for program, project, and staff decisions and actions.

PERSONAL CONTACTS/RELATIONSHIPS

This measures types of contact required (employee's own supervisor vs. department director or outside public officials); scope of the subject matter dealt with in the contacts (explaining straightforward procedures vs. negotiating procedures and policies); and the tact, poise, persuasiveness, skill required in the contact.

Information Technology Technician

Contacts are typically with employees within the immediate organization, office, project, or work unit, and related support units to solve problems and ensure conformity of methods and practices. Contacts can also be with vendors or customers in very highly structured situations to ask questions and get information on existing or new technologies. Daily contacts are made with users to answer questions, solve problems, and clarify instructions. Contact is to obtain, clarify, or give facts and information, which vary in nature. The facts and information range from easily understood to more highly technical.

Information Technology Associate

Daily contact is made with a wide range of users to provide technical information and solve problems. Routine contact with other IT staff, vendors, and external entities to coordinate problem solving methods, and practices. Contacts users and staff throughout the organization to discuss operational or business needs and system requirements; the role and authority of each is identified and developed during the course of the contact. The nature of personal contact is

not routine; the purpose and extent of each contact is different. Contact is to plan, coordinate, and advise on work efforts which resolve operating problems. Personal contact is to influence and motivate individuals working toward mutual goals with basic cooperative attitudes.

Information Technology Specialist I
Contacts managers, technical staff, and users to provide and make recommendations regarding systems and problems requiring solutions. Regular contact with IT staff, vendors, and external entities to coordinate problem solving and ensure conformity of methods and practices. Contacts users to discuss business and system requirements, contractors to provide oversight, and vendors to discuss existing or new technology. Contact is to influence, motivate, persuade, and lead individuals or groups.

Information Technology Specialist II
Contact with senior-level and high-level entities in unique situations where it can be difficult to establish the contact and identify goals. Consults with or advises management, administrative or executive staff on the planning, development, implementation, and coordination of IT issues. Frequent contact with vendors to assess new technologies and contractors to provide oversight, negotiate contract modifications, and analyze compliance with contract specifications. Contacts occur in conferences, meetings, hearing, or presentations involving problems or issues of considerable consequence or importance. Contacts typically have diverse goals, or objectives requiring common understanding of the problem and a satisfactory solution by convincing individuals, arriving at a compromise, or developing suitable alternatives. Contacts are to justify, defend, negotiate, or settle matters involving significant or controversial issues.

Information Technology Specialist III
Contact with senior-level and high-level entities in unique situations where it can be difficult to establish the contact and identify goals. Consults with or advises management, administrative or executive staff on the planning, development, implementation, and coordination of IT issues. Frequent contact with vendors to assess new technologies and contractors to provide oversight, negotiate contract modifications, and analyze compliance with contract specifications. Contacts occur in conferences, meetings, hearing, or presentations involving problems or issues of considerable consequence or importance. Contacts typically have diverse goals, or objectives requiring common understanding of the problem and a satisfactory solution by convincing individuals, arriving at a compromise, or developing suitable alternatives. Contacts are to justify, defend, negotiate, or settle matters involving significant or controversial issues.

Information Technology Supervisor I
Contacts managers, technical staff, and users to provide and make recommendations regarding systems and problems requiring solutions. Regular contact with IT staff, vendors, and external entities to coordinate problem solving and ensure conformity of methods and practices. Contacts users to discuss business and system requirements, contractors to provide oversight, and vendors to discuss existing or new technology. Contact is to influence, motivate, persuade, and lead individuals or groups.

Information Technology Supervisor II
Contact with senior-level and high-level entities in unique situations where it can be difficult to establish the contact and identify goals. Consults with or advises management, administrative or executive staff on the planning, development, implementation, and coordination of IT issues. Frequent contact with vendors to assess new technologies and contractors to provide oversight, negotiate contract modifications, and analyze compliance with contract specifications. Contacts

occur in conferences, meetings, hearing, or presentations involving problems or issues of considerable consequence or importance. Contacts typically have diverse goals, or objectives requiring common understanding of the problem and a satisfactory solution by convincing individuals, arriving at a compromise, or developing suitable alternatives. Contacts are to justify, defend, negotiate, or settle matters involving significant or controversial issues.

Information Technology Manager I
Contact with senior-level and high-level entities in unique situations where it can be difficult to establish the contact and identify goals. Consults with or advises management, administrative or executive staff on the planning, development, implementation, and coordination of IT issues. Frequent contact with vendors to assess new technologies and contractors to provide oversight, negotiate contract modifications, and analyze compliance with contract specifications. Contacts occur in conferences, meetings, hearing, or presentations involving problems or issues of considerable consequence or importance. Contacts typically have diverse goals, or objectives requiring common understanding of the problem and a satisfactory solution by convincing individuals, arriving at a compromise, or developing suitable alternatives. Contacts are to justify, defend, negotiate, or settle matters involving significant or controversial issues.

Information Technology Manager II
Contact with senior-level and high-level entities in unique situations where it can be difficult to establish the contact and identify goals. Consults with or advises management, administrative or executive staff on the planning, development, implementation, and coordination of IT issues. Frequent contact with vendors to assess new technologies and contractors to provide oversight, negotiate contract modifications, and analyze compliance with contract specifications. Contacts occur in conferences, meetings, hearing, or presentations involving problems or issues of considerable consequence or importance. Contacts typically have diverse goals, or objectives requiring common understanding of the problem and a satisfactory solution by convincing individuals, arriving at a compromise, or developing suitable alternatives. Contacts are to justify, defend, negotiate, or settle matters involving significant or controversial issues.

CONSEQUENCE OF ERROR
This evaluates the significance of an error, omission, or wrong decision in the carrying out of job duties.

Information Technology Technician
The consequence of error at the Technician level may result in loss of data, user dissatisfaction, and impact within the immediate organization, office, project, or work unit, and related support units.

Information Technology Associate
The consequence of error at the Associate level may result in loss of data, user dissatisfaction, and impact within the immediate organization, office, project, or work unit, and related support units.

Information Technology Specialist I
The consequence of error at the Specialist I level may result in loss of data, user dissatisfaction, and impact to the organization, project, or work unit, and related support units. Consequences include operational down time, loss of business continuity, and poor customer service and performance.

Information Technology Specialist II
The consequence of error at the Specialist II level may have statewide and enterprise-wide impacts. Consequences include lost funding, project failure, failed business strategy, poor customer service and performance, risk exposure, and loss of business continuity. Consequences also include error in making decisions or giving advice that would have a serious detrimental effect on the operating efficiency of the undertaking or function.

Information Technology Specialist III
The consequence of error at the Specialist III level may have statewide and enterprise-wide impacts. Consequences include lost funding, project failure, failed business strategy, poor customer service and performance, risk exposure, loss of business continuity, missed business opportunities, and budget implications. Consequences also include error in making decisions or giving advice that would have a serious detrimental effect on the operating efficiency of the undertaking or function.

Information Technology Supervisor I
The consequence of error at the Supervisor I level may result in loss of data, user dissatisfaction, and impact within the organization, office, project, or work unit, and related support units. Consequences include project failure, failed business strategy, poor customer service and performance, risk exposure, loss of business continuity, missed business opportunities, and budget implications.

Information Technology Supervisor II
The consequence of error at the Supervisor II level may have statewide and enterprise-wide impacts. Consequences include lost funding, project failure, failed business strategy, poor customer service and performance, risk exposure, loss of business continuity, missed business opportunities, and budget implications.

Information Technology Manager I
The consequence of error at the Manager I level may have statewide and enterprise-wide impacts. Consequences include lost funding, project failure, failed business strategy, poor customer service and performance, risk exposure, loss of business continuity, missed business opportunities, and budget implications.

Information Technology Manager II
The consequence of error at the Manager II level may have statewide and enterprise-wide impacts. Consequences include lost funding, project failure, failed business strategy, poor customer service and performance, risk exposure, loss of business continuity, missed business opportunities, and budget implications.

ADMINISTRATIVE RESPONSIBILITY
This measures the extent to which the position is involved in administrative tasks such as developing and monitoring program goals and objectives; developing and monitoring program budget; and performing personnel, contracts, and business services related activities.

Information Technology Technician
The Technician level does not have direct administrative responsibilities.

Information Technology Associate
The Associate level does not have direct administrative responsibilities.

Information Technology Specialist I
The Specialist I level does not have direct administrative responsibilities.

Information Technology Specialist II
The Specialist II level is responsible for project goals, objectives, budget, and contract management.

Information Technology Specialist III
The Specialist III level is responsible for project goals, objectives, budget, and contract management.

Information Technology Supervisor I
The Supervisor I level is responsible for monitoring program goals and personnel management and development activities.

Information Technology Supervisor II
The Supervisor II level is responsible for monitoring program goals and personnel management and development activities.

Information Technology Manager I
The Manager I level is responsible for developing and monitoring program goals, objectives, and budget. This level is responsible for the personnel development activities of personnel within the IT unit, contract negations, and business services.

Information Technology Manager II
The Manager II level is responsible for developing and monitoring program goals, objectives, and budget. This level is responsible for the personnel development activities of personnel within the IT unit, contract negations, and business services.

KNOWLEDGE, SKILLS, AND ABILITIES REQUIRED
A measurement of the knowledge, skills, and abilities which the individual must bring to the job. The subject matter of the work and the nature of the problems to be solved will indicate the educational background and the degree of mental agility, skill, and analytical ability needed.

Sample typical knowledge, skills, and/or abilities listed below.

Information Technology Technician

	Knowledge of:	Skill in/Ability to:
Business Technology Management	• IT concepts, practices, and principles to provide a foundation for technology related work. • principles, techniques, and procedures related to the delivery of IT services. • the organization's business processes and procedures.	• interpret and explain technical information to non-technical individuals in terms they can understand. • perform research and data gathering. • understand and align technology proposals with business needs. • understand and comply with State and departmental reporting guidelines.

	- the department's goals and policies. - the use of computers and productivity software including but not limited to word processing, spreadsheets, e-mail, and presentation preparation.	- understand and align technology proposals with business needs. - analyze information, reason logically and develop sound recommendations and conclusions.
Client Services	- basic networking and telecommunications systems including standards and protocols. - end-user device optimization and performance tuning methods. - end-user device technology, industry standards, and applicable usages. - IT Service Management processes. - principles and best practices for end-user device security. - common operating systems for various types of IT communication devices. - information classification requirements and methodology. - State and Federal regulations, policies and standards related to information security and privacy. - principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	- service management related to client technologies. - troubleshooting related to basic network and telecommunications connectivity and performance monitoring. - computing information system devices such as servers, storage devices, and network devices. - communicate detailed, technical information in an understandable way to non-technical people. - identify, analyze, and resolve problems related to end-user devices, software and peripherals. - interpret customer requests to meet service needs and resolve problems. - resolve client technology problems. - setup, install, configure, and secure end-user devices. - evaluate multiple sources of technical information to perform root cause analysis. - communicate effectively with a wide variety of individuals and audiences at different levels and with different backgrounds both inside and outside of the organization. - engage and communicate effectively with stakeholders. - provide excellent customer service. - validate policies/guidelines/procedures/regulations/laws to ensure organizational compliance. - communicate effectively verbally and in writing as appropriate for the needs of the audience. - translate IT terms into everyday language. - work cooperatively with staff at all levels. - communicate technical concepts to non-technical audience.

	Knowledge of:	Skill in/Ability to:
Software Engineering	• system security practices to control access and protect from unauthorized use. • information produced, stored, processed, received, and shared by the organization.	• analyze information and evaluate results to choose the best solution and solve problems. • diagnose and resolve system problems. • identify, assess, and solve problems including gathering and processing relevant information, identifying possible solutions, making recommendations, and implementing solutions.
Information Security Engineering	Work in this domain is not typical at this level.	
IT Project Management	Work in this domain is not typical at this level.	
System Engineering	Work in this domain is not typical at this level.	

Information Technology Associate

All knowledge, skills, and abilities of the Information Technology Technician classification and

	Knowledge of:	Skill in/Ability to:
Business Technology Management	• structured writing techniques and methods to draft technical documents. • principles, techniques, and procedures related to the delivery of IT services. • service performance industry standards and best practices. • education tools and techniques. • performance monitoring tools and techniques. • the organization's mission, policies, principles and practices.	• perform technical analysis of proposed technology solutions (i.e.: hardware, software). • assess, analyze, and identify IT policy needs and gap analysis. • assess and correct noncompliance issues. • gather data to perform statistical analysis and report outcomes. • utilize reporting tools to develop and analyze statistical reports. • produce and edit excellent written materials to include issue papers, policies, standards, procedures, memos and contracts. • use logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Client Services	• network access, identity, and access management, including authentication, authorization, and access control methods. • system and application security threats and vulnerabilities. • operating systems.	• resolve basic connectivity issues. • use IT Service Management tools. • develop end-user training materials. • create and understand technical documentation, procedures and case studies. • serve as a technical liaison.

	• hardware and software licensing principles and practices.	• develop and effectively utilize all available resources. • perform system health checks using system monitoring techniques, tools, and methods.
Software Engineering	• data administration techniques and best practices. • operating systems to ensure efficient software integration and maintenance. • software design and administration practices to perform routine system administration and upgrades. • software development languages. • basic system administration, network, and operating system hardening techniques. • IT security principles and methods (physical and logical architecture).	• effectively estimate project work and required resources throughout the duration of the project. • identify complex problems and review related information to develop and evaluate options and implement solutions. • comprehend technical documents to interpret specifications, system implementations, capabilities, interdependencies, and compatibilities. • formulate comprehensive and accurate system documentation.
Information Security Engineering	Work in this domain is not typical at this level.	
IT Project Management	Work in this domain is not typical at this level.	
System Engineering	Work in this domain is not typical at this level.	

Information Technology Specialist I
All knowledge, skills, and abilities of the Information Technology Associate classification and

	Knowledge of:	Skill in/Ability to:
Business Technology Management	• complex and mission critical business processes and systems. • IT governance principles and guidelines to support decision making. • organizational change management principles, techniques and methods.	• develop decision making documents. • develop educational material and curriculum based on consideration of the audience skill level and needs. • formulate and recommend policies and procedures. • perform benchmarking. • perform requirement management activities. • understand and analyze performance metrics.
Client Services		• conduct end-user training.

Software Engineering	- current industry standards, best practices, and trends related to software development life cycle. - database administration techniques and best practices. - principles, methods, and procedures for designing, developing, optimizing, and integrating systems in accordance with best practices. - software architecture principles, standards, and best practices. - software configuration and release management practices and principles. - system specifications design, documentation, and implementation methodologies and techniques.	- apply concepts, best practices, methodologies, and principles related to software deployment. - develop and maintain standards and procedures to support and ensure consistency during the development, implementation, and maintenance of software systems. - gather and document software development specifications and requirements from various sources to facilitate software design in accordance with business needs. - monitor and review software development activities to ensure compliance with specifications, requirements, and standards. - serve as a technical expert for software systems development.
Information Security Engineering	- computing Information systems that include processing devices, storage devices, networking devices and the software that controls these devices. - incident response and handling methodologies. - procedures, tools, and techniques that provide contingency planning and business continuity.	- performing root cause analysis. - author concise and clear documentation. - collaborate closely with technical subject matter experts such as database administrators, network engineers, and server administrators, to ensure systems are secure and meet compliance requirements. - convey technical intelligence data to decision makers in a consumable fashion. - demonstrate experience with system analysis and design tools, methods, and techniques. - develop information security strategy based upon emerging technology, risk assessments, customer requirements and the organization's strategic plan. - perform effectively in a fast-paced environment with constantly changing priorities.
IT Project Management	- Federal, State, Department, organizational policies and procedures to State operations. - and ability to apply principles and methods for planning or managing the implementation, update, or integration of	- assess situations to determine the importance, urgency and risks to the project and the organization, and make clear decisions which are timely and in the best interests of the organization. - set goals and priorities, develop a

	Knowledge of:	Skill in/Ability to:
	information systems components. • the System Development Lifecycle including the associated methodologies, tools, and processes. • systems life cycle management concepts used to plan, develop, implement, operate, and maintain information systems. • principles, methods, and techniques of IT assessment, planning, management, monitoring, and evaluation such as IT baseline assessment, interagency/department dependencies, contingency planning, and disaster recovery. • basic Project Management principles. • laws, legal codes, court procedures, precedents, legal practices and documents, government regulations, Executive Orders, agency rules, policies, government organization and functions, and the political process used to regulate the implementation of projects. • the State of California Project Approval Process.	work schedule, monitor progress towards goals, and track details/data/information/activities. • establish and maintain project priorities. • facilitate project meetings with project stakeholders. • positively influence others to achieve results that are in the best interest of the organization. • use of project management software. • identify and analyze measures or indicators of system performance and determine the actions needed to improve or correct performance, relative to the goals of the system.
System Engineering	• quality control principles and practices related to the deployment and configuration of system components.	• analyze needs and product requirements to create functional designs. • consider the business implications of the technology to the current and future business environment. • prepare technical documentation related to the operations and maintenance of system components. • use structured approach to system performance issues.

Information Technology Specialist II

All knowledge, skills, and abilities of the Information Technology Specialist I classification and

	Knowledge of:	Skill in/Ability to:

Business Technology Management	- business continuity and technology recovery principles and processes. - business or systems process analysis, design, testing, and implementation techniques. - IT systems and data auditing. - principles and practices related to the design and implementation of IT systems. - research and IT best practice methods and processes to identify current and emerging trends in technology. - statistical analysis and reporting techniques. - techniques for assessing skills and education needs to support training, planning and development.	- assess and monitor compliance with contract terms. - assess current IT assets to forecast future technology acquisitions. - assess training needs related to the application of technology. - develop an organization change management plan. - develop vendor performance measurements and monitor performance outcomes. - evaluate vendor responses for compliance with requirements and determine best value. - identify procurement requirements and execute appropriate procurement method. - monitor and evaluate the effectiveness of the applied change management activities. - perform organizational readiness assessments and identify and recommend appropriate actions. - prepare and maintain the Technology Recovery Plan (TRP).
Client Services	- various scripting languages and techniques. - scripting languages, practices, and tools.	keeping informed on technology trends and industry best practices and recommending appropriate solutions.
Software Engineering	- software environment performance and capacity optimization techniques. - software quality assurance and quality control principles, methods, tools, and techniques. - system engineering fundamental concepts, practices, and procedures.	- establish application development standards. - plan and estimate software product development activities.

Information Security Engineering	- information security issues, application of information security techniques, and implications across a broad set of computing platforms. - information security threats, techniques for protecting against the threats, and the resulting implications to systems, business processes, and cost. - audit practices and standards. - computer networking concepts and protocols, and network security methodologies, risk management processes, cyber security principles, and cyber threats and vulnerabilities. - different classes of attacks (e.g., passive, active, insider, close-in, distribution). - general attack stages (e.g., fingerprinting and scanning, enumeration, gaining access, escalation or privileges, maintaining access, network exploitation, covering tracks). - host, vendor, and client business functions and has the ability to author, review, and update continuity and recovery plans that outline and address the proper processes, technologies, and techniques to prepare for, mitigate, respond to security incidents and ensure operational continuity. - information security controls and security categorizations. - information security impact analysis techniques, procedures and reporting. - information security, administrative, physical, and technical controls, their applications and their assessment procedures. - layered security principles, including network segmentation, perimeter security, database security, end point security, and	- architecting secure enterprise IT solutions. - analyzing potential business impact of multiple alternatives based upon expert knowledge of emerging security threats, vulnerabilities, and risks - applying and incorporating information technologies into proposed solutions; applying confidentiality, integrity, and availability principles; applying organization-specific systems analysis principles and techniques; conducting capabilities and requirements analysis; in design modeling and building use cases; and in using incident handling methodologies. - developing security architecture when integrating hardware and software solutions. - evaluating testing and assessment results for applicability and completeness. - implementing information assurance principles and organizational requirements to protect confidentiality, integrity, availability, authenticity, and non-repudiation of information and data. - recognizing and categorizing types of vulnerabilities and associated attacks. - using network analysis tools. - analyze the effectiveness of the backup and recovery of data, programs, and services. - create contingency strategies. - identify and develop detailed guidance and procedures for restoring a damaged system's security impact level and recovery requirements. - identify and prioritize information systems and components critical to supporting the organization's mission and business processes. - identify preventive controls. - apply appropriate security controls based on information classification and risk to the organization to protect information privacy. - apply essential elements of

	- event monitoring. - modern and emerging information, communications, and operations technologies, encryption methods, security controls, as well as their capabilities to support the function and security of business operations. - network security architecture concepts, including topology, protocols, components, and principles (e.g., application of defense-in-depth). - Open Systems Interconnection model and the ability to transfer this understanding to security concepts and methods. - physical security principles and how they relate to cyber infrastructure. - relevant and applicable international, national, and state information security and privacy laws, policies, standards, procedures, and guidelines. - remediation methods to bring information security deficiencies into compliance. - risk management processes (e.g., methods for assessing and mitigating risk). - security event correlation tools. - State and Federal privacy laws, policies, and standards. - testing and assessment principles, tools, and techniques. - the organization's security and risk management policies, requirements, and acceptable level of risk. - the risks that exist when measures are not taken to provide for contingency planning and business continuity.	- information pertaining to all relevant and applicable international, national, and state laws, policies, standards, procedures, and guidelines pertaining to information security to the organization's security training program. - apply risk based measures in determining adequate security which meets business objectives. - apply secure network design concepts and protocols during solution development. - apply security controls in an evolving information security threat landscape as seen through external resources directed towards information security professionals. - assess and understand complex business processes and customer requirements to ensure new technologies, architectures, and security products will meet their needs. - convey information about threats, mitigation strategies and techniques, as well and providing leadership in the practice of technology development best practices. - design applications which are secure at all layers including secure coding, authentication and authorization, event monitoring, audit logs, database access rights, network controls, hardening, and configuration management. - determine scope, urgency, and potential impact; identify the threat and corresponding remediation. - develop and present security analysis based on existing and immerging threats. - develop detailed alternatives, analyze emerging IT security methods, solutions, designs, and architectures. - develop detailed security requirements which meet security, technical, and business needs. - develop methods to monitor and measure risk, compliance, and

		• assurance efforts.
		• document and disseminate cyber defense techniques and guidance for the organization.
		• ensure system security configuration guidelines are followed; compliance monitoring occurs.
		• establish and maintain cooperative relationships with outside compliance related agencies.
		• formulate and/or review corrective actions plans.
		• identify anomalous and threatening behavior and implement a viable incident response mechanism.
		• independently conduct compliance reviews.
		• interpret and analyze results and to formulate recommendations for improvements.
		• interpret audit findings and results.
		• interpret patterns of noncompliance to determine their impact on the enterprise's levels of risk and/or the information assurance program's overall effectiveness.
		• keep current with security trends, mitigation techniques, general technology developments and related subjects necessary to recognize and address security issues.
		• recognize and implement changes in laws, policies or regulations that impact the privacy or security of confidential information.
IT Project Management	• emerging technologies and their applications to business processes, and applications and implementation of information systems to meet organizational requirements. • principles and practices of developing a Work Breakdown structure based upon a defined project scope. • the project management lifecycle including the State of California project management standards, methodologies, tools,	• apply the principles, methods, techniques, and tools for developing, scheduling, coordinating, and managing projects and resources, including integration, scope, time, cost, quality, human resources, communications, and risk and procurement management. • foster a team environment through leadership and conflict management. • effectively negotiate with project stakeholders, suppliers, or sponsors to achieve project objectives. • plan, coordinate and direct the

	and processes. • various types of contracts, techniques for contracting or procurement, and contract negotiation and administration in order to effectively obtain written documentation to ensure the delivery of products or services.	activities of multi-disciplinary staff.
System Engineering	• current and emerging system engineering trends. • inner workings of hardware and software components including machine level programming and scripting. • transmission, broadcasting, switching, control, and operation of telecommunications systems. • algorithms, data structures and complexity analysis.	

Information Technology Specialist III

This level focuses on the interoperability of multiple domains or disciplines. All knowledge, skills, and abilities of the Information Technology Specialist II classification and

	Knowledge of:	Skill in/Ability to:
Business Technology Management **Client Services** **Software Engineering** **Information Security Engineering** **IT Project Management** **System Engineering**	• interoperability of multiple architectural platforms and systems. • operational environment and industry standards for architectural framework. • the development and application of technology in the current and future business environment.	• align IT with strategic organizational goals. • bridge the strategic intent and practical application across multiple domains. • produce technical enterprise level architectural design outputs. • link strategic goals and innovation.

Information Technology Supervisor I

All knowledge, skills, and abilities of the Information Technology Associate classification and

	Knowledge of:	Skill in/Ability to:
Business Technology Management	• budget, resource management, and IT strategies to meet departmental goals.	• communicate change impacts and change activities through various methods.

	• transition management practices and methods. • business and management principles involved in strategic planning, resource allocation, leadership technique, and coordination of people and resources.	• perform business process modeling activities. • advocate contingency planning. • assess the controls against the business environment to evaluate the effectiveness of the controls to provide desired outcome. • effectively communicate compliance status to organizational representatives. • establish cooperative relationships and gain support of key individuals to accomplish goals. • plan, administer, and monitor expenditures. • provide quality and timely ad hoc project information to Executives, project team members, and stakeholders.
Client Services	• incident categories, incident responses, and timelines for responses. • organizational roles and responsibilities and the ability to tailor training appropriately.	• developing and executing technical training programs and curricula. • educating others regarding contingency planning and business continuity. • correlate results into understandable and actionable reports. • monitor the controls, their effectiveness in order to implement any necessary adjustments to the controls or their usages to increase positive results. • prepare and deliver education and awareness briefings to ensure that systems, network, and data users are aware of and adhere to systems security policies and procedures.
Software Engineering	• identifying and extracting data of forensic interest. • performing or participating in privacy compliance assessments. • develop contingency planning policy statement.	• assist asset managers and owners inventory assets and categorize the assets based on risk indexes. • effectively communicate the results of security control assessments with a broad range of technical and business peers and information security professionals.

	Knowledge of:	Skill in/Ability to:
Information Security Engineering	Work in this domain is not typical at this level.	
IT Project Management	Work in this domain is not typical at this level.	
System Engineering	Work in this domain is not typical at this level.	

Information Technology Supervisor II

All knowledge, skills, and abilities of the Information Technology Specialist I and Information Technology Supervisor I classifications.

	Knowledge of:	Skill in/Ability to:
Business Technology Management	• procurement processes to acquire and secure IT goods and services. • cost/benefit analysis concepts, principles and techniques. • contract negotiations practices and techniques.	
Client Services	No domain specific knowledge, skills, or abilities identified.	
Software Engineering	No domain specific knowledge, skills, or abilities identified	
Information Security Engineering	• intrusion detection methodologies and techniques for detecting host-and network-based intrusions via intrusion detection technologies. • organizational interdependencies and how they affect organizational continuity and business processes (electric grid, communications, transportation, etc.).	• translate an organization's enterprise IT goals and objectives, standards, and security architecture into well documented enterprise principles, requirements, standards, and processes for information security.
IT Project Management	• principles and practices of organization, administration, personnel (recruitment, selection, training, compensation, benefits, labor relations, negotiation, and personnel information systems), and budget management. • program management. • governmental functions and organization at the State and local level, including the legislative process.	

		Knowledge of:	Skill in/Ability to:
	•	principles and practices of employee supervision, development, and training.	
System Engineering	No domain specific knowledge, skills, or abilities identified.		

Information Technology Manager I

In addition to all knowledge, skills, and abilities of the Information Technology Specialist II and Information Technology Supervisor II classifications.

	Knowledge of:	Skill in/Ability to:
Business Technology Management	• customer support best practices and industry standards. • IT Service Management processes. • relevant and applicable international, national, and state information security and privacy laws, policies, standards, procedures, and guidelines. • principles and processes for managing contract performance and deliverables.	
Client Services	No domain specific knowledge, skills, or abilities identified.	
Software Engineering	No domain specific knowledge, skills, or abilities identified.	

| Information Security Engineering | • laws, regulations, policies, and compliance requirements as they relate to information security.
• and ability to apply proven validation and accreditation processes.
• industry-specific Risk Management tools, standards, techniques and frameworks.
• information security control assessment procedures.
• National Institute of Standards and Technology (NIST) publication 800 series. | • designing analysis structures, determining testing objectives and rigor, and writing test plans.
• develop an information system contingency plan.
• ensure contingency plans testing, training, exercises, and maintenance.
• consolidate data from multiple intelligence sources and apply data to strategic and operational security measures.
• coordinate with other security and privacy professionals to review policies and implement asset security controls and practices.
• develop and tailor assessments in creative ways to determine the effectiveness and limitations of implemented security and privacy controls.
• engage other areas of IT support to elicit information about new security opportunities.
• identify risk factors and determine viable security controls to mitigate or lessen risk.
• interpret and adhere to specialized NIST publications to develop and conduct standardized assessment procedures to effectively protect the privacy of customer data and the security of information assets and personnel.
• interpret NIST publications as it relates to the protection of information assets and personnel.
• tailor and apply applicable international, national, and state information security and privacy laws, policies, standards, procedures, and guidelines to organizational business functions.
• work within strategic and operational entities in the organization to implement an asset management program that tracks all assets from acquisition to disposition. |
| IT Project Management | | • create organizational change leadership and vision and strategic |

		thinking. • prepare, justify, and administer the budget for project(s).
System Engineering	No domain specific knowledge, skills, or abilities identified.	

Information Technology Manager II
In addition to all knowledge, skills, and abilities of the Information Technology Series classifications.

	Knowledge of:	Skill in/Ability to:
Business Technology Management	No domain specific knowledge, skills, or abilities identified.	
Client Services	No domain specific knowledge, skills, or abilities identified.	
Software Engineering	No domain specific knowledge, skills, or abilities identified.	
Information Security Engineering	• evaluate an organization's contingency planning program and contingency plans for business continuity strengths and weaknesses. • identifying, capturing, containing, and eliminating malware.	• monitor all enterprise services for technology changes, topology changes, and other alterations that might impact the security posture of the business entity.
IT Project Management	No domain specific knowledge, skills, or abilities identified.	
System Engineering	No domain specific knowledge, skills, or abilities identified.	

AREA OF RESPONSIBILITY
This refers to the geographic or program area over which the position has responsibility.

The incumbents will be working statewide in IT offices.

Information Technology Technician
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Software Engineering

Information Technology Associate
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Software Engineering

Information Technology Specialist I
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Information Security Engineering
- IT Project Management
- Software Engineering
- System Engineering

Information Technology Specialist II
This level typically performs duties and responsibilities in the following domains:
- Information Security Engineering
- IT Project Management
- Software Engineering
- System Engineering

Information Technology Specialist III
This level typically performs duties and responsibilities in the following domains:
- Information Security Engineering
- IT Project Management
- Software Engineering
- System Engineering

Information Technology Supervisor I
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Software Engineering

Information Technology Supervisor II
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Information Security Engineering
- IT Project Management
- Software Engineering
- System Engineering

Information Technology Manager I
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Information Security Engineering
- IT Project Management
- Software Engineering
- System Engineering

Information Technology Manager II
This level typically performs duties and responsibilities in the following domains:
- Business Technology Management
- Client Services
- Information Security Engineering
- IT Project Management
- Software Engineering
- System Engineering

WORKING CONDITIONS/ENVIRONMENT
This refers to the physical characteristics/surroundings of the job that make specific demands upon a worker's capacity. These may include work location (inside, outside, or both); machines, tools, equipment required to operate; special physical demands (climbing, lifting, etc.); noise and/or vibration; special hazards or dangers; and other atmospheric conditions.

This allocation factor is not applicable. Incumbents typically work in an office environment.

ORGANIZATION SIZE
Organization size is a combination of total number of IT staff and long-term contract staff directed, number of separate functional domains and organizational units, number of operating systems supported, complexity and criticality of programs and their integration into the department's mission and operations.

Information Technology Technician
This level may be used in all organizations.

Information Technology Associate
This level may be used in all organizations.

Information Technology Specialist I
This level may be used in all organizations.

Information Technology Specialist II
This level may be used in all organizations.

Information Technology Specialist III
This level is only used in the departments with the most complex IT organizations or complex software that is an integral part of the department's mission and operations.

Information Technology Supervisor I
This level may be used in all organizations.

Information Technology Supervisor II
This level may be used in all organizations.

Information Technology Manager I
This level may be used in all organizations and may function as the highest-level IT individual in small- to medium- organizations.

Information Technology Manager II
This level may only be used in the largest organizations.