# 2210 – Information and Technology Management

This occupational series guide is intended for informational/developmental purposes only. Please note:

* This resource does not supersede any existing HHS policy;
* The information provided should not be used to evaluate individual job performance; and
* The attainment of the specified knowledge, skills, experiences and training does not automatically qualify you for promotion.

This guide is intended to educate you on career opportunities available within the Agency. It provides a means through which you can explore your professional options and identify a career path that best matches your specific needs and interests.

The Enterprise Workforce Development and Performance (EWDP) website at <http://www.ewdp.hhs.gov/> also provides guidance on the knowledge, skills, and work experience that will prepare you for progression within your chosen career path.

## INTRODUCTION

The incumbent performs routine duties related to the design and development of major HHS information technology (IT) systems and programming specifications for those systems.

## POSITION DESCRIPTION

The purpose of the position is to:

* Perform a wide variety of activities related to HHS information technology (IT) network infrastructure for operational continuity, including mainframes, mid tier servers, local area and wide area networks.
* Perform HHS information technology (IT) analytical tasks involving the design, development, implementation and maintenance of complex IT systems in support of HHS programs. The incumbent is part of a team that manages contracts for work such as standard system maintenance, redesign, IT supporting and testing. Assignments involve a variety of problems or situations, and each assignment typically consists of a series of related actions or decisions prior to final completion.
* Review, analyze, and promote awareness of enterprise-wide HHS information technology (IT) security and/or system development life cycle (SDLC) policies and standards.
* Analyze, manage, or perform work necessary to plan, design, develop, acquire, document, test, implement, integrate, maintain or modify data bases for HHS programs. This also includes activities that utilize data mining, data storage, and data warehousing concepts, methods and technology.
* Develop, maintain, and continuously improve interactive databases as well as static content for HHS websites. This includes working with database owners around the Agency to define: 1) available data for public reporting; 2) website reporting requirements that determine data needs; 3) database structures and processing needs; and 4) data storage, maintenance, and updating.

## CAREER MAP

*The following graphic shows a bird’s eye view of how an individual’s career path progresses potentially upward in grade and proficiency stage levels in the Information Technology Management Series, GS-2210. The GS Grade Levels are 9, 11, 12; 13. The Proficiency Levels are Intermediate, Intermediate to Advance, Advance to Expert; Expert.*

*\*A supervisory role may start at a GS-12 or 13 grades. To determine if you are in a management or supervisor role review the position description.*

*GS Grade and Proficiency Levels Key: 9 = Intermediate, 11= Intermediate to Advance, 12 = Advance; 13 = Expert*

****Figure 1: 2210 Career Map

## SUCCESS FACTORS

The success factors below provide guidance on how individuals can maximize performance and career success as they progress through a career in Information Technology and Management. Subject matter experts in that field provided these success factors. Many of the success factors shown in this Guide do not tie to any particular specialty area or grade level. Also, these statements do not tie to any specific competency or developmental experience. After reading through the success factors, you should seek clarification from your supervisor on how to develop experience or apply some of the success factors.

Note: You may develop knowledge and skill in numerous ways. The content below provides guidance with regard to the types of on-the-job experiences you may wish to pursue as well as training opportunities that may be beneficial.

These success factors, listed below, vary according to grade levels.

* Gain broad experience in project management by managing multiple projects.
* Identify problems and implement adjustments and improvements required to maintain production and delivery of products and services.
* Employ procedures for management of information system components.
* Use software needed to build screens and edit information, including skip patterns.
* Apply knowledge of relational databases, data formats, and converting information back and forth.
* Apply knowledge of network structure, data transformation standards (e.g., HL7, X12, and SML), standards for coding the segment, and various protocols (e.g., http, ftp, IP, and SMTP).
* Apply knowledge of coding languages, job control language, and interfaces to build a system.
* Translate technical requirements into an integrated system design.
* Apply knowledge of techniques, environments, and tools to create software that is compliant with general and site specific software standards and that easily integrate with other applications, platforms, and databases.
* Integrate software developed commercially or by other agencies.

## PROFICIENCY LEVEL DISTINCTIONS FOR BASELINE COMPETENCIES

| **Proficiency Level**  | **Baseline Competencies** |
| --- | --- |
| 5 = Expert  | * Applies the competency in exceptionally difficult situations.
* Serves as a key resource and advises others
 |
| 4 = Advanced | * Applies the competency in considerably difficult situations.
* Generally requires little or no guidance
 |
| 3 = Intermediate | * Applies the competency in difficult situations.
* Requires occasional guidance.
 |
| 2 = Basic | * Applies the competency in somewhat difficult situations.
* Requires frequent guidance.
 |
| 1 = Awareness | * Applies the competency in the simplest situations.
* Requires close and extensive guidance.
 |

Table : Proficiency Level Distinctions for Baseline Competencies

## BASELINE COMPETENCIES BY GRADE LEVEL

| **Baseline Competencies** | **GS 7** | **GS 9** | **GS 11** | **GS 12** | **GS 13** |
| --- | --- | --- | --- | --- | --- |
| Project Management | N/A | 2-3 | 3 | 4 | 5 |
| Leveraging Technology | N/A | 2-3 | 3 | 4 | 5 |
| Continuous Development | N/A | 2-3 | 3 | 4 | 5 |
| Collaboration and Partnering  | N/A | 2-3 | 3 | 4 | 5 |
| Interpersonal Skills | N/A | 2-3 | 3 | 4 | 5 |
| Negotiating | N/A | 2-3 | 3 | 4 | 5 |
| Organizational Awareness | N/A | 2-3 | 3 | 4 | 5 |
| Customer Service | N/A | 2-3 | 3 | 4 | 5 |
| Problem Solving | N/A | 2-3 | 3 | 4 | 5 |
| Flexibility | N/A | 2-3 | 3 | 4 | 5 |
| Analytical Thinking | N/A | 2-3 | 3 | 4 | 5 |
| Planning and Prioritization | N/A | 2-3 | 3 | 4 | 5 |
| Communication | N/A | 2-3 | 3 | 4 | 5 |
| Decision Making | N/A | 2-3 | 3 | 4 | 5 |
| Honesty | 5 | 5 | 5 | 5 | 5 |
| Data Analysis and Interpretation  | N/A | 2-3 | 3 | 4 | 5 |
| Mentoring | N/A | 2-3 | 3 | 4 | 5 |
| System Design and Development | N/A | 2-3 | 3 | 4 | 5 |
| Emerging Technologies | N/A | 2-3 | 3 | 4 | 5 |
| Database Management | N/A | 2-3 | 3 | 4 | 5 |
| Information Security | N/A | 2-3 | 3 | 4 | 5 |
| Enterprise Architecture | N/A | 2-3 | 3 | 4 | 5 |
| Information Technology Policy and Planning | N/A | 2-3 | 3 | 4 | 5 |
| Information Technology Service Operations | N/A | 2-3 | 3 | 4 | 5 |
| Network and Telecommunications Technology | N/A | 2-3 | 3 | 4 | 5 |
| Software Engineering and Development | N/A | 2-3 | 3 | 4 | 5 |
| Systems Administration | N/A | 2-3 | 3 | 4 | 5 |
| Systems Analysis and Design | N/A | 2-3 | 3 | 4 | 5 |
| Web Based Technologies | N/A | 2-3 | 3 | 4 | 5 |
| Health Informatics | N/A | 2-3 | 3 | 4 | 5 |

Table : Baseline Competencies by Grade Level

1. **Project Management** - Designs, implements and manages ongoing projects and directs the related resources, personnel and activities to successful completion.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Researches and collaborates to ensure a clear understanding of the project;
* Identifies key stakeholders in a project;
* Identifies and analyzes environmental influences affecting a project;
* Develops and manages the scope of a project (e.g., project objectives, team, tasks, deliverables, timelines, hours, costs);
* Develops metrics, standards of performance, critical success factors and key indicators to monitor and assess results;
* Explains the processes involved in the start up of a project and the development of an overall project plan;
* Develops risk strategies to eliminate or reduce, overcome, or compensate for an organization’s exposure to liability;
* Maintains an awareness of potential high-risk practices and situations, and appropriately identifies, responds and alerts others to risks and issues as they develop;
* Evaluates performance by reviewing progress toward goals and operational plans and makes adjustments as needed; and
* Develops a plan to ensure quality and manage project activities in a way that allows for an appropriate level of control based on role within a project.
 |
| 1=Awareness | Occasionally is attentive to project management skills but may avoid or miss key details. |
| 2=Basic | Sometimes uses project management to effectively accomplish organizational goals and assist colleagues. |
| 3=Intermediate | Normally ensures that project management is utilized to achieve the desired results of the organization. |
| 4=Advanced | Even in the most difficult situations, ensures that the core principles of project management are effectively employed.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be highly proficient in mentoring and helping others. |

Table : Project Management

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Leveraging Technology** – Demonstrates a depth of judgment, knowledge and technical skill important for the position.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Applies knowledge of basic techniques and concept;
* Uses good judgment to handle basic issues and problems;
* Keeps informed about the technical field;
* Acquires and applies new skills as necessary to keep current in field;
* Tracks new advances and cutting-edge developments in the technical field;
* Acts as a technical resource and transfers the most current knowledge and skills to others;
* Exercises excellent judgment in all aspects of the execution of job duties; and
* Modifies and creates new methods and techniques in response to changing technology.
 |
| 1=Awareness | Occasionally leverages technology appropriately; may avoid or miss opportunities to successfully make use of existing technologies.  |
| 2=Basic | Sometimes is adept at leveraging technology.  |
| 3=Intermediate | Normally leverages technology sufficiently and makes of resources that are available. |
| 4=Advanced | Even in the most difficult situations is able to leverage the technologies available to deliver the best products. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in leveraging technology.  |

Table : Leveraging Technology

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Continuous Development** – Builds professional skills and competencies and improves work processes.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Consistently seeks out business opportunities that will create growth and development;
* Identifies personal skill areas to be developed;
* Invests time and resources to learn, grow, and develop;
* Looks for opportunities to learn from mistakes;
* Looks for ways to improve performance and efficiency on the job;
* Provides others with tools and approaches to solve problems and improve processes;
* Regularly analyzes systems, processes, and performance trends to identify opportunities for improvement; and
* Uses a variety of resources to generate potential ideas for improvement.
 |
| 1=Awareness | Occasionally is attentive to continuous development, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes uses appropriate continuous development strategies to create growth and development for oneself and others. |
| 3=Intermediate | Normally ensures that regular continuous development is occurring at the work place.  |
| 4=Advanced | Even in the most difficult situations, ensures that regular continuous development is carried out, and invests time and resources to constantly grow, learn, and develop.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in continuous development.  |

Table : Continuous Development

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Collaboration and Partnering** – Works together with others and helps others to work cooperatively to accomplish objectives.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Affirms others for being good team members;
* Builds a spirit of unity within the team;
* Builds cooperation between departments and work groups;
* Cooperates with other team members;
* Fulfills commitments to other team members;
* Provides others with feedback to help them be better team members;
* Recognizes the efforts of other team members; and
* Understands and utilizes group process techniques to maximize participation and effective group functioning.
 |
| 1=Awareness | Occasionally is open to partnerships; may avoid or miss opportunities to form new partnerships or alliances. |
| 2=Basic | Sometimes is open to partnering, takes steps to understand reasons for partnerships.  |
| 3=Intermediate | Normally operates well with newly formed alliances and partnerships. |
| 4=Advanced | Normally ensures that regular partnering occurs based on the needs of the project or individual, listens well. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in partnering and working with others. |

Table : Collaborating and Partnering

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Interpersonal Skills** – Infused with strong diplomacy, understanding, and friendliness.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * 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; and
* Is sensitive to cultural diversity, race, gender, disabilities, and other individual differences.
 |
| 1=Awareness | Occasionally is in tune with interpersonal skills indicative of high friendliness and tact, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes employs interpersonal skills to further the organization’s goals. |
| 3=Intermediate | Normally ensures that all actions are imbued with understanding, friendliness, tact, empathy, concern. |
| 4=Advanced | Even in the most difficult situations, interpersonal skills are fully applied. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in interpersonal skills. |

Table : Interpersonal Skills

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Negotiating** – ability to exercise diplomacy within workplace; ability to effectively persuade and convince others of key perspectives vital to organizational success.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Strong diplomacy skills; and
* Strong persuasion skills.
 |
| 1=Awareness | Occasionally is attentive to negotiating and influencing, but may avoid or miss opportunities to negotiate/influence or take responsibility to understand others. |
| 2=Basic | Sometimes uses appropriate negotiating and influencing skills to achieve success. |
| 3=Intermediate | Normally ensures that regular negotiating and influencing occurs based on the needs of the project or individual, listens well, exercises diplomacy.  |
| 4=Advanced | Even in the most difficult situations, ensures that regular negotiating and influencing occurs based on the needs of the project or individual. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in negotiating and influencing. |

Table : Negotiating

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

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

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Knowledge of key roles and responsibilities across organizational functions; and
* Makes major recommendations concerning significant internal and external policy issues.
 |
| 1=Awareness | Occasionally demonstrates organizational awareness, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes exhibits traits that are indicative of an organizationally aware personality.  |
| 3=Intermediate | Normally exhibits a strong sense of organizational awareness, proficient with basic features of the organization.  |
| 4=Advanced | Even in the most difficult situations, exhibits a solid sense of organizational awareness, thus is deeply knowledgeable regarding the organization’s mission and function.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in organizational awareness.  |

Table : Organizational Awareness

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **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.

| **Professional Levels** | **Behaviors** |
| --- | --- |
| All Levels | * Provide information or assistance;
* Resolve their problems;
* Satisfy expectations;
* Knows about available products and services; and
* Committed to providing quality products and services.
 |
| 1=Awareness | Occasionally is attentive to the needs of the customers and colleagues but may avoid or miss opportunities to perform the necessary work when applicable. |
| 2=Basic | Sometimes uses customer service skills to perform work. |
| 3=Intermediate | Normally ensures that customer service is solid and the skills are employed to properly perform job duties. |
| 4=Advanced | Even in the most difficult situations, ensures that customer service is employed. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in providing customer service. |

Table : Customer Service

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Problem Solving** – Accurately assesses problems and effectively and efficiently arrives at excellent solutions.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Asks meaningful and relevant questions to understand problems and potential causes;
* Notices discrepancies and inconsistencies in information related to problems;
* Identifies and evaluates many possible causes for a problem;
* Proactively identifies the root causes of problems;
* Uses logical, systematic approaches to break down and solve problems;
* Creatively comes at problems in new and different ways that lead to innovative solutions;
* Analyzes costs, benefits, risks, and chances for success of potential solutions; and
* Breaks down complex problems into their fundamental parts.
 |
| 1=Awareness | Occasionally solves problems effectively and efficiently, but often fails to do so because key steps in the problem solving process are not done well. |
| 2=Basic | Sometimes breaks down problems into their fundamental parts, identifies their root causes, analyzes costs, benefits, risks, and chances for success of potential solutions, and creatively attacks problems in ways that lead to innovative solutions. |
| 3=Intermediate | Often breaks down problems into their fundamental parts, identifies their root causes, analyzes costs, benefits, risks, and chances for success of potential solutions, and creatively attacks problems in ways that lead to innovative solutions. |
| 4=Advanced | Even in the most complex situations, breaks down problems into their fundamental parts, identifies their root causes, analyzes costs, benefits, risks, and chances for success of potential solutions, and creatively attacks problems in ways that lead to innovative solutions. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent at problem solving. |

Table : Problem Solving

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **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.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Is adaptable to changing situations;
* Adjusts well to new information, guidelines, unexpected obstacles; and
* Deals well with vagueness.
 |
| 1=Awareness | Occasionally is flexible, but may avoid or miss opportunities. |
| 2=Basic | Sometimes is adaptable to changing circumstances and situations, but not at a high level.  |
| 3=Intermediate | Normally adjusts well to the workplace environment.  |
| 4=Advanced | Even in the most difficult situations, displays flexibility and adaptability at a high level.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in flexibility.  |

Table : Flexibility

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Analytical Thinking** – A person with this competency regularly questions basic assumptions about work and how it gets done, identifying underlying principles, root causes, and facts by breaking down information and data and their implications, and drawing conclusions based on their analyses. They understand the complexity of certain issues and crystallize the components of those issues to make them more manageable by applying sound reasoning.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Regularly questions basic assumptions about work and how it gets done;
* Identifies underlying principles, root causes, and facts by breaking down information; and
* Draws conclusions based upon in-depth analysis.
 |
| 1=Awareness | Occasionally is analytical, but may avoid or miss opportunities to draw conclusions that aid the organization.  |
| 2=Basic | Sometimes uses analytical thinking to accomplish tasks and objectives.  |
| 3=Intermediate | Normally ensures that analytical thinking is exercised and utilized fully.  |
| 4=Advanced | Even in the most difficult situations, ensures that analytical thinking is a priority.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in analytical thinking.  |

Table : Analytical Thinking

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Planning and Prioritization** – Plans and organizes work activities; manages several tasks at once.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Organizes work, sets priorities, and determines resource requirements;
* Implements or utilizes strategic plans on a daily basis;
* Determines necessary sequence of activities and the efficient level of resources needed to achieve short and long term goals;
* Recognizes and addresses the interdependences of activities and resources;
* Maintains a high level of energy and commitment to juggle multiple tasks and priorities, and use available resources to get more done with less; all without losing focus;
* Takes advantage of available resources (individuals, processes, departments, and tools) to complete work efficiently;
* Anticipates problems and mitigates risks;
* Uses time effectively and prevents irrelevant issues or distractions from interfering with work completion;
* Provides work-in-progress status updates proactively and informs others when work is completed;
* Coordinates with customers when problems or conflicts occur that might impact the timely completion of work;
* Negotiates adjustments in timelines and/or scope of work, when appropriate. Consults with supervisor to determine priorities if necessary;
* Sets, commits to, and maintains high standards for quality work and responsiveness in providing administrative services; readily re-adjusts priorities to respond to pressing and changing demands; and
* Coordinates with others in response to multiple, competing demands to ensure work is completed in a timely manner.
 |
| 1=Awareness | Occasionally is attentive to planning and prioritization but may avoid or miss opportunities to perform the necessary work when applicable. |
| 2=Basic | Sometimes uses planning and prioritization skills to perform work. |
| 3=Intermediate | Normally ensures that planning and prioritization is solid and the skills are employed to properly perform job duties. |
| 4=Advanced | Even in the most difficult situations, ensures that planning and prioritization techniques are fully utilized. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in planning and prioritization. |

Table : Planning and Prioritization

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Communication** – Delivers clear, effective communication and takes responsibility for understanding others.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Organizes and expresses ideas clearly orally and in writing;
* Keeps manager and others informed of the status of projects and activities;
* Ensures that regular communication occurs based on the needs of the project or the individual; and
* Clarifies the meaning and intent of others’ communication when it is unclear.
 |
| 1=Awareness | Occasionally is attentive to communication, but may avoid or miss opportunities to deliver effective communication or take responsibility to understand others. |
| 2=Basic | Sometimes uses appropriate grammar and choice of words, organizes and expresses ideas clearly, and keeps others informed of the status of projects. |
| 3=Intermediate | Normally ensures that regular communication occurs based on the needs of the project or individual, listens well, clarifies the intent of others’ communication, tailors communication to the level of the audience, and utilizes creative methods such as analogies and visuals to communicate complex ideas. |
| 4=Advanced | Even in the most difficult situations, ensures that regular communication occurs based on the needs of the project or individual, listens well, clarifies the intent of others’ communication, tailors communication to the level of the audience, and identifies creative methods such as analogies and visuals to communicate complex ideas. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in attention to communication. |

Table : Communication

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Decision Making** – Makes sound decisions in a timely manner.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Bases decisions on an analysis of short-range consequences or simple options, including people’s reactions and potential problems;
* Makes decisions in a timely manner when the options are clear and there is little pressure or risk;
* Solicits the input of the appropriate people to improve the quality and timing of a decision;
* Gathers sufficient information to identify gaps and variances before making a decision;
* Focuses on objectives and results when considering the various alternatives to a decision;
* Foresees the long-range consequences or implications of different options;
* Takes charge of a group when it is necessary to facilitate either an action or a decision; and
* Makes decisions at the right time when there is ambiguity or considerable personal or organizational risk.
 |
| 1=Awareness | Occasionally makes decisions, but may avoid or miss opportunities to make sound decisions in a timely manner. |
| 2=Basic | Sometimes bases decisions on an analysis of short-range consequences, makes decisions in a timely manner when the options are clear and there is little risk, solicits the input of others to improve the quality and timing of a decision, and gathers information to identify gaps before making a decision. |
| 3=Intermediate | Normally focuses on objectives and results when considering the alternatives to a decision, foresees the long-range consequences or implications of different options, takes charge of a group when it is necessary to facilitate a decision, and makes decisions at the right time when there is ambiguity or considerable risk. |
| 4=Advanced | Even in the most difficult or complex situations, focuses on results when considering the alternatives to a decision, foresees the long-range consequences or implications of different options, takes charge of a group when it is necessary to facilitate a decision, and makes decisions at the right time when there is ambiguity or considerable risk. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in decision making. |

Table : Decision Making

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Honesty** – Infused with principles and ethics that are valued by the organization.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * 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; and
* Is trustworthy.
 |
| 1=Awareness | Occasionally is in tune with ethics indicative of high integrity and honesty, but may avoid or miss opportunities to display ethical behavior. |
| 2=Basic | Sometimes employs integrity/honesty to further the organization’s goals. |
| 3=Intermediate | Normally ensures that all actions are imbued with integrity and honesty; results occurs based on the needs of the project or individual. |
| 4=Advanced | Even in the most difficult situations, ensures that integrity is vividly apparent.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in honesty and integrity.  |

Table : Honesty

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 5 | 5 | 5 | 5 |

Table : Proficiency Levels by Grade

1. **Data Analysis and Interpretation** – Analyzes data effectively to manage and achieve results.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Analyzes charts, graphs, and other data in order to make comparisons and draw conclusions;
* Establishes budgets based on the historical data of an individual or department’s past performance;
* Uses established financial models for analyzing quantitative data;
* Uses quantitative data to make daily decisions and monitor business performance;
* Uses marketplace and industry resources to track the performance of competitors and industry trends;
* Identifies key performance issues and establishes cause and effect relationships to solve complex financial problems for the business;
* Makes necessary decisions with incomplete, conflicting, or ambiguous quantitative data; and
* Understands the implications of quantitative data on overall business performance and makes recommendations.
 |
| 1=Awareness | Occasionally is attentive to communication, but may avoid or miss opportunities to deliver effective communication or take responsibility to understand others. |
| 2=Basic | Sometimes uses appropriate grammar and choice of words, organizes and expresses ideas clearly, and keeps others informed of the status of projects. |
| 3=Intermediate | Normally ensures that regular communication occurs based on the needs of the project or individual, listens well, clarifies the intent of others’ communication, tailors communication to the level of the audience, and utilizes creative methods such as analogies and visuals to communicate complex ideas. |
| 4=Advanced | Even in the most difficult situations, ensures that regular communication occurs based on the needs of the project or individual, listens well, clarifies the intent of others’ communication, tailors communication to the level of the audience, and identifies creative methods such as analogies and visuals to communicate complex ideas. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in attention to communication. |

Table : Data Analysis and Interpretation

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Mentoring** - Helps others, regardless of reporting relationship, to acquire the awareness, confidence, and resources necessary to fulfill their potential.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Acts as a role model and example to others;
* Facilitates the personal and professional growth of others, regardless of reporting relationship;
* Provides informal developmental feedback;
* Listens actively to what is said and not said, and to support others' self expression;
* Shares expertise and provides informal advice;
* Assists protégé in navigating organizational landscape to achieve objectives; and
* Assists, supports, and encourages others in identifying difficulties, prioritizing tasks, defining goals (e.g., creating an IDP), and producing positive results.
 |
| 1=Awareness | Occasionally mentors developing employees; may avoid or miss opportunities.  |
| 2=Basic | Sometimes demonstrates ability to mentor effectively and assist with directing others in proper career direction. |
| 3=Intermediate | Normally mentors individuals and looks for opportunities to mentor. |
| 4=Advanced | Even in the most difficult situations, identifies mentoring candidates and looks for ways to assist others. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in mentorship. |

Table : Mentoring

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **System Design and Development** – System Design Station is a software tool that specifies and verifies your system design against requirements at the conceptual and architectural level before beginning hardware or software implementation.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Assess your ability in using System Design Station in the design and development process. Consider your experience with the various functions and features of this product.
 |
| 1=Awareness | Occasionally is attentive to system design and development, but may avoid or miss opportunities. |
| 2=Basic | Sometimes uses appropriate system design and development protocols.  |
| 3=Intermediate | Normally ensures that system design and development occurs.  |
| 4=Advanced | Even in the most difficult situations, ensures that there is system design and development.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in system design and development.  |

Table : System Design and Development

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Emerging Technologies** – Maintains current knowledge of market trends and the evolution of technology in relevant specialty area(s).

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Applies emerging and evolving technologies to current and future business needs at the operational and tactical levels;
* Compares, contrasts and evaluates internal and external sources of information to assure awareness and understanding of new and emerging technology and its business implications;
* Considers trends in technology and compares and contrasts options for flexibility and risk;
* Manages competing priorities among future hardware and related software initiatives;
* Researches regularly to understand and anticipate emerging business needs to ensure technology can adequately support business needs and processes;
* Evaluates cost benefits of alternative IT-and non IT-solutions to develop a business case, and ensure support and justification for the best alternative;
* Analyzes and evaluates data to determine or support decisions around, when to adopt new technologies (i.e., lead, follow);
* Evaluates and pilots technologies prior to major investment or deployment; and
* Reviews, recommends, and/or determines emerging technologies based on their value.
 |
| 1=Awareness | Occasionally is attentive to emerging technologies, but may avoid or miss opportunities. |
| 2=Basic | Sometimes keeps abreast of emerging technologies, but at a low level of competency.  |
| 3=Intermediate | Normally ensures that there is regular adherence to emerging technologies and trends, capturing essential elements to make progress.  |
| 4=Advanced | Even in the most difficult situations, ensures that the latest technology trends are followed. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in emerging technologies.  |

Table : Emerging Technologies

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Database Management** – Plans, develops and manages data storage and retrieval systems by applying generally accepted data models, standards and processes.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Working knowledge of relational database management systems (RDBMS) models;
* Considers the challenges of development, the benefits and applications of data warehouses, and best practices to implement applications;
* Utilizes knowledge of data mining and its various uses to perform duties;
* Learns self on and understands the benefits associated with using multidimensional information (e.g., Online Analytical Processing – OLAP);
* Knows bibliographic data management systems and databases for scientific research, such as PubMed;
* Learns, stays up to date on and incorporates the basic components of a data, records, and knowledge management process;
* Considers the differences between data management and records management and how they may support one another; and
* Maintains, analyzes and/or updates a computer database.
 |
| 1=Awareness | Occasionally is attentive to database management, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes uses appropriate database management techniques. |
| 3=Intermediate | Normally ensures that database management is prioritized as an essential skill. |
| 4=Advanced | Even in the most difficult situations, plans, develops and manages data storage and retrieval systems by applying generally accepted data models, standards, and processes. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in database management.  |

Table : Database Management

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Information Security** – Ensures the confidentiality, integrity, availability, reliability, and non-repudiation of the organization’s information contained in and transmitted from systems and networks by implementing security laws, regulations, policies, standards, and control techniques.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Assesses risks associated with vulnerable systems and information;
* Considers privacy, security and accessibility of government websites;
* Keeps up to date on standards and determines or recommends levels of security protection required to protect and close exposure/risk to systems and information, in accordance with organization and federal standards;
* Uses the concepts of confidentiality, integrity and availability as applied to information systems security;
* Implements cost effective methods to reduce risks to systems and information;
* Identifies and evaluates resources needed to achieve acceptable levels of security and to remedy deficiencies based on system criticality and information sensitivity;
* Uses knowledge of continuity assurance principles, methods, and practices to plan, implement and ensure continuous service;
* Reads and/or collaborates to clearly understand the implications of legislation, regulations and standards related to information assurance and security;
* Reviews the types of and uses or recommends the most effective security controls as directed by Federal policies and procedures; and
* Ensures procedures for detecting, reporting and responding to security incidents are consistent with and follow standards and guidelines issued by applicable governing entities and regulations.
 |
| 1=Awareness | Occasionally is attentive to information security, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes uses appropriate information security techniques to accomplish tasks and objectives.  |
| 3=Intermediate | Normally ensures that regular information security protocols are followed and adhered to.  |
| 4=Advanced | Even in the most difficult situations, prioritizes information security as a high priority.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in information security.  |

Table : Information Security

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Enterprise Architecture** – Maintains a comprehensive IT framework to manage and align IT strategies, plans and systems to support the organization’s mission, goals and structure.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Analyzes, designs and implements enterprise-wide IT solutions (e.g., applications, platforms, security) that align with the organization’s structure, goals and systems;
* Identifies and uses various criteria (e.g., time, budget, etc.) to determine IT success and ensure alignment with stakeholder needs;
* Follows the enterprise architecture transition plan for moving from baseline business and technology operating environment to the target environment;
* Considers key regulatory requirements and guidance as they relate to enterprise architecture;
* Considers and integrates security and privacy into the enterprise architecture;
* Demonstrates an understanding of basic architecture documentation (i.e., work product) methodologies at each level of a commonly used framework (e.g., Zachman, FEAF or DODAF);
* Identifies opportunities to improve systems supporting business processes;
* Provides guidance and support to customers and stakeholders on the use of the enterprise system; and
* Applies emerging and evolving technologies to current and future business needs at the enterprise, operational and tactical levels.
 |
| 1=Awareness | Occasionally is attentive to enterprise architecture, but may avoid or miss opportunities. |
| 2=Basic | Sometimes prioritizes enterprise architecture as a vital component of IT work. |
| 3=Intermediate | Normally maintains a comprehensive IT framework to manage and align IT strategies.  |
| 4=Advanced | Even in the most difficult situations, supports the organization’s mission, goals, and structure via a sound adherence to enterprise architecture.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in enterprise architecture.  |

Table : Enterprise Architecture

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table : Proficiency Levels by Grade

1. **Information Technology Policy and Planning** – Develops a framework for acquiring and managing information technology systems based on the organization’s business requirements.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Aligns IT investments with the organization’s mission (e.g., capital planning and investment control, Enterprise Performance Life Cycle);
* Uses established analysis, business cases and decision-making processes to evaluate capital investments in IT and IT-alternative investments;
* Considers the organization’s strategic and performance plans, to identify specific requirements and capital planning processes to drive the acquisition strategy (e.g., Enterprise performance life cycle);
* Evaluates current and emerging best practices in IT relative to the enterprise’s strategic plan;
* Acquires feedback from business owners, community and end users;
* Establishes and utilizes methodologies to compare and contrast cost, benefits and risks;
* Analyzes cost and economic data to assess quality and communicate meaning to others;
* Evaluates needs and a variety of potential IT-based solutions.
* Identifies and designs shared solutions between organizations to leverage technology investments;
* Assesses and manages all IT investments. (Follows logical steps to move from assessment of individual IT capital investments, to an integrated process for managing IT investments, as portfolios);
* Follows the organization’s IT acquisition approach to compare, contrast and evaluate acquisitions;
* Develops metrics, critical success factors and key indicators to monitor and assess results; and
* Develops security plans to protect the confidentiality, integrity, and availability of the organization's information, information systems, and networks in accordance with policies, procedures and control techniques, and agency and federal regulations.
 |
| 1=Awareness | Occasionally is attentive to IT policy and planning, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes uses appropriate IT policy and planning protocols, but not at a high level. |
| 3=Intermediate | Normally ensures that IT policy and planning is a priority.  |
| 4=Advanced | Even in the most difficult situations, ensures that IT policy and planning occurs. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in IT policy and planning.  |

Table : Information Technology Policy and Planning

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

: Proficiency Levels by Grade

1. **Information Technology Service Operations** – Supports stakeholders by assessing and translating information technology into responsive solutions.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Applies knowledge of IT systems, methods and practices to support customers (e.g., help desk functions);
* Uses knowledge of IT principles, methods and practices to plan, implement and coordinate services to diagnose and resolve problems, and ensure continuous service;
* Develops metrics, critical success factors and key indicators to monitor and assess results;
* Ensures continuous customer support and contact with customer;
* Diagnoses problems in computer hardware or software and makes recommendations for problem resolutions; and
* Implements the most effective solutions to resolve organization and stakeholder/customer problems.
 |
| 1=Awareness | Occasionally is attentive to IT Service Operations. |
| 2=Basic | Sometimes uses appropriate means to ensure that IT Service Operations are carried out. |
| 3=Intermediate | Normally ensures that regular IT Service Operations are carried out. |
| 4=Advanced | Even in the most difficult situations, ensures that regular IT Service Operations are undertaken. |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in IT Service Operations.  |

: Information technology Service Operations

**Proficiency Levels by Grade**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 49: Proficiency Levels by Grade

1. **Network and Telecommunications Technology** – Designs, manages, and maintains network systems to transmit data.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Maintains awareness of capabilities and limitations of data transmission modes and media;
* Uses knowledge of data transmission concepts, functions and mechanisms;
* Evaluates the benefits and limitations of commonly used local wired and wireless voice and data communication architectures, devices and protocols; as well as wide-area voice and data architectures, devices and protocols;
* Applies network systems knowledge to plan, design and develop systems, and properly deploy systems to support the organization; and
* Uses network engineering knowledge in design, operations and security activities.
 |
| 1=Awareness | Occasionally is proficient with network and telecommunications technology, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes displays awareness of capabilities and limitations of data transmission modes and media.  |
| 3=Intermediate | Normally designs, manages, and maintains network systems to transmit data consistently.  |
| 4=Advanced | Even in the most difficult situations, ensures adherence of network and telecommunication technology standards.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent network and telecommunication technology.  |

Table 50: Network and Telecommunications Technology

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 51: Proficiency Levels by Grade

1. **Software Engineering and Development** – Develops or selects, integrates, and transitions software technology.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Understands existing and emerging technologies and their applicability in the software implementation environment [e.g., vendor or open source, Service Oriented Architectures (SOA)];
* Compares benefits and limitations of open source software with vendor-developed software;
* Adopts and applies systems engineering perspectives and processes to software development;
* Evaluates software quality and applicability in testing software capabilities;
* Knows and considers available off-the-shelf software to make ‘build or buy’ decisions;
* Monitors software configuration changes to anticipate and address the impact of data reliability and customer satisfaction issues;
* Tests, debugs, and maintains detailed instructions (programs) for computers to follow and ensure performance of their intended functions;
* Conceives, designs, and tests logical structures for solving problems by computer; and
* Maintains an awareness of the different programming languages used based on the purpose of the program, individual focus and area supported (e.g., specialist, generalist), and the organization.
 |
| 1=Awareness | Occasionally exhibits proficiency with software engineering and development, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes displays proficiency with software technology.  |
| 3=Intermediate | Normally displays a sound level of software engineering and development know-how.  |
| 4=Advanced | Even in the most difficult situations, displays strong skills exhibiting software engineering and development.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in software engineering and development . |

Table 52: Software Engineering and Development

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 53: Proficiency Levels by Grade

1. **Systems Administration** – Plans and coordinates the installation, testing, operation, and maintenance of hardware and software systems.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Evaluates, selects, and installs compilers, assemblers and utilities;
* Integrates hardware and software components within the systems environment;
* Evaluates new systems engineering technologies and their effect on the operating environment;
* Ensures that information security/assurance policies, principles, practices are an integral element of the operating environment;
* Monitors the systems environment to ensure effective performance;
* Manages hardware and software obsolescence;
* Anticipates and forecasts hardware requirements when software needs change;
* Supports decisions to determine when hardware upgrades are required based on emerging software requirements;
* Plans and schedules the installation of new or modified hardware, operating systems and software;
* Addresses opportunities and challenges of implementing transformational technology (e.g., virtualization, cloud computing) into the Federal environment;
* Manages accounts, network rights and access to systems and equipment;
* Implements security procedures and tools to ensure rigorous security measures are in place; and
* Ensures system availability, functionality, integrity and efficiency, and maintains system configuration.
 |
| 1=Awareness | Occasionally is in-tune with system administration, but may avoid or miss opportunities. |
| 2=Basic | Sometimes displays proficiency with systems administration tasks.  |
| 3=Intermediate | Normally ensures that hardware and software systems are properly maintained.  |
| 4=Advanced | Even in the most difficult situations, takes time to implement proper systems administration goals and priorities.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in systems administration.  |

Table 54: Systems Administrator

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 55: Proficiency Levels by Grade

1. **Systems Analysis and Design** – Analyzes the business needs and integrates technology into the organization by designing and utilizing models and methodologies to simulate deployment.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Determines and conducts applicable data mining and modeling activities;
* Identifies and uses various criteria (i.e., time, budget, etc.) to determine IT success and ensure alignment with stakeholder needs;
* Compares and contrasts characteristics and challenges in “new” systems adopted by the organization;
* Maintains awareness of stakeholder point of views related to available systems;
* Embraces a systems perspective for IT and related assessment process(es);
* Distinguishes between outcome (what the system needs to achieve) and output (what the system does);
* Identifies and uses modeling and simulation approaches/tools (e.g., dynamics modeling, cost benefit analysis, costing, forecasting, sourcing models—build or buy) to make decisions;
* Maintains knowledge of programs and standards associated with quality management; and
* Identifies criteria and integrates “go/no go” consideration stages into development life cycle.
 |
| 1=Awareness | Occasionally is in-tune with systems analysis and design, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes analyzes business needs and carries out other related tasks. |
| 3=Intermediate | Normally ensures that business needs are analyzed and technology is integrated. |
| 4=Advanced | Even in the most difficult situations, ensures that the organization received the latest technology.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in systems analysis and design.  |

Table 56: Systems Analysis and Design

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 57: Proficiency Levels by Grade

1. **Web Based Technologies** - Supports the development, maintenance and application of web-based systems, services and technologies (e.g., Internet, intranet, extranet, and website).

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Supports development of web-based systems;
* Assists with web-based systems maintenance; and
* Provides development support with other services and technologies.
 |
| 1=Awareness | Considers stakeholder needs when recommending appropriate web technologies. |
| 2=Basic | Considers the organization’s strategic vision of web technology solutions. Evaluates current collaborative web technologies and the benefits/risks associated with them. |
| 3=Intermediate | Considers internal factors such as records management, human resources, etc. when making decisions involving technologies. Assesses delivery strategies, web technologies, oversight, and organizational implications for web-based development. |
| 4=Advanced | Knows Internet standards relative to web technology development. Considers web technology in relation to privacy standards and Federal regulations. Assess the challenges and opportunities associated with integrating new web technologies and applications into the Federal Government’s IT infrastructure. |
| 5=Expert | Identifies and uses tools for information management and technology product design and development. |

Table 58: Web Based Technologies

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 59: Proficiency Levels by Grade

1. **Health Informatics** – Combines computer science, information science, and healthcare information with the latest IT systems to optimize the acquisition, storage, retrieval, and use of information in health and biomedicine.

| **Professional Levels** | **Key Behaviors** |
| --- | --- |
| All Levels | * Creates and advances databases, algorithms, computational and statistical techniques, and theory to solve formal and practical problems arising from the management and analysis of biological data;
* Gleans understanding of biological processes through the use of mathematical and computing approaches;
* Focuses on developing and applying computationally intensive techniques (e.g., pattern recognition, data mining, machine learning algorithms, and visualization) to increase understanding of biological processes.
 |
| 1=Awareness | Occasionally is attentive to health informatics, but may avoid or miss opportunities.  |
| 2=Basic | Sometimes uses appropriate health informatics skills to accomplish tasks.  |
| 3=Intermediate | Normally ensures that there is adherence across the organization of health informatics. |
| 4=Advanced | Even in the most difficult situations, exercises health informatics measures.  |
| 5=Expert | Models, leads, trains, and motivates multiple levels of personnel to be excellent in health informatics.  |

Table 60: Health Informatics

**Proficiency Levels by Grade**

| Grade Level | GS-7 | GS-9 | GS-11 | GS-12 | GS-13 |
| --- | --- | --- | --- | --- | --- |
| Proficiency Scale | N/A | 2-3 | 3 | 4 | 5 |

Table 61: Proficiency Levels by Grade

## BASELINE JOB REQUIREMENTS, AND PROFICIENCY DEMONSTRATIONS, BY GRADE LEVEL

### GS-2210-07, Information Technology Management

#### Baseline Job Requirements

Knowledge of, and skill in applying, most of the following:

* IT principles, methods, and practices in the assigned specialty area
* IT systems development life cycle management concepts
* Performance monitoring principles and methods
* Quality assurance principles
* Technical documentation methods and procedures
* Systems security methods and procedures
* Analytical methods
* Oral and written communication techniques

#### Proficiency Demonstrations

Performs easily distinguishable tasks involving related steps, processes, methods, and procedures. The employee decides what needs to be done by choosing from various alternatives, recognizing differences among a few easily distinguishable situations.

#### Education Requirements

One full year of graduate level education or superior academic achievement.

### GS-2210-09, Information Technology Management

#### Baseline Job Requirements

Knowledge of, and skill in applying, most of the following:

* IT concepts, principles, methods, and practices
* The mission and programs of customer organizations
* The organization’s IT infrastructure
* Performance management/measurement methods, tools, and techniques
* Systems testing and evaluation principles, methods, and tools
* IT security principles and methods
* Requirement analysis principles and methods
* COTS products and components
* Internet technologies to analyze the Internet potential of systems, networks, and data
* New and emerging information technologies and/or industry trends
* Acquisition management policies and procedures
* Cost-benefit analysis principles and methods
* Analytical methods and practices
* Project management principles and methods
* Oral and written communication techniques

#### Proficiency Demonstrations

Performs various duties that involve applying a series of different and unrelated processes and methods. The employee: decides what needs to be done based on analyses of the subjects and issues related to the assignment; and selects appropriate courses of action from many acceptable alternatives.

#### Education Requirements

Master's degree or equivalent graduate degree; or 2 full years of progressively higher level graduate education leading to a master's degree or equivalent graduate degree.

### GS-2210-11, Information Technology Management

#### Baseline Job Requirements

Knowledge of, and skill in applying, most of the following:

* IT concepts, principles, methods, and practices
* The mission and programs of customer organizations
* The organization’s IT infrastructure
* Performance management/measurement methods, tools, and techniques
* Systems testing and evaluation principles, methods, and tools
* IT security principles and methods
* Requirement analysis principles and methods
* COTS products and components
* Internet technologies to analyze the Internet potential of systems, networks, and data
* New and emerging information technologies and/or industry trends
* Acquisition management policies and procedures
* Cost-benefit analysis principles and methods
* Analytical methods and practices
* Project management principles and methods
* Oral and written communication techniques

#### Proficiency Demonstrations

Performs a variety of duties that involve many different and unrelated processes and methods pertinent to the IT field. The employee decides what needs to be done by: evaluating unusual circumstances; considering different approaches; and dealing with incomplete and conflicting data.

#### Education Requirements

Ph.D. or equivalent doctoral degree or 3 full years of progressively higher level graduate education leading to a Ph.D. or equivalent doctoral degree.

### GS-2210-12, Information Technology Management

#### Baseline Job Requirements

Knowledge of, and skill in applying, most of the following:

* IT concepts, principles, methods, and practices
* The mission and programs of customer organizations
* The organization’s IT infrastructure
* Performance management/measurement methods, tools, and techniques
* Systems testing and evaluation principles, methods, and tools
* IT security principles and methods
* Requirement analysis principles and methods
* COTS products and components
* Internet technologies to analyze the Internet potential of systems, networks, and data
* New and emerging information technologies and/or industry trends
* Acquisition management policies and procedures
* Cost-benefit analysis principles and methods
* Analytical methods and practices
* Project management principles and methods
* Oral and written communication techniques

#### Proficiency Demonstrations

Performs a variety of duties requiring the application of many different and unrelated processes and methods to a broad range of IT activities or to the in-depth analysis of IT issues. The employee makes decisions that involve major uncertainties with regard to the most effective approach or methodology to be applied. These changes typically result from: continuing changes in customer business requirements; or rapidly evolving technology in the specialty areas.

#### Education Requirements

Ph.D. or equivalent doctoral degree or 3 full years of progressively higher level graduate education leading to a Ph.D. or equivalent doctoral degree.

### GS-2210-13, Information Technology Management

#### Baseline Job Requirements

Mastery of, and skill in applying, advanced IT principles, concepts, methods, standards, and practices sufficient to accomplish assignments such as:

* Develop and interpret policies, procedures, and strategies governing the planning and delivery of services throughout the agency
* Provide expert technical advice, guidance, and recommendations to management and other technical specialists on critical IT issues
* Apply new developments to previously unsolvable problems; and
* Make decisions or recommendations that significantly influence important agency IT policies or programs

Mastery of, and skill in applying, most of the following:

* Interrelationships of multiple IT specialties;
* The agency’s IT architecture;
* New IT developments and applications;
* Emerging technologies and their applications to business processes;
* IT security concepts, standards, and methods;
* Project management principles, methods, and practices, including developing plans and schedules, estimating resource requirements, defining milestones and deliverables, monitoring activities, and evaluating and reporting on accomplishments

Oral and written communication techniques sufficient to:

* Ensure the integration of IT programs and services
* Develop solutions to integration/interoperability issues
* Design, develop, and manage systems that meet current and future business requirements and apply and extend, enhance, or optimize the existing architecture
* Manage assigned projects
* Communicate complex technical requirements to non-technical personnel
* Prepare and present briefings to senior management officials on complex/controversial issues

#### Proficiency Demonstrations

Perform a variety of duties requiring the application of many different and unrelated processes and methods to a broad range of IT activities or to the in-depth analysis of IT issues. The employee makes decisions that involve major uncertainties with regard to the most effective approach or methodology to be applied. These changes typically result from: continuing changes in customer business requirements; or rapidly evolving technology in the specialty areas.

####  Education Requirements

Ph.D. or equivalent doctoral degree or 3 full years of progressively higher level graduate education leading to a Ph.D. or equivalent doctoral degree.

##  RECOMMENDED TRAINING FOR QUALITATIVE / QUANTITATIVE ANALYSIS

| **Proficiency Levels** | **Recommended Training** | **Potential Vendor(s)** |
| --- | --- | --- |
| Entry (1) or Intermediate (2) | Basic Mathematics Practical StatisticsCustomer ServiceCommunication and Listening SkillsGroup Processes and TeamworkMicrosoft Office TrainingPresentations and Briefings | USDA Grad SchoolHHS Learning Portal |
| Intermediate (2) or Intermediate to Advanced (3) | Introductory Statistics I Team BuildingTechnical WritingProject ManagementManagement Theories and Practices (TQM, Six Sigma, Balance Scorecard)Introduction to MS Project 2003Cost Benefit Analysis Workshop | HHS Learning PortalOPDIV Training CenterUSDA Grad School |
| Intermediate to Advanced (3) | Evaluation under OMB Program Assessment Rating Tool (PART): An IntroductionSurvey Design and CollectionCOTR TrainingRegulatory TrainingFood and Drug LawBiologics LawNew Reviewers Training | HHS Learning PortalOPDIV Training CenterUSDA Grad School |
| Intermediate to Advanced(3) or Advanced (4) | Introductory Statistics II Scientific Course Seminars and WorkshopsDecision Support: Building New Analytical SkillsCommunicating Analysis ResultsCost-Benefit AnalysisData Collection and AnalysisIntermediate MS Excel 2003 | Management ConceptsUSDA Grad SchoolOPDIV UniversitiesHHS Learning Portal |
| Advanced (4) | Advanced Data Analysis Techniques and StrategiesAnalytic Techniques – AdvancedBudget FundamentalsBudget Formulation and ExecutionBusiness Systems | Management ConceptsOPDIV UniversitiesHHS Learning Portal |

Table 62: Recommended Training

## DEVELOPMENTAL ACTIVITIES

Training is only one option, other developmental ideas include:

* Reading/Studying
* Developing SOPs
* Specific assignments/On the job training
* Rotations with customers
* Completing/Leading special project(s)
* Membership in professional organizations
* Participating in committees
* Shadowing
* Mentoring (Become a mentor!)
* Volunteering
* Peer coaching
* Cross-Training (Also Intramural vs. Extramural)
* Learning Teams

## ADDITIONAL TRAINING OPPORTUNITIES AND RESOURCES:

### Free Training

#### SkillSoft Training Courses in the HHS Learning Management System (LMS)

The [Learning Management System](https://lms.learning.hhs.gov/Saba/Web/Main) has thousands of free online training courses for all HHS employees on topics such as IT programming and certifications, MS Office Programs, Business, Live learning, Legal information, and Federal programs:

<https://lms.learning.hhs.gov/Saba/Web/Main>

#### Microsoft Office Training

The official training site of the [Microsoft Office](http://office.microsoft.com/en-us/support/training-FX101782702.aspx) suite covers many topics and has separate pages for 2003, 2007 and 2010 versions.

<http://office.microsoft.com/en-us/support/training-FX101782702.aspx>

#### OPDIV IT Training

Free training programs taught by IT Specialists focused on basic IT programs and data tracking systems:

<http://training.cit.nih.gov/courselisting.aspx?Sort=Month>

#### OPDIV Training Centers

Provides [training](http://trainingcenter.nih.gov/audience-admin.html) for Administrative Professionals at the OPDIV level who are responsible for providing comprehensive administrative support. Such incumbents may serve as principal advisors to important agency organizations. They may participate in the development and implementation of management policies, the planning of organizational needs, and the preparation of plans, goals, objectives, or criteria for management processes. These positions require knowledge of a wide range of qualitative and/or quantitative methods for the development and management of major administrative programs, demonstrated analytical ability, and strong written and verbal communications skills.

<http://trainingcenter.nih.gov/audience-admin.html>

#### OPDIV Library Resource Training

[OPDIV Libraries](http://nihlibrary.nih.gov/ResourceTraining/Pages/default.aspx) offers training on how to effectively find, appraise and manage information using an array of electronic library resources. Topics include: how to search the biomedical literature, access online journals, order and receive articles via email, set up a research update service, use bibliographic management software to manage a personal library collection, and format bibliographies.

<http://nihlibrary.nih.gov/ResourceTraining/Pages/default.aspx>

#### Pathways Program

The [Management Intern Program](http://www.opm.gov) offers outstanding HHS employees the opportunity to explore different administrative career fields, gain invaluable insight into the HHS, and to prepare for future administrative or leadership positions.

<http://www.opm.gov>

#### HHS Mentoring Program

The HHS [mentoring](http://trainingcenter.nih.gov/hhs_mentoring.html) program was created to help federal employees develop their knowledge, skills, and abilities. Build a year-long relationship as either a mentor or a mentee, and participate in HHS and NIH program events, activities, and resources to facilitate personal and professional growth.

<http://trainingcenter.nih.gov/hhs_mentoring.html>

#### OPDIV Videocasting and Podcasts

Watch OPDIV Conferences and Seminars that are recorded live and then archived within:

* The HHS Learning Portal
* The Leadership Development Channel

### Free Classes and Lectures

#### Excel is Fun

[YouTube](http://www.youtube.com/user/ExcelIsFun) has over 1600 instructional videos about Microsoft Excel. There are playlists dealing with Excel basics, pivot tables, finance and statistical functions, and much more. <http://www.youtube.com/user/ExcelIsFun>

#### Leadership Resources

Twenty-five free online leadership resources can be found at:

<http://people-equation.com/25-free-leadership-resources/>

#### [iTunes](http://www.apple.com/education/itunes-u/) University

A powerful distribution system for everything from lectures to language lessons, films to labs, audio books to tours — this is an innovative way to get educational content into everyone’s hands. More than 350,000 free lectures, videos, films, and other resources — from all over the world.

<http://www.apple.com/education/itunes-u/>

#### Open Courseware Consortium

**The** [Open CourseWare Consortium](http://www.ocwconsortium.org/) **is a worldwide collaboration of higher education institutions and associated organizations creating a broad and deep body of open educational content using a shared model. You can search for courses based on keywords, language, and source, or visit university homepages to find more courses.**

<http://www.ocwconsortium.org/>

#### TED

**TED is a clearinghouse that offers free knowledge and inspiration from the world's most inspired and articulate thinkers. The site houses free lectures by scientists, physicians, philosophers, professors and more. Topics include: Science, Technology, Business, Design and Global Issues.**

<http://www.ted.com/talks>

#### OPDIV Acquisition Management Training Resource Center

The site contains information about [NIH](http://trainingcenter.nih.gov/acquisition_mgmt_resource_ctr.html)/HHS acquisition certification requirements, training options, FAQs, and additional acquisitions resources:

<http://trainingcenter.nih.gov/acquisition_mgmt_resource_ctr.html>

### Language Development

#### American Sign Language Online

ASL University is an online American Sign Language curriculum resource center. ASLU provides free self-study materials, lessons, and information.

<http://www.lifeprint.com/index.htm>

#### Free Language Lessons

Learning a language can sharpen your mind and broaden your horizons. This page has sites that will help you get started learning any of 40 different languages.

<http://www.openculture.com/freelanguagelessons>

### Free Books

#### Books 24x7

Thousands of Free online books, concise summaries of today's foremost business books, live and on demand videos of preeminent thought leaders and business gurus, best practices from leading senior executives of Fortune 5000 companies. Available in the HHS LMS:

<https://lms.learning.hhs.gov/Saba/Web/Main>

#### Learn Out Loud

[Learn Out Loud](http://www.learnoutloud.com/Free-Audio-Video) offers a wide selection of free audio books, lectures, speeches, and interviews on different subjects.

<http://www.learnoutloud.com/Free-Audio-Video>

#### PubMed

[PubMed](http://www.ncbi.nlm.nih.gov/pubmed/) comprises more than 21 million citations for biomedical literature from MEDLINE, life science journals, and online books. Citations may include links to full-text content from PubMed Central and publisher web sites.

<http://www.ncbi.nlm.nih.gov/pubmed/>

#### The National Library of Medicine

Bookshelf provides free access to over 700 texts in life science and healthcare. A vital node in the data-rich resource network at [NCBI](http://www.ncbi.nlm.nih.gov/books/), Bookshelf enables users to easily browse, retrieve, and read content, and spurs discovery of related information.

<http://www.ncbi.nlm.nih.gov/books/>

#### Your Public Library

### Free Conferences and Seminars

#### DDM Seminar Series

The DDM Seminar Series offers the [NIH](http://www.ddmseries.od.nih.gov/) community engaging presentations that provide meaningful insights into leadership and management concepts, challenges, and solutions. The seminars provide NIH employees with the opportunity to advance their knowledge of best practices in a variety of leadership and management areas.

<http://www.ddmseries.od.nih.gov/>

#### Management Seminar Series

The Management Seminar Series (MSS) provides an opportunity for administrative and scientific staff to obtain or enhance management skills through discussions and presentations addressing core management issues and NIH-related matters.

<http://trainingcenter.nih.gov/management_seminar_series.html>