



UNITED STATES OFFICE OF PERSONNEL MANAGEMENT
Washington, DC 20415

The Director

July 12, 2011

MEMORANDUM FOR: Chief Human Capital Officers

FROM: JOHN BERRY, DIRECTOR

Subject: Competency Model for IT Program Management

In January 2011, the U.S. Office of Personnel Management initiated a Governmentwide study to identify critical competencies for Information Technology (IT) program management work. We have worked closely with the Chief Information Officers (CIO) Council and the Office of Management and Budget on this initiative. This study supports the *White House's 25 Point Implementation Plan to Reform Federal Information Technology Management*. The competencies identified through the study will be used to develop an IT program management career path. We included IT project managers in the competency study to assist with the career path effort.

Subject matter experts provided key insights, and employees and supervisors across the Government completed surveys to paint a comprehensive picture of IT program management work. We are pleased to provide the attached IT program management competency model to support your human resources initiatives. The competencies identified may be used in such agency efforts as workforce planning, training and development, performance management, recruitment, and selection. When used for selection, the competencies must be used in conjunction with the appropriate qualification standard. Results for both IT program and project managers are presented in the attached summary document.

Thank you for your continued support of this important project. If you have any questions regarding the competency model, please contact Andrea Bright, Manager of Classification and Assessment Policy at (202) 606-3600, or e-mail <mailto:mcompetency@opm.gov>.

Attachment

cc: Human Resources Directors

IT Program Management Competencies by Grade Level

The following tables present the competencies that have been confirmed as appropriate for selection on a Governmentwide basis for IT program management work at the grades indicated. Agencies are responsible for conducting job analyses for work responsibilities outside the IT program management function. Similarly, agencies must determine the applicability of these competencies to positions which do not perform the full range of IT program management work.

Please refer to OPM's *Delegated Examining Operations Handbook* for more information on conducting a job analysis.

General Competencies		
Grade 13	Grade 14	Grade 15
<ul style="list-style-type: none"> • Accountability • Attention to Detail • Computer Skills • Conflict Management • Creative Thinking • Customer Service • Decision Making • Flexibility • Influencing/Negotiating • Integrity/Honesty • Interpersonal Skills • Leadership • Learning • Oral Communication • Organizational Awareness • Planning and Evaluating • Problem Solving • Reading Comprehension • Reasoning • Self-Management • Strategic Thinking • Teaching Others • Teamwork • Technical Competence • Writing 	<ul style="list-style-type: none"> • Accountability • Attention to Detail • Computer Skills • Conflict Management • Creative Thinking • Customer Service • Decision Making • Flexibility • Influencing/Negotiating • Integrity/Honesty • Interpersonal Skills • Leadership • Learning • Oral Communication • Organizational Awareness • Partnering • Planning and Evaluating • Political Savvy • Problem Solving • Reading Comprehension • Reasoning • Self-Management • Strategic Thinking • Teaching Others • Teamwork • Technical Competence • Vision • Writing 	<ul style="list-style-type: none"> • Accountability • Attention to Detail • Computer Skills • Conflict Management • Creative Thinking • Customer Service • Decision Making • External Awareness • Flexibility • Influencing/Negotiating • Integrity/Honesty • Interpersonal Skills • Leadership • Learning • Managing Human Resources • Oral Communication • Organizational Awareness • Partnering • Planning and Evaluating • Political Savvy • Problem Solving • Reading Comprehension • Reasoning • Self-Management • Strategic Thinking • Teaching Others • Teamwork • Technical Competence • Vision • Writing

IT Program Management Competencies by Grade Level, Continued

Technical Competencies		
Grade 13	Grade 14	Grade 15
<ul style="list-style-type: none"> • Change Management • Configuration Management • Cost-Benefit Analysis • Data Management 	<ul style="list-style-type: none"> • Change Management • Configuration Management • Contracting/Procurement • Cost-Benefit Analysis 	<ul style="list-style-type: none"> • Change Management • Compliance • Configuration Management • Contracting/Procurement

<ul style="list-style-type: none"> • Information Assurance • Information Management • Information Resources Strategy and Planning • Project Management • Quality Assurance • Requirements Analysis • Risk Management • Systems Life Cycle • Systems Testing and Evaluation • Technology Awareness • Acquisition Strategy 	<ul style="list-style-type: none"> • Financial Management • Information Assurance • Information Technology Program Management • Project Management • Quality Assurance • Requirements Analysis • Risk Management • Stakeholder Management • Systems Life Cycle • Technology Awareness • Acquisition Strategy • Capital Planning and Investment Assessment 	<ul style="list-style-type: none"> • Cost-Benefit Analysis • Data Management • Enterprise Architecture • Financial Management • Information Assurance • Information Management • Information Resources Strategy and Planning • Information Systems Security Certification • Information Technology Architecture • Information Technology Program Management • Project Management • Quality Assurance • Requirements Analysis • Risk Management • Stakeholder Management • Systems Engineering • Systems Life Cycle • Systems Testing and Evaluation • Technology Awareness
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IT Project Management Competencies by Grade Level

The following tables present the competencies that have been confirmed as appropriate for selection on a Governmentwide basis for IT project management work at the grades indicated. Agencies are responsible for conducting job analyses for work responsibilities outside the IT project management function. Similarly, agencies must determine the applicability of these competencies to positions which do not perform the full range of IT project management work. Please refer to OPM's Delegated Examining Operations Handbook for more information on conducting a job analysis.

General Competencies		
Grade 13	Grade 14	Grade 15
<ul style="list-style-type: none"> • Accountability • Attention to Detail • Computer Skills • Creative Thinking • Customer Service • Decision Making • Flexibility • Influencing/Negotiating • Integrity/Honesty • Interpersonal Skills • Leadership 	<ul style="list-style-type: none"> • Accountability • Attention to Detail • Computer Skills • Conflict Management • Creative Thinking • Customer Service • Decision Making • Flexibility • Influencing/Negotiating • Integrity/Honesty • Interpersonal Skills 	<ul style="list-style-type: none"> • Accountability • Attention to Detail • Computer Skills • Conflict Management • Creative Thinking • Customer Service • Decision Making • External Awareness • Flexibility • Influencing/Negotiating • Integrity/Honesty

<ul style="list-style-type: none"> • Learning • Oral Communication • Planning and Evaluating • Problem Solving • Reading Comprehension • Reasoning • Self-Management • Strategic Thinking • Teamwork • Technical Competence • Writing 	<ul style="list-style-type: none"> • Leadership • Learning • Oral Communication • Partnering • Planning and Evaluating • Political Savvy • Problem Solving • Reading Comprehension • Reasoning • Self-Management • Strategic Thinking • Teaching Others • Teamwork • Technical Competence • Vision • Writing 	<ul style="list-style-type: none"> • Interpersonal Skills • Leadership • Learning • Managing Human Resources • Oral Communication • Organizational Awareness • Partnering • Planning and Evaluating • Political Savvy • Problem Solving • Reading Comprehension • Reasoning • Self-Management • Strategic Thinking • Teaching Others • Teamwork • Technical Competence • Vision • Writing
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IT Project Management Competencies by Grade Level, Continued

Technical Competencies		
Grade 13	Grade 14	Grade 15
<ul style="list-style-type: none"> • Configuration Management • Information Management • Project Management • Requirements Analysis • Risk Management • Systems Life Cycle • Systems Testing and Evaluation • Technology Awareness • Acquisition Strategy 	<ul style="list-style-type: none"> • Change Management • Configuration Management • Contracting/Procurement • Cost-Benefit Analysis • Financial Management • Information Assurance • Information Technology Program Management • Project Management • Quality Assurance • Requirements Analysis • Risk Management • Stakeholder Management • Systems Life Cycle • Technology Awareness • Acquisition Strategy • Business Process Reengineering • Capital Planning and Investment Assessment 	<ul style="list-style-type: none"> • Change Management • Compliance • Configuration Management • Contracting/Procurement • Cost-Benefit Analysis • Data Management • Enterprise Architecture • Financial Management • Information Assurance • Information Management • Information Resources Strategy and Planning • Information Systems Security Certification • Information Systems/Network Security • Information Technology Architecture • Information Technology Program Management • Product Evaluation • Project Management • Quality Assurance

		<ul style="list-style-type: none"> • Requirements Analysis • Risk Management • Stakeholder Management • Systems Engineering • Systems Life Cycle • Systems Testing and Evaluation • Technology Awareness
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IT Program Management Competency Model

Competency Importance Rankings

The table below presents the rank order of the top 25 competencies on current importance, based on supervisor and employee ratings, along with the corresponding rank order of the competencies on future importance (in three years), based on employee ratings.

Competencies	Current Importance	Future Importance
Integrity/Honesty	1	1
Decision Making	2	3
Interpersonal Skills	3	4
Teamwork	4	6
Accountability	5	7
Self-Management	6	11
Project Management	7	5
Leadership	8	2
Customer Service	9	8
Problem Solving	10	10
Oral Communication	11	13
Attention to Detail	12	19
Reasoning	13	17
Planning and Evaluating	14	22
Writing	15	25

Information Technology Program Management	16	9
Strategic Thinking	17	12
Flexibility	18	15
Stakeholder Management	19	14
Creative Thinking	20	16
Learning	21	27
Reading Comprehension	22	28
Requirements Analysis	23	24
Influencing/Negotiating	24	21
Risk Management	25	18

IT Project Management Competency Model

Competency Importance Rankings

The table below presents the rank order of the top 25 competencies on current importance, based on supervisor and employee ratings, along with the rank order of the competencies on future importance (in three years), based on employee ratings

Competencies	Current Importance	Future Importance
Integrity/Honesty	1	1
Decision Making	2	3
Interpersonal Skills	3	5
Teamwork	4	6
Self-Management	5	8
Project Management	6	4
Accountability	7	7
Customer Service	8	10
Leadership	9	2
Problem Solving	10	9

Attention to Detail	11	12
Oral Communication	12	11
Reasoning	13	16
Planning and Evaluating	14	17
Writing	15	24
Requirements Analysis	16	23
Reading Comprehension	17	26
Strategic Thinking	18	14
Flexibility	19	15
Creative Thinking	20	19
Learning	21	25
Stakeholder Management	22	13
Information Technology Program Management	23	21
Influencing/Negotiating	24	18
Risk Management	25	22

IT Program Management Competency Model

Proficiency Level Guidance

The following table presents the proficiency levels associated with each general and technical competency for each grade level. The definitions of these proficiency levels can be found later in this document. Please note that general and technical competencies have different proficiency level definitions. These proficiency levels are based on Governmentwide data and are therefore provided as guidance only for training and development. Required proficiency levels may vary based on an agency's specific needs and position requirements.

General Competencies	Grade Levels		
	13	14	15
	Proficiency Levels		
Accountability	4	4	4

Attention to Detail	4	4	4
Computer Skills	4	4	3
Conflict Management	3	4	3
Creative Thinking	3	4	4
Customer Service	4	4	4
Decision Making	4	4	4
External Awareness	3*	3*	3
Flexibility	4	4	4
Influencing/Negotiating	4	4	4
Integrity/Honesty	4	5	5
Interpersonal Skills	4	4	4
Leadership	4	4	4
Learning	3	4	4
Legal, Government, and Jurisprudence	2*	3*	3*
Managing Human Resources	2*	3*	3
Oral Communication	3	4	4
Organizational Awareness	3	3	4
Partnering	3*	3	4
Planning and Evaluating	3	4	4
Political Savvy	3*	3	3
Problem Solving	4	4	4
Reading Comprehension	4	4	4
Reasoning	3	4	4
Self-Management	4	4	4
Strategic Thinking	3	3	4
Teaching Others	3	3	4

Vision	3*	3	4
Writing	3	4	4

IT Program Management Proficiency Level Guidance, Continued

Technical Competencies	Grade Levels		
	13	14	15
	Proficiency Levels		
Accessibility	2*	2*	2*
Acquisition Strategy	3*	3	4
Business Process Reengineering	3*	3*	3*
Capital Planning and Investment Assessment	3*	3*	3
Change Management	3	3	3
Compliance	3*	3*	3
Configuration Management	3	3	4
Contracting/Procurement	3*	3	3
Cost-Benefit Analysis	3	3	3
Data Management	3	3*	3
Enterprise Architecture	2*	3*	3
Financial Analysis	2*	3*	3*
Financial Management	2*	3	3
Information Assurance	3	3	3
Information Management	4	3*	3
Information Resources Strategy and Planning	3	3*	3
Information Systems Security Certification	3*	3*	3

Information Systems/Network Security	3*	2*	3*
Information Technology Architecture	3*	3*	3
Information Technology Performance Assessment	3*	3*	3*
Information Technology Program Management	3*	3	4
Infrastructure Design	3*	2*	3*
Operations Support	3*	3*	3*
Product Evaluation	3*	3*	3*
Project Management	4	4	4
Quality Assurance	3	3	3
Requirements Analysis	3	4	4
Risk Management	3	4	4
Stakeholder Management	3*	4	4
Systems Engineering	3*	3*	3
Systems Life Cycle	3	3	3
Systems Testing and Evaluation	3	3*	3
Technology Awareness	4	3	3

Note: Ratings noted with an asterisk (*) indicate that the competency fell below the cutoff on importance and required at entry.

IT Project Management Competency Model

Proficiency Level Guidance

The following table presents the proficiency levels associated with each general and technical competency for each grade level. The definitions of these proficiency levels can be found later in this document. Please note that general and technical competencies have different proficiency level definitions. These proficiency levels are based on Governmentwide data and are therefore provided as guidance only for training and development. Required proficiency levels may vary based on an agency's specific needs and position requirements.

General Competencies	Grade Levels		
	13	14	15
	Proficiency Levels		
Accountability	4	4	4
Attention to Detail	4	4	4
Computer Skills	4	4	3
Conflict Management	3*	4	3
Creative Thinking	3	3	3
Customer Service	4	4	4
Decision Making	4	4	4
External Awareness	3*	3*	3
Flexibility	4	4	3
Influencing/Negotiating	3	4	4
Integrity/Honesty	4	4	4
Interpersonal Skills	4	4	4
Leadership	3	4	4
Learning	3	4	4
Legal, Government, and Jurisprudence	2*	3*	3*
Managing Human Resources	2*	3*	3
Oral Communication	3	4	4
Organizational Awareness	3*	3*	4
Partnering	3*	3	4
Planning and Evaluating	3	4	4
Political Savvy	2*	3	3

Problem Solving	4	4	4
Reading Comprehension	4	4	4
Reasoning	3	4	4
Self-Management	4	4	4
Strategic Thinking	3	3	4
Teaching Others	3*	3	4
Teamwork	3	4	4
Technical Competence	3	3	4
Vision	3*	3	4
Writing	3	4	4

IT Project Management Proficiency Level Guidance, Continued

Technical Competencies	Grade Levels		
	13	14	15
	Proficiency Levels		
Accessibility	2*	2*	2*
Acquisition Strategy	3*	3	4
Business Process Reengineering	3*	3*	3
Capital Planning and Investment Assessment	3*	3*	3
Change Management	3*	3	4
Compliance	3*	3*	3
Configuration Management	4	3	4
Contracting/Procurement	3*	3	3
Cost-Benefit Analysis	3*	3	3
Data Management	3*	3*	3

Enterprise Architecture	2*	3*	3
Financial Analysis	3*	3*	3*
Financial Management	3*	3	3
Information Assurance	3*	3	3
Information Management	4	3*	3
Information Resources Strategy and Planning	3*	3*	3
Information Systems Security Certification	3*	3*	3
Information Systems/Network Security	3*	3*	3*
Information Technology Architecture	3*	3*	3
Information Technology Performance Assessment	3*	3*	3*
Information Technology Program Management	3*	4	4
Infrastructure Design	3*	2*	3*
Operations Support	3*	3*	3*
Product Evaluation	3*	3*	3
Project Management	4	4	4
Quality Assurance	3*	3	3
Requirements Analysis	3	4	4
Risk Management	3	4	4
Stakeholder Management	3*	4	4
Systems Engineering	3*	3*	3
Systems Life Cycle	3	3	3
Systems Testing and Evaluation	3	3*	3
Technology Awareness	4	3	3

Note: Ratings noted with an asterisk(*) indicate that the competency fell below the cutoff on importance and required at entry.

Proficiency Level Scale Definitions		
Proficiency Levels	General Competencies	Technical Competencies
5 = Expert	<ul style="list-style-type: none"> • Applies the competency in exceptionally difficult situations. • Serves as a key resource and advises others. • Applies the competency in exceptionally difficult situations. • Serves as a key resource and advises others. <p>Demonstrates comprehensive, expert understanding of concepts and processes.</p>	
4 = Advanced	<ul style="list-style-type: none"> • Applies the competency in considerably difficult situations. • Generally requires little or no guidance. • Applies the competency in considerably difficult situations. • Generally requires little or no guidance. <p>Demonstrates broad understanding of concepts and processes.</p>	
3 = Intermediate	<ul style="list-style-type: none"> • Applies the competency in difficult situations. • Requires occasional guidance. • Applies the competency in difficult situations. • Requires occasional guidance. <p>Demonstrates understanding of concepts and processes.</p>	
2 = Basic	<ul style="list-style-type: none"> • Applies the competency in somewhat difficult situations. • Requires frequent guidance. 	

	<ul style="list-style-type: none"> • Applies the competency in somewhat difficult situations. • Requires frequent guidance. <p>Demonstrates familiarity with concepts and processes.</p>	
1 = Awareness	<ul style="list-style-type: none"> • Applies the competency in the simplest situations. • Requires close and extensive guidance. • Applies the competency in the simplest situations. • Requires close and extensive guidance. <p>Demonstrates awareness of concepts and processes.</p>	

IT Program Management Competency Model

General Competencies

Accountability - Holds self and others accountable for measurable high-quality, timely, and cost-effective results. Determines objectives, sets priorities, and delegates work. Accepts responsibility for mistakes. Complies with established control systems and rules.

Attention to Detail - Is thorough when performing work and conscientious about attending to detail.

Computer Skills - Uses computers, software applications, databases, and automated systems to accomplish work.

Conflict Management - Manages and resolves conflicts, grievances, confrontations, or disagreements in a constructive manner to minimize negative personal impact.

Creative Thinking - Uses imagination to develop new insights into situations and applies innovative solutions to problems; designs new methods where established methods and procedures are inapplicable or are unavailable.

Customer Service - Works with clients and customers (that is, any individuals who use or receive the services or products that your work unit produces, including the general public, individuals who work in the agency, other agencies, or organizations outside the Government) to assess their needs, provide information or assistance, resolve their problems, or satisfy their expectations; knows about available products and services; is committed to providing quality products and services.

Decision Making - Makes sound, well-informed, and objective decisions; perceives the impact and implications of decisions; commits to action, even in uncertain situations, to accomplish organizational goals; causes change.

External Awareness - Identifies and understands economic, political, and social trends that affect the organization.

Flexibility - Is open to change and new information; adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles; effectively deals with ambiguity.

Influencing/Negotiating - Persuades others to accept recommendations, cooperate, or change their behavior; works with others towards an agreement; negotiates to find mutually acceptable solutions.

Integrity/Honesty - Contributes to maintaining the integrity of the organization; displays high standards of ethical conduct and understands the impact of violating these standards on an organization, self, and others; is trustworthy

Interpersonal Skills - Shows understanding, friendliness, courtesy, tact, empathy, concern, and politeness to others; develops and maintains effective relationships with others; may include effectively dealing with individuals who are difficult, hostile, or distressed; relates well to people from varied backgrounds and different situations; is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.

Leadership - Influences, motivates, and challenges others; adapts leadership styles to a variety of situations.

Learning - Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.

Legal, Government and Jurisprudence - Knowledge of laws, legal codes, court procedures, precedents, legal practices and documents, Government regulations, Executive orders, agency rules, Government organization and functions, and the democratic political process.

Managing Human Resources - Plans, distributes, coordinates, and monitors work assignments of others; evaluates work performance and provides feedback to others on their performance; ensures that staff are appropriately selected, utilized, and developed, and that they are treated in a fair and equitable manner.

Oral Communication - Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately.

Organizational Awareness - Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.

Partnering - Develops networks and builds alliances; collaborates across boundaries to build strategic relationships and achieve common goals.

Planning and Evaluating - Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes.

Political Savvy - Identifies the internal and external politics that impact the work of the organization. Perceives organizational and political reality and acts accordingly.

Problem Solving - Identifies problems; determines accuracy and relevance of information; uses sound judgment to generate and evaluate alternatives, and to make recommendations.

Reading Comprehension - Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.

Reasoning - Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.

Self-Management - Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.

Strategic Thinking - Formulates effective strategies consistent with the business and competitive strategy of the organization in a global economy. Examines policy issues and strategic planning with a long-term perspective. Determines objectives and sets priorities; anticipates potential threats or opportunities.

Teaching Others - Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.

Teamwork - Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Vision - Understands where the organization is headed and how to make a contribution; takes a long-term view and recognizes opportunities to help the organization accomplish its objectives or move toward the vision.

Writing - Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, which may include technical material, that is appropriate for the intended audience.

IT Program Management Competency Model

Technical Competencies

Accessibility - Knowledge of tools, equipment, and technologies used to help individuals with disabilities use computer equipment and software.

Acquisition Strategy - Knowledge of the principles and methods for developing an integrated acquisition management plan that describes the business, technical, and support strategies, including the relationship between the acquisition phases, work efforts, and key program events (for example, decision points, contract awards, test activities).

Business Process Reengineering - Knowledge of methods, metrics, tools, and techniques of Business Process Reengineering.

Capital Planning and Investment Assessment - Knowledge of the principles and methods of capital investment analysis or business case analysis, including return on investment analysis.

Change Management - Knowledge of change management principles strategies, and techniques required for effectively planning, implementing, and evaluating change in the organization.

Compliance - Knowledge of procedures for assessing, evaluating, and monitoring programs or projects for compliance with Federal laws, regulations, and guidance.

Configuration Management - Knowledge of the principles and methods for planning or managing the implementation, update, or integration of information systems components

Contracting/Procurement - Knowledge of various types of contracts, techniques for contracting or procurement, and contract negotiation and administration.

Cost-Benefit Analysis - Knowledge of the principles and methods of cost-benefit analysis, including the time value of money, present value concepts, and quantifying tangible and intangible benefits.

Data Management - Knowledge of the principles, procedures, and tools of data management, such as modeling techniques, data backup, data recovery, data dictionaries, data warehousing, data mining, data disposal, and data standardization processes.

Enterprise Architecture - Knowledge of principles, concepts, and methods of enterprise architecture to align information technology (IT) strategy, plans, and systems with the mission, goals, structure, and processes of the organization.

Financial Analysis - Knowledge of the principles, methods, and techniques of financial analysis, forecasting, and modeling to interpret quantitative and qualitative data; includes data modeling, earned value management, and evaluating key financial indicators, trends, and historical data.

Financial Management - Prepares, justifies, and/or administers the budget for program areas; plans, administers, and monitors expenditures to ensure cost-effective support of programs and policies; assesses financial condition of an organization.

Information Assurance - Knowledge of methods and procedures to protect information systems and data by ensuring their availability, authentication, confidentiality, and integrity.

Information Management - Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.

Information Resources Strategy and Planning - Knowledge of the principles, methods, and techniques of information technology (IT) assessment, planning, management, monitoring, and evaluation, such as IT baseline assessment, interagency functional analysis, contingency planning, and disaster recovery.

Information Systems Security Certification - Knowledge of the principles, methods, and tools for evaluating information systems security features against a set of specified security requirements. Includes developing certification and accreditation plans and procedures, documenting deficiencies, reporting corrective actions, and recommending changes to improve the security of information systems.

Information Systems/Network Security - Knowledge of methods, tools, and procedures, including development of information security plans, to prevent information systems vulnerabilities, and provide or restore security of information systems and network services.

Information Technology Architecture - Knowledge of architectural methodologies used in the design and development of information systems, including the physical structure of a system's internal operations and interactions with other systems.

Information Technology Performance Assessment - Knowledge of the principles, methods, and tools (for example, surveys, system performance measures) to assess the effectiveness and practicality of information technology systems.

Information Technology Program Management - Knowledge of the principles, methods, and tools for the coordinated management of an IT program to include providing oversight of multiple IT projects, integrating dependent schedules and deliverables, and related activities (for example, benefits management, life cycle management, program governance).

Infrastructure Design - Knowledge of the architecture and typology of software, hardware, and networks, including LANS, WANS, and telecommunications systems, their components and associated protocols and standards, and how they operate and integrate with one another and with associated controlling software.

Operations Support - Knowledge of procedures to ensure production or delivery of products and services, including tools and mechanisms for distributing new or enhanced software.

Product Evaluation - Knowledge of methods for researching and analyzing external products to determine their potential for meeting organizational standards and business needs.

Project Management - Knowledge of the principles, methods, or tools for developing, scheduling, coordinating, and managing projects and resources, including monitoring and inspecting costs, work, and contractor performance.

Quality Assurance - Knowledge of the principles, methods, and tools of quality assurance and quality control used to ensure a product fulfills functional requirements and standards.

Requirements Analysis - Knowledge of the principles and methods to identify, analyze, specify, design, and manage functional and infrastructure requirements; includes translating functional requirements into technical requirements used for logical design or presenting alternative technologies or approaches.

Risk Management - Knowledge of methods and tools used for risk assessment and mitigation, including assessment of failures and their consequences.

Stakeholder Management - Knowledge of the concepts, practices, and techniques used to identify, engage, influence, and monitor relationships with individuals and groups connected to a work effort; including those actively involved, those who exert influence over the process and its results, and those who have a vested interest in the outcome (positive or negative).

Systems Engineering - Knowledge of the practice of integrating multiple disciplines into a team as part of a structured development process throughout a system's life cycle.

Systems Life Cycle - Knowledge of systems life cycle management concepts used to plan, develop, implement, operate, and maintain information systems.

Systems Testing and Evaluation - Knowledge of principles, methods, and tools for analyzing and developing systems testing and evaluation procedures and technical characteristics of IT systems, including identifying critical operational issues.

Technology Awareness - Knowledge of developments and new applications of information technology (hardware, software, telecommunications), emerging technologies and their applications to business processes, and applications and implementation of information systems to meet organizational requirements.