

# General Dynamics Information Technology, Inc.

## GS-35F-080CA

### SIN 132-51 – IT Professional Services Labor Category Requirements and Descriptions

#### LABOR CATEGORIES, EDUCATION AND YEARS OF EXPERIENCE

<u>No.</u>	<u>Labor Categories</u>	<u>Education</u>	<u>Years Experience</u>
ANT-001	Technical Expert Level 5	BA/BS	6
ANT-002	Technical Expert Level 4	BA/BS	8
ANT-003	Technical Expert Level 3	MA/MS	10
ANT-004	Technical Expert Level 2	MA/MS	12
ANT-005	Technical Expert Level 1	PhD	15
ANT-006	Project Manager/Task Lead	BA/BS	7
ANT-007	Program Manager	BA/BS	10
ANT-008	Sr. Program Manager	BA/BS	12
ANT-009	Proprietary Product Application Developer	*	*
ANT-010	Proprietary Product Application Designer	*	*
ANT-011	Proprietary Product Database Administrator	*	*
ANT-012	Proprietary Product System Architect	*	*
ANT-013	Business Process Reengineering Analyst	*	*
ANT-015	Scientist	BA/BS	2
ANT-016	Staff Scientist	BA/BS	5
ANT-017	SR Scientist	MA/MS	8
ANT-018	Principal Scientist	MA/MS	10
ANT-019	SR Principal Scientist	PhD	15
ANT-023	JR Systems Engineer	BA/BS	*
ANT-024	Systems Engineer	BA/BS	3
ANT-025	Staff Systems Engineer	BA/BS	6
ANT-026	SR Systems Engineer	BA/BS	8
ANT-027	Principal Systems Engineer	BA/BS	10
ANT-028	SR Principal Systems Engineer	MA/MS	15
ANT-029	Information Engineer	BA/BS	5
ANT-030	SR Information Engineer	BA/BS	8
ANT-031	Principal Information Engineer	BA/BS	10
ANT-032	JR Software Engineer	BA/BS	*
ANT-033	Software Engineer	BA/BS	2
ANT-034	Staff Software Engineer	BA/BS	3
ANT-035	SR Software Engineer	BA/BS	5
ANT-036	Principal Software Engineer	MA/MS	8
ANT-037	Software Architect	MA/MS	10
ANT-038	Computer Security Specialist	BA/BS	7
ANT-039	SR Computer Security Systems Specialist	BA/BS	10
ANT-040	JR Database Architect	BA/BS	2
ANT-041	Database Architect	BA/BS	3
ANT-042	SR Database Architect	BA/BS	5
ANT-045	Computer Programmer/Analyst	BA/BS	3
ANT-046	Staff Computer Programmer/Analyst	BA/BS	4
ANT-047	SR Computer Programmer/Analyst	BA/BS	5
ANT-048	Principal Computer Programmer/Analyst	BA/BS	8
ANT-049	Computer Systems Programmer	BA/BS	5
ANT-050	Web Designer	BA/BS	2

<u>No.</u>	<u>Labor Categories</u>	<u>Education</u>	<u>Years Experience</u>
ANT-051	Web Developer	BA/BS	4
ANT-052	SR Web Developer	BA/BS	8
ANT-053	Web Tech Administrator	BA/BS	4
ANT-054	Web Content Manager	BA/BS	2
ANT-055	Web Security Administrator	BA/BS	4
ANT-057	Computer Systems Analyst	BA/BS	3
ANT-058	Staff Computer Systems Analyst	BA/BS	5
ANT-059	SR Computer Systems Analyst	BA/BS	8
ANT-060	Principal Computer Systems Analyst	BA/BS	10
ANT-061	Legacy System Analyst	*	*
ANT-062	JR Functional Analyst/Specialist	BA/BS	1
ANT-063	Functional Analyst/Specialist	BA/BS	5
ANT-064	SR Functional Analyst/Specialist	BA/BS	7
ANT-065	Principal Functional Analyst/Specialist	MA/MS	8
ANT-066	SR Principal Functional Analyst/Specialist	MA/MS	10
ANT-067	Data Management Specialist	BA/BS	6
ANT-068	Data Administrator	BA/BS	6
ANT-069	Data Manager	BA/BS	7
ANT-070	Computer Operations Manager	AA/AS	6
ANT-071	SR Computer Operations Manager	BA/BS	8
ANT-076	Communications Engineer	BA/BS	6
ANT-077	SR Communications Engineer	BA/BS	10
ANT-078	JR Network Engineer	BA/BS	*
ANT-079	Network Engineer	BA/BS	2
ANT-080	Staff Network Engineer	BA/BS	5
ANT-081	SR Network Engineer	MA/MS	8
ANT-082	Principal Network Engineer	MA/MS	10
ANT-083	Network Administrator	BA/BS	7
ANT-084	SR Network Administrator	BA/BS	8
ANT-088	Network/Computer Support Specialist	BA/BS	3
ANT-089	Computer System/Network Integration Engineer	*	*
ANT-092	SR Telecommunications Analyst	AA/AS	3
ANT-093	Communications Network Manager	BA/BS	6
ANT-102	Hardware Specialist	BA/BS	5
ANT-103	Quality Assurance/IV&V Analyst	BA/BS	2
ANT-104	Quality Assurance/IV&V Specialist	BA/BS	4
ANT-105	Quality Assurance/IV&V Manager	BA/BS	7
ANT-108	Configuration Management Specialist	BA/BS	5
ANT-109	SR Configuration Management Specialist	BA/BS	7
ANT-111	Training Specialist/Instructor	BA/BS	4
ANT-112	SR Training Specialist/Instructor	BA/BS	6
ANT-114	Training Specialist	AA/AS	3
ANT-115	SR Training Specialist	AA/AS	7
ANT-116	Principal Training Specialist	AA/AS	10
ANT-119	Testing and Validation Specialist	BA/BS	*
ANT-121	Principal Testing and Validation Specialist	MA/MS	5
ANT-123	Instructional System Designer	BA/BS	2
ANT-124	SR Instructional System Designer	MA/MS	5

<u>No.</u>	<u>Labor Categories</u>	<u>Education</u>	<u>Years Experience</u>
ANT-128	Staff Graphics Design Specialist	AA/AS	5
ANT-129	SR Graphics Design Specialist	AA/AS	8
ANT-130	Principal Graphics Design Specialist	AA/AS	9
ANT-133	Contract Administrator	BA/BS	2
ANT-134	SR Contract Administrator	BA/BS	5
ANT-137	Program Management Specialist	BA/BS	3
ANT-138	SR Program Management Specialist	BA/BS	6
ANT-139	Principal Program Management Specialist	BA/BS	8
ANT-148	SR Documentation Specialist	AA/AS	8
ANT-150	Technical Editor	BA/BS	5
ANT-158	Imagery Analyst	BA/BS	2
ANT-159	Imagery Sr. Analyst	BA/BS	5
ANT-160	Imagery Principal Analyst	BA/BS	8
ANT-161	Imagery Sr. Principal Analyst	MA/MS	20
ANT-162	Geospatial Analyst	BA/BS	2
ANT-163	Geospatial Sr. Analyst	BA/BS	5
ANT-164	Geospatial Principal Analyst	BA/BS	8
ANT-165	Geospatial Sr. Principal Analyst	MA/MS	20

\* See Labor Category Descriptions for Specialized Training and Minimum Qualifications

Resumes shall be provided to the GSA Contracting Officer or user Agency upon request.

#### **Education/Experience Substitutions**

The following presents the allowable substitutions based on education and experience:

Four (4) years' experience (in addition to minimum experience requirements) may be substituted for a Bachelor's degree.

Two (2) years' experience (in addition to minimum experience requirements and Bachelor's degree) may be substituted for a Master's degree.

Two (2) years' experience (in addition to minimum requirements and Master's degree) may be substituted for a Ph.D.

For categories where a Bachelor's degree is required, a Master's degree may be substituted for two (2) years' experience; or a doctoral degree may be substituted for three (3) years' experience.

Successful completion of each course in specialized or emerging technology (Windows 2000/XP, Oracle, Powerbuilder, Web development, internet/intranet security, and XML, etc.) may be substituted for one year of experience.

For the categories of JR Network Engineer, Network Engineer, Staff Network Engineer, and Communications Network Manager, a Certificate in a related technology (certified Network Engineer, for example) may be substituted for the degree requirement.

**SIN 132-51 - LABOR CATEGORY DESCRIPTIONS**

**ANT-001 Technical Expert Level 5**

Minimum/General Experience: Experience qualifications will be determined on a case-by-case basis. Generally, this requires at least six years of general experience in information systems, including four years of specialized experience providing state-of-the-art solutions in information systems technology (or, if the particular area of expertise is new state-of-the-art technology, the specialized experience may be less than four years and more consistent with the age of the technology). Performs highly specialized and technical tasks associated with the most current and cutting-edge technologies. May serve as a technical consultant to a project or a number of projects dealing with area of technical expertise. Generally recognized as a leader in the industry in their area of expertise, sought out by others in their area of expertise for advice and guidance.

Functional Responsibility: Provide expert, independent services and leadership in specialized technical areas. Provides expertise on an as-needed basis to all task assignments. Provides expert advice and assistance in state-of-the-art software/hardware. Coordinates with contractor management and Government personnel to ensure that the problem has been properly defined and that the solution will satisfy the Government's requirement.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

**ANT-002 Technical Expert Level 4**

Minimum/General Experience: Experience qualifications will be determined on a case-by-case basis. Generally this requires at least eight years of general experience in information systems, including six years of specialized experience providing state-of-the-art solutions in information systems technology (or, if the particular area of expertise is new state-of-the-art technology, the specialized experience may be less than six years and more consistent with the age of the technology). Recognized expert in the technology being addressed.

Functional Responsibility: Provide expert, independent services and leadership in specialized technical areas. Provides expertise on an as-needed basis to all task assignments. Provides expert advice and assistance in state-of-the-art software/hardware.

Coordinates with contractor management and Government personnel to ensure that the problem has been properly defined and that the solution will satisfy the Government's requirement.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-003 Technical Expert Level 3**

Minimum/General Experience: Experience qualifications will be determined on a case-by-case basis. Generally this requires at least ten years of general experience in information systems, including eight years of specialized experience providing state-of-the-art solutions in information systems technology (or, if the particular area of expertise is new state-of-the-art technology, the specialized experience may be less than eight years and more consistent with the age of the technology). Recognized expert in the technology being addressed.

Functional Responsibility: Provide expert, independent services and leadership in specialized technical areas. Provides expertise on an as-needed basis to all task assignments. Provides expert advice and assistance in state-of-the-art software/hardware. Coordinates with contractor management and Government personnel to ensure that the problem has been properly defined and that the solution will satisfy the Government's requirement.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	16 years
AA/AS	14 years
BA/BS	12 years
Doctorate Degree/Ph.D.	9 years

**ANT-004 Technical Expert Level 2**

Minimum/General Experience: Experience qualifications will be determined on a case-by-case basis. Generally this requires twelve years of general experience in information systems, including ten years of specialized experience providing state-of-the-art solutions in information systems technology (or, if the particular area of expertise is new state-of-the-art technology, the specialized experience may be less than ten years and more consistent with the age of the technology).

**Functional Responsibility:** Provide expert, independent services and leadership in specialized technical areas. Provides expertise on an as-needed basis to all task assignments. Provides expert advice and assistance in state-of-the-art software/hardware. Coordinates with contractor management and Government personnel to ensure that the problem has been properly defined and that the solution will satisfy the Government's requirement.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	18 years
AA/AS	16 years
BA/BS	14 years
Doctorate Degree/Ph.D.	11 years

**ANT-005 Technical Expert Level 1**

**Minimum/General Experience:** Experience qualifications will be determined on a case-by-case basis. Generally this requires fifteen years of general experience in information systems, including ten years of specialized experience providing state-of-the-art solutions in information systems technology (or, if the particular area of expertise in new state-of-the-art technology, the specialized experience may be less than ten years and more consistent with the age of the technology). Recognized expert in the technology being addressed.

**Functional Responsibility:** Provide expert, independent services and leadership in specialized technical areas. Provides expertise on an as-needed basis to all task assignments. Provides expert advice and assistance in state-of-the-art software/hardware. Coordinates with contractor management and Government personnel to ensure that the problem has been properly defined and that the solution will satisfy the Government's requirement.

Minimum Education: Doctorate Degree/Ph.D.

Approved Substitutions	
Education	Experience
HS	22 years
AA/AS	20 years
BA/BS	18 years
MA/MS	16 years

**ANT-006 Project Manager/Task Lead**

**Minimum/General Experience:** Must have seven years of general experience including five years of specialized experience of which two years were direct supervisory experience.

**Functional Responsibility:** Monitors each task, and keeps the Program Manager abreast of all problems and accomplishments. Anticipates problems, and works to mitigate the anticipated problems. As a team or project leader, provides technical direction for the complete systems development effort. May serve as a technical authority for a design area. As a staff specialist or consultant, resolves unique and unyielding systems problems using new technology. Can complete tasks within estimated time frames and budget constraints. Schedules and assigns duties to subordinates. Interacts with government management personnel. Reports in writing and orally to contractor management and government representatives, including the government contracting officer.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-007 Program Manager**

**Minimum/General Experience:** Must have at least ten years' experience, of which at least six years must be specialized. Specialized experience includes: complete engineering project development from inception to deployment, demonstrated ability to provide guidance and direction in the tasks similar to the sample tasks provided in the statement of work, proven expertise in the management and control of funds and resources, demonstrated capability in managing multi-task contracts of this type and complexity. General experience includes increasing responsibilities in information systems design and management.

**Functional Responsibility:** Serves as the contractor's contract manager, and shall be the contractor's authorized interface with the Government Contracting Officer (CO), the Contracting Officer's Representative (COR), government management personnel and customer agency representatives. Responsible for formulating and enforcing work standards, assigning contractor schedules, reviewing work discrepancies, supervising contractor personnel and communicating policies, purposes, and goals of the organization to subordinates. Shall be responsible for the overall contract performance. Ability to manage and ensure the successful completion multiple technical tasks in assigned program(s)

Minimum Education: BA/BS

Approved Substitutions
------------------------

Education	Experience
HS	14 years
AA/AS	12 years
MA/MS	8 years
Doctorate Degree/Ph.D.	7 years

**ANT-008 Sr. Program Manager**

Minimum/General Experience: Must have twelve years' experience, of which at least five years must be supervisory experience. Must have the ability to manage and ensure the successful completion of multiple technical tasks in assigned program(s). Must have the ability to recruit, hire, manage, supervise, train, schedule, coordinate, and evaluate staff as assigned.

Functional Responsibility: Responsible for managing very complex and/or high risk programs. Directs daily staff and task activities to meet client and corporate work objectives. Supervises assigned technical and administrative staff, including subordinate managers. Assures quality of task products, services, and deliverables, including participating in reviews, audits, and site visits. Serves as a liaison with clients to coordinate activities, negotiate tasks, and solve problems. Responsible for coordinating and monitoring subcontractor activities.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	16 years
AA/AS	14 years
MA/MS	10 years
Doctorate Degree/Ph.D.	9 years

**ANT-009 Proprietary Product Application Developer**

Minimum/General Experience: Completed three proprietary product courses such as Oracle 9i Forms, Oracle 9iAS Release 2PL/SQL, and Oracle 9i J2EE, and at least one year experience performing application development or; received a certification level with the proprietary product (such as Lotus Notes) and at least one year of experience performing applications development, in a broad based ADP setting. One year development experience using high technology and/or emerging technology proprietary software including but not limited to Oracle Application Development Products, Powerbuilder, Lotus Notes, Windows NT, JAVA, Visual C++, Netscape, and other Internet developer and applicator tools. Must have excellent communication skills both written and oral.

Functional Responsibility: Participates in the development of modernized software applications using high technology and/or emerging technology proprietary software.

**ANT-010 Proprietary Product Application Designer**

Minimum/General Experience: Completed four proprietary product courses such as Data Modeling and Relational Database Design, Oracle IDS Designer, Managing Development Using Oracle Repository, and Oracle 9iAS: Develop Web Based Applications with PL/SQL, Introduction to Design Proprietary Product (such as Oracle SQL, Powerbuilder, Windows NT) and at least one year of experience performing analysis, design and development, or; received a certification level with the proprietary product (such as Lotus Notes) and at least one year of experience performing analysis, design and development or four years of intensive and progressive experience performing analysis, design and development on contemporary hardware using contemporary languages, two years of experience performing design and development using high technology and/or emerging technology CASE technology such as Oracle CASE products, Rational Rose, or UML. Must have excellent communication skills both written and oral.

Functional Responsibility: Performs high-level analysis and design tasks associated with the overall design of application systems using one or more high technology or emerging technology proprietary product tools. Directs emerging technology software development programs to include system and subsystem design and implementation. Works directly with the customer to define requirements.

**ANT-011 Proprietary Product Database Administrator**

Minimum/General Experience: Completed 3 proprietary product courses such as Oracle 9i DBA Fundamentals II, Oracle 9i Database Performance Tuning, Enterprise DBA Part 1A: Architecture and Administration, and at least two years experience in all phases of system analysis, data base administration, or five years of intensive and progressive experience in all phases of systems analysis, design and development. Three years experience as a database administrator for proprietary product RDBMS, such as ORACLE. Must have experience as Database Administrator with the latest commonly used version of the relevant RDBMS.

Functional Responsibility: Creates and manages the database. Performs exceptionally complex database administration functions which include, but is not limited to, managing/maintaining distributed relational databases residing in a central system. Provides 24 x 7 support for production issues.

**ANT-012 Proprietary Product System Architect**

Minimum/General Experience: Completed 4 proprietary product courses such as SQL and PL/SQL. Data Modeling and Relational Database Design, Oracle 9i Forms, Oracle 9iAS: Develop Web Based Applications with PL/SQL, and at least one year of experience in application design and development, or; completed three proprietary product courses and at least two years of experience in application design and development, or; six years experience in performing application development in a broad based ADP setting including two years of extensive experience in proprietary product architect tools such as Oracle Design/2000. Must have experience in the latest commonly used version of proprietary product such as Oracle RDBMS version 8.x or 9.x. Must have excellent communication skills both written and oral.

Functional Responsibility: Participates in all phases of system design and development of complex applications generally in a client/server environment using a variety of proprietary product or emerging technology tools in a variety of operating environments. Works closely with the customer to validate system design and architecture.

**ANT-013 Business Process Reengineering Analyst**

Minimum/General Experience: Completed a minimum of 3 courses in Information Engineering & Business Process Reengineering Methodologies such as Activity Based Costing, IDEF Modeling, Facilitation, and two years' experience performing analysis projects, or; five years' experience, of which at least two years must be specialized in the implementation of information engineering projects using IE tools and methods. Two years business/functional experience is desirable, to support the business modeling.

Functional Responsibility: Applies business process improvement practices to reengineer methodologies/principles and business process modernization projects. Applies, as appropriate, activity and data modeling, transaction flow analysis, internal control and risk analysis and modern business methods and performance measurement techniques.

**ANT-015 Scientist**

Minimum/General Experience: Requires at least two years' experience. Also requires knowledge of the principles, methods, and techniques used in scientific functional area(s) and knowledge of the associated equipment and systems used in assigned scientific functional area(s).

Functional Responsibility: Initiates and executes scientific research and/or development studies; analyzes problems and develops experimental or

theoretical techniques for formalized engineering or scientific studies; resolves a variety of technical problems leading to advanced engineering studies designed to increase efficiency or reduce costs; plans and executes laboratory research; analyzes and organizes technical data and reports into summaries for management or customer review; demonstrates creative ability through patent disclosures or published papers; prepares technical manuals, reports and procedures reflecting advanced knowledge in assigned area of expertise; defines and describes laboratory tests to be performed; participates in test programs and prepares reports of test results; participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-016 Staff Scientist**

Minimum/General Experience: Requires at least five years' experience. Also requires knowledge of the principles, methods, and techniques used in scientific functional area(s) and knowledge of the associated equipment and systems used in scientific functional area(s).

Functional Responsibility: Initiates and executes scientific research and/or development studies; analyzes problems and develops experimental or theoretical techniques for formalized engineering or scientific studies; carries out development and testing of programs on systems, components and materials concurrent with design, fabrication or testing to better evaluate and minimize future problems; plans and executes laboratory research; develops alternative solutions to existing problems; uses specialized techniques and ingenuity to select and evaluate approaches to unforeseen or unique problems; performs or delegates all detail work necessary to determine optimum solutions; evaluates proposals and makes recommendations based on sound scientific principles and practical considerations; may provide work leadership for lower level employees; prepares cost and schedule estimates and technical documents on proposed projects in assigned area; demonstrates creative ability through patent disclosures, problem solving, scientific reports or technical papers and articles; participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience

HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-017 SR Scientist**

**Minimum/General Experience:** Requires at least eight years' experience. Also requires advanced knowledge of the principles, methods, theories, and techniques used in scientific functional area(s), advanced knowledge of the associated equipment and systems used in scientific functional area(s), and ability to serve as a technical task or project lead.

**Functional Responsibility:** Initiates, directs, and executes scientific research and/or development studies; may serve as a technical team or task lead; plans and performs scientific duties on new and varied problems where only general objectives are stated; coordinates broad phases of a project and performs advanced development work to obtain or maintain technical leadership in assigned field; plans and executes laboratory research; plans scientific effort in coordination with related efforts of other projects, departments, etc.; establishes and defines the theoretical bases and principles which should apply and the empirical test procedures to be used; conducts investigations or tests pertaining to the development of new designs, methods, materials, or processes and investigates possible applications of results; interprets and evaluates test data and results of investigations and develops recommendations; recommends necessary corrections in technical analyses and design to ensure successful project completion; may provide technical consultation in area of specialty; may serve as a technical team or task lead; demonstrates creative ability through patent disclosures, problem solving, scientific reports or technical papers and articles; participates in special projects as required.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
BA/BS	10 years
Doctorate Degree/Ph.D.	7 years

**ANT-018 Principal Scientist**

**Minimum/General Experience:** Requires at least ten years' experience in a specific scientific field. Also requires advanced knowledge of the principles, methods, theories, and techniques used in scientific functional area(s), as well as associated equipment and systems used in scientific functional area(s). Must

also have the ability to serve as a technical team or task lead.

**Functional Responsibility:** Initiates, directs, and executes advanced-level scientific research and/or development studies. Plans and performs advanced scientific studies on new and varied problems where only general objectives are stated; acts as technical liaison with customers and sponsors, to include the preparation and presentation of high-level technical information; interprets, organizes, and coordinates overall project assignments within an assigned scientific functional area; plans and executes laboratory research; analyzes, evaluates, and plans methods of approach for projects and organizes means to achieve the solution of problems; serves as technical team or task lead; may provide supervision to lower-level staff; establishes and defines the theoretical bases and principles which should apply and the empirical test procedures to be used; conducts complex investigations or tests pertaining to the development of new designs, methods, materials, or processes and investigates possible applications of results; interprets and evaluates test data and results of investigations and develops recommendations; recommends necessary corrections in technical analyses and design to ensure successful project completion; specifies equipment, materials and suppliers required for completion and implementation of projects; evaluates vendor capabilities to provide or build required services, supplies, or equipment; maintains a current knowledge of technologies through the careful review of reports, patents, literature and other data; demonstrates creative ability through patent disclosures, problem solving, scientific reports or technical papers and articles; participates in special projects as required.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	16 years
AA/AS	14 years
BA/BS	12 years
Doctorate Degree/Ph.D.	9 years

**ANT-019 SR Principal Scientist**

**Minimum/General Experience:** Requires fifteen years' experience in a specific scientific field. Also requires advanced knowledge of the principles, methods, theories, and techniques used in scientific functional area(s), advanced knowledge of the associated equipment and systems used in scientific functional area(s), and the ability to serve as a technical team or task lead and supervise and direct the work of assigned staff.

**Functional Responsibility:** Makes decisions and recommendations that are recognized as authoritative

and have an important impact on extensive scientific activities of the organization. This individual acts as primary technical liaison with customers and sponsors, to include the preparation and presentation of high-level technical information; analyzes, evaluates, and plans methods of approach for projects and organizes means to achieve the solution of problems; serves as technical team or task lead; supervises and directs the work of lower-level scientific and technical personnel; plans and executes laboratory research and/or the development and/or evaluation of advanced physics or first-principles engineering models; establishes and defines the theoretical bases and principles which should apply and the empirical test procedures to be used; conducts complex investigations or tests pertaining to the development of new designs, methods, materials, or processes and investigates possible applications of results; interprets and evaluates test data and results of investigations and develops recommendations; recommends necessary corrections in technical analyses and design to ensure successful project completion; specifies equipment, materials and suppliers required for completion and implementation of projects; evaluates vendor capabilities to provide or build required services, supplies, or equipment; maintains a current knowledge of technologies through the careful review of reports, patents, literature and other data; demonstrates creative ability through patent disclosures, problem solving, scientific reports or technical papers and articles; participates in special projects as required.

Minimum Education: Doctorate Degree/Ph.D.

Approved Substitutions	
Education	Experience
HS	23 years
AA/AS	21 years
BA/BS	19 years
MA/MS	17 years

**ANT-023 JR Systems Engineer**

Minimum/General Experience: Requires no experience and knowledge of the principles, methods, and techniques used in the engineering, development, maintenance, and application of multiple operating systems; knowledge of or certification in one or more specific applications or processes may be required, depending on job assignment; must have the ability to write, maintain, and modify technical documentation/specifications.

Functional Responsibility: Assists in the design, development, analysis, installation, maintenance, operation and servicing of computer operating/hardware systems; provides customer support; works under direct supervision; does related work as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	4 years
AA/AS	2 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-024 Systems Engineer**

Minimum/General Experience: Must have three years' experience of which at least one year must be specialized. Specialized experience includes: analytically solving workflows, organization, and/or planning problems. General experience includes increasing responsibilities in systems engineering.

Functional Responsibility: Designs software tools and subsystems to support software reuse and domain analysis. Interprets software requirements and design specifications to code, and integrates and tests software components.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-025 Staff Systems Engineer**

Minimum/General Experience: Must have six years' experience, of which at least three must be specialized. Specialized experience includes: supervision of system engineers, and demonstrated use of interactive, interpretative systems with on-line, real-time acquisition capabilities. General experience includes increasing responsibilities in systems engineering.

Functional Responsibility: Analyzes and studies complex system requirements. Designs software tools and subsystems to support software reuse and domain analyses and manages their implementation. Manages software development and support using formal specifications, data flow diagrams, other accepted design techniques and CASE tools. Estimates software development costs and schedule. Reviews existing programs and assists in making refinements, reducing operating time, and improving current techniques. Supervises software configuration management

Minimum Education: BA/BS

Approved Substitutions
------------------------

Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

#### ANT-026 SR Systems Engineer

**Minimum/General Experience:** Must have eight years' directly related experience in all phases of systems engineering. Also requires advanced knowledge of the principles, methods, and techniques used in all phases of the engineering, application, and development of multiple operating systems; knowledge of or certification in specific applications or processes may be required, depending on job assignment.

**Functional Responsibility:** Participates in all phases of computer operating/hardware systems engineering, including design, analysis, and modeling at a highly technical level; analyzes complex computer software/hardware requirements to provide integration and implementation support; performs operating/hardware systems engineering, including full life cycle design and development; analyzes and documents users' functional and data requirements; develops site survey instruments to gather detailed user requirements and business process analysis data; conducts functional user interviews to document functional, system, customization, and data requirements and data sources; formulates system concepts and architecture, specifies requirements, and develops implementation approaches; determines data requirements for internal processes and external interfaces; develops new systems or tailors commercial products to meet user requirements; directs and coordinates all activities necessary to complete a major engineering project or several small projects to specification and on schedule; may serve as task or project lead, exercising leadership in either a technical role training other hardware engineers and implementing and enforcing established standards and technologies, or in a project coordination role leading tasks and assuming responsibility for the design, development, test and delivery of a software system or application;

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

#### ANT-027 Principal Systems Engineer

**Minimum/General Experience:** Must have ten years' directly related experience in all phases of systems engineering. Requires advanced knowledge of the principles, methods, and techniques used in all phases of the engineering, application, and development of multiple operating systems; knowledge of or certification in specific applications or processes may be required, depending on job assignment.

**Functional Responsibility:** Establishes state-of-the-art techniques for designing, developing, modifying and troubleshooting highly complex computer operating/hardware system; may work independently on projects requiring advanced, concentrated and diversified knowledge regarding engineering principles in broad assignment areas or may serve as project lead with supervisory responsibilities. Designs operating/hardware systems; formulates system concepts and architecture, specifies requirements, and develops implementation approaches; identifies and directs resolution of complex hardware/software interface issues; subject matter expert on emerging technologies; directs the development of systems specifications and technical documentation; may serve as project lead, either working independently in a technical role in field of specialization, or in providing work leadership with management or supervisory responsibility for the group;

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
MA/MS	8 years
Doctorate Degree/Ph.D.	7 years

#### ANT-028 SR Principal Systems Engineer

**Minimum/General Experience:** Must have fifteen years' directly related experience in all phases of systems engineering. Also requires advanced knowledge of the principles, methods, and techniques used in all phases of the engineering, application, and development of multiple operating systems; knowledge of or certification in specific applications or processes may be required, depending on job assignment.

**Functional Responsibility:** Works at the highest systems level to provide expert advice and counsel to assigned functional/user area managers and project teams for systems of the most complex nature, often crossing functional lines. Designs major computer systems; coordinates work on subsystems; oversees the integration of new applications with established systems and files; confers with assigned systems users and evaluates utilization to identify requirements modifications which will facilitate integration, increase efficiency and/or reduce costs; investigates new procedures, equipment and operating systems to

determine their usefulness and applicability to operations; assists systems management in developing systems analysis standards and provides consultative direction to applications programmers, systems software engineers, computer center operations and user personnel in the planning and scheduling of systems projects which cross functional lines or are of the most complex nature.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	21 years
AA/AS	19 years
BA/BS	17 years
Doctorate Degree/Ph.D.	14 years

#### ANT-029 Information Engineer

Minimum/General Experience: Must have a minimum of five years' experience, of which at least two years must be specialized in information systems development, functional and data requirements analysis, systems analysis and design, programming, program design and documentation preparation. The following experience is also required: two years' experience in the implementation of information engineering projects and experience in systems analysis; design and programming using CASE and IE tools and methods. Two years business/functional experience is desirable, to support the business modeling activities. Must demonstrate the ability to work independently or under only general direction.

Functional Responsibility: Applies a business-wide set of disciplines for the planning, analysis, design and construction of information systems on a business-wide basis or across a major sector of the business. Performs business strategic systems planning, information planning, business and analysis. Performs process and data modeling in support of the planning and analysis efforts using both manual and automated tools such as Integrated Computer Aided Software Engineering (I-CASE) tools. Applies reverse engineering and reengineering disciplines to develop migration strategic and planning documents. Provides technical guidance in software engineering techniques and automated support tools.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

#### ANT-030 SR Information Engineer

Minimum/General Experience: Must have at least eight years' experience, of which at least five must be specialized in information systems development, functional and data requirements analysis, systems analysis and design, programming, program design and documentation preparation. The following experience is also required: demonstrated experience in the implementation of information engineering projects; systems analysis, design and programming using CASE and IE tools and methods and three to five years of business or functional experience. Must demonstrate the ability to work independently or under only general direction.

Functional Responsibility: Applies business process improvement practices to reengineer methodologies/principles and business process modernization projects. Applies, as appropriate, activity and data modeling, transaction flow analysis, internal control and risk analysis and modern business methods and performance measurement techniques. Assist in establishing standards for information systems procedures. Develops and applies organization-wide information models for use in designing and building integrated, shared software and database management systems. Construct sound, logical business improvement opportunities consistent with the CIM guiding principles, cost savings, and open system architecture objectives. Provides daily supervision and direction to staff.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

#### ANT-031 Principal Information Engineer

Minimum/General Experience: Must have at least ten years' experience in information systems development, functional and data requirements analysis, systems analysis and design, programming, program design and documentation preparation. A minimum of five years' experience is required in the following: demonstrated experience in managing the implementation of information engineering projects and experience in systems analysis, design and programming using CASE and IE tools and methods. Proven managerial and supervisory skills. Demonstrated exceptional written and oral communications skills, including giving formal presentations to different audiences. Must demonstrate the ability to work independently or under only general direction.

**Functional Responsibility:** Applies an enterprise-wide set of disciplines for the planning, analysis, design and construction of information systems on an enterprise-wide basis or across a major sector of the enterprise. Develops analytical and computational techniques and methodology for problem solutions. Performs enterprise-wide strategic systems planning, business information planning, business and analysis. Performs process and data modeling in support of the planning and analysis efforts using both manual and automated tools such as Integrated Computer Aided Software Engineering (I-CASE) tools. Applies reverse engineering and re-engineering disciplines to develop migration strategic and planning documents. Provides technical guidance in software engineering techniques and automated support tools.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
MA/MS	8 years
Doctorate Degree/Ph.D.	7 years

**ANT-032 JR Software Engineer**

**Minimum/General Experience:** Requires no experience and knowledge of the fundamental concepts, practices and procedures used in software engineering and applications and systems development.

**Functional Responsibility:** Assists in the design, development, analysis, and implementation of software operating systems and software application programs; works under general supervision; does related work as required. Works from specifications to develop and modify operating systems and software applications; participates in the design, coding, testing, debugging, and documentation of programs; assists in the definition of limited design specifications and parameters; assists engineers or analysts with the hardware/software integration of the application or utility into software operating systems; assists in the analysis of system architecture requirements; may customize purchased applications; participates in the research of emerging technologies to determine impacts on application execution; analyzes and documents client needs and requirements; assists with writing, modifying, and maintaining technical documentation and specifications such as user manuals, system documentation, and training materials; performs integration testing and support of various computer operating and/or network systems; troubleshoots and provides customer support for software operating system and application issues; maintains current knowledge of relevant hardware and software applications as assigned.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	4 years
AA/AS	2 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-033 Software Engineer**

**Minimum/General Experience:** Requires at least two years' directly related experience in software engineering, including the design, coding, testing, and documentation of computer programs. Also requires knowledge of the fundamental concepts, practices and procedures used in software engineering and applications and systems development.

**Functional Responsibility:** Participates in the design, development, analysis, and implementation of software operating systems and software application programs; works under general supervision; performs software operating systems and application engineering, including full life cycle design and development; works from specifications to develop and modify operating systems and software applications; participates in the design, coding, testing, debugging, and documentation of programs; participates in the definition of limited design specifications and parameters; assists engineers or analysts with the hardware/software integration of the application or utility into software operating systems; analyzes system architecture requirements; performs requirements acquisition and definition and data analysis; may customize purchased applications; performs technical and subject matter research on emerging technologies to determine impacts on application execution; analyzes and documents client needs and requirements; participates in the writing, modifying, and maintaining technical documentation and specifications such as user manuals, system documentation, and training materials; performs integration testing and support of various computer operating and/or network systems; troubleshoots and provides customer support for software operating system and application issues; maintains current knowledge of relevant hardware and software applications as assigned; participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-034 Staff Software Engineer**

Minimum/General Experience: Requires at least three years' directly related experience in software engineering, including the design, coding, testing, and documentation of computer programs. Also requires knowledge of the fundamental concepts, practices and procedures used in software engineering and applications and systems development.

Functional Responsibility: Performs software operating systems and software application programs design, development, analysis, and implementation; performs software operating systems and application engineering, including full life cycle design and development; works under limited supervision; works from specifications to develop and modify operating systems and software programming applications; designs, codes, tests, debugs, and documents programs; defines limited design specifications and parameters; resolves hardware/software compatibility and interface design considerations; analyzes system architecture requirements; performs requirements acquisition and definition and data analysis; may customize purchased applications; conducts technical and subject matter research on emerging technologies to determine impacts on application execution; analyzes and documents client needs and requirements; participates in writing, modifying, and maintaining technical documentation and specifications such as user manuals, system documentation, and training materials; performs integration testing and support of various computer operating and/or network systems; troubleshoots and provides customer support for software operating systems and application issues; maintains current knowledge of relevant hardware and software applications as assigned.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-035 SR Software Engineer**

Minimum/General Experience: Requires at least five years' directly related experience in the design, writing, and testing of computer programs or database development. Also requires comprehensive knowledge of the principles, practices, and procedures used in all phases of full life cycle applications and systems development, engineering, programming, and analysis

Functional Responsibility: Participates in all phases of software operating systems and software application

programs engineering, including design, analysis, and modeling at a highly technical level; Performs software operating systems and application engineering, including full life cycle application systems design and development; assesses system architecture and hardware limitations; defines and selects new concepts and approaches for the design, development, and implementation of software engineering applications; defines complex design specifications and parameters; resolves complex hardware/software compatibility and interface design considerations; performs requirements acquisition and definition and data analysis; directs research on emerging technologies to determine impacts on application execution; performs systems modeling; may perform database analysis, design, implementation, and testing; writes, modifies, and maintains technical documentation and specifications such as user manuals, system documentation, and training materials; performs integration testing and support of various computer operating and/or network systems; troubleshoots and provides customer support for software operating systems and application issues; analyzes and documents client needs and requirements; serves as liaison with clients, participates in meetings to ensure client needs are met and may make client presentations; may serve as task or team lead, exercising leadership in either a technical role training other software engineers and implementing and enforcing established standards and technologies, or in a project coordination role leading tasks and assuming responsibility for the design, development, test and delivery of a software system or application;

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-036 Principal Software Engineer**

Minimum/General Experience: Requires at least eight years' directly related experience in the design, writing, and testing of computer programs or database development, with two or more years experience in software operating systems architecture. Also requires expert knowledge of the principles, practices, and procedures used in all phases of full life cycle applications and systems development, engineering, programming, and analysis at a highly technical level.

Functional Responsibility: Participates in all phases of software operating systems and software application programs engineering, including design, analysis, and modeling at an expert level; establishes state-of-the-art techniques for designing, developing, modifying and troubleshooting highly complex software operating

systems and applications architectures; defines complex design specifications and parameters; identifies and directs resolution of complex hardware/software interface issues; can serve as a subject matter expert on emerging technologies; directs the development of systems specifications and technical documentation; may serve as project lead, either working independently in a technical role in field of specialization, or providing work leadership with management or supervisory responsibility for the group.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
BA/BS	10 years
Doctorate Degree/Ph.D.	7 years

**ANT-037 Software Architect**

Minimum/General Experience: Requires ten years' directly related experience in the design, writing, and testing of computer programs or database development, with four or more years experience in software operating systems architecture. Also requires expert knowledge of the principles, practices, and procedures used in all phases of full life cycle applications and systems development, engineering, programming, and analysis at a highly technical level.

Functional Responsibility: Establishes state-of-the-art techniques for designing, developing, modifying and troubleshooting highly complex software operating systems and applications architectures; defines complex design specifications and parameters; identifies and directs resolution of complex hardware/software interface issues; is recognized as a subject matter expert in all areas of software engineering, including emerging technologies; directs the development of systems specifications and technical documentation; may serve as project lead, either working independently in a technical role in field of specialization, or providing work leadership with management or supervisory responsibility for the group; responsible for task cost, schedule and level of effort estimates; reports project progress directly to senior management; performs business development services; may provide expertise to multiple projects and tasks; may supervise and direct the work of assigned staff.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	16 years
AA/AS	14 years

BA/BS	12 years
Doctorate Degree/Ph.D.	9 years

**ANT-038 Computer Security Specialist**

Minimum/General Experience: Must have a minimum of seven years' experience, of which at least five years must be information security/Information Assurance (IA) experience. Must have experience in security administration, evaluation of security/Information Assurance product capabilities, assessment and policy development. Must have a solid understanding of federal information security/assurance policies, standards and regulations.

Functional Responsibility: Gathers and organizes technical information about an organization's mission goals and needs, IT infrastructure and existing security/IA products. Assists in developing security/IA policies, procedures and standards. Responsibilities will include working with the customer to minimize risks and assess and secure networks.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-039 SR Computer Security Specialist**

Minimum/General Experience: Must have a minimum of ten years' experience, of which at least eight must be information security/Information Assurance (IA) experience. Must have experience in security administration, evaluation of security/Information Assurance product capabilities, assessment and policy development. Must have a solid understanding of federal information security/assurance policies, standards and regulations.

Functional Responsibility: . Gathers and organizes technical information about an organization's mission goals and needs, IT infrastructure, and existing security/IA products. Assists in developing security/IA policies, procedures, and standards. Responsibilities will include working with the customer to minimize risks and assess and secure networks. Evaluates and recommends security products for various platforms and initiatives. May act as a project leader and provide technical leadership and guidance.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
MA/MS	8 years
Doctorate Degree/Ph.D.	7 years

**ANT-040 JR Database Architect**

Minimum/General Experience: Requires at least two years' directly related experience in the design, maintenance, and coding of databases. Also requires knowledge of the principles, methods, and techniques used in all phases of database development, coding, and design, including business analysis, event modeling, logical and physical database design, data access analysis and design, DBMS optimization, archive and recovery strategy, load strategy design and implementation, security, and change management.

Functional Responsibility: Participates in the design, maintenance, enhancement, and coding of relational databases; analyzes and determines information needs and elements, data relationships and attributes, data flow and storage requirements, and data output and reporting capabilities; assists on developing data modeling and participates in data acquisition and access analysis and design, and archive, recovery, and load strategy design and implementation; coordinates new data development ensuring consistency and integration with existing data warehouse structure; reviews requests for data and data usage, researches data sources for new and better data feeds; participates in continuous improvement efforts in enhancing performance and providing increased functionality; assists with the development of screens and queries; tests designed applications; assists with upgrades and maintenance of hardware and software; maintains current knowledge of relevant hardware and software applications as assigned; participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-041 Database Architect**

Minimum/General Experience: Requires at least three years' directly related experience in the design, maintenance, and coding of databases. Also requires knowledge of the principles, methods, and techniques

used in all phases of database development, coding, and design, including business analysis, event modeling, logical and physical database design, data access analysis and design, DBMS optimization, archive and recovery strategy, load strategy design and implementation, security, and change management

Functional Responsibility: Designs, maintains, enhances, and codes relational databases; analyzes and determines information needs and elements, data relationships and attributes, data flow and storage requirements, and data output and reporting capabilities; develops data modeling and participates in data acquisition and access analysis and design, and archive, recovery, and load strategy design and implementation; coordinates new data development ensuring consistency and integration with existing data warehouse structure; reviews requests for data and data usage, researches data sources for new and better data feeds; participates in continuous improvement efforts in enhancing performance and providing increased functionality; designs data structures to accommodate database production, storage, maintenance, and accessibility; develops screens and queries; tests designed applications; performs upgrades and maintenance of hardware and software; provides technical support and guidance to users; maintains current knowledge of relevant hardware and software applications as assigned; may serve as team or technical task lead; participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-042 SR Database Architect**

Minimum/General Experience: Requires at least five years' directly related experience in the design, maintenance, and coding of databases. Also requires advanced knowledge of the principles, methods, and techniques used in all phases of database development, coding, and design, including business analysis, event modeling, logical and physical database design, data access analysis and design, DBMS optimization, archive and recovery strategy, load strategy design and implementation, security, and change management.

Functional Responsibility: Designs, maintains, enhances, and codes relational databases; analyzes and determines information needs and elements, data relationships and attributes, data flow and storage

requirements, and data output and reporting capabilities; develops data modeling and is responsible for data acquisition and access analysis and design, and archive, recovery, and load strategy design and implementation; coordinates new data development ensuring consistency and integration with existing data warehouse structure; reviews business requests for data and data usage, researches data sources for new and better data feeds; participates in continuous improvement efforts in enhancing performance and providing increased functionality; designs data structures to accommodate database production, storage, maintenance, and accessibility; develops screens and queries; tests designed applications; may perform upgrades and maintenance of hardware and software; provides technical support and guidance to users; maintains current knowledge of relevant hardware and software applications as assigned; may serve as team or technical task lead and provide guidance and training to lower-level staff; participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-045 Computer Programmer/Analyst**

Minimum/General Experience: Must have at least three years' experience in the computer programming field. Depending on the job assignment, knowledge of or certification in specific applications or processes may be required in the following areas: Web technologies, design technologies, specific programming languages, authoring languages and systems, and Modeling and Simulation (M&S) technologies, processes, and tools.

Functional Responsibility: Generates new code and corrects, converts, and/or modifies existing code to meet documented standards; designs new and/or redesigns and maintains existing software products; identifies client needs and requirements based on evaluation of client documentation and interviews; performs data and technical analysis; performs a variety of testing procedures on assigned products, analyzes test results, and corrects problems; prepares test scripts and descriptions and examines to locate necessary modifications; analyzes and modifies program specifications and documentation to support contract requirements; may design and develop computer-based and/or multimedia courseware for customer training initiatives utilizing appropriate authoring languages, systems, animation and graphics

software; provides customer support to clients and troubleshoots problems.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-046 Staff Computer Programmer/Analyst**

Minimum/General Experience: Requires at least four years' experience in the computer programming field. Depending on the job assignment, knowledge of or certification in specific applications or processes may be required in the following areas: Web technologies, design technologies, specific programming languages, authoring languages and systems, and Modeling and Simulation (M&S) technologies, processes, and tools.

Functional Responsibility: Programs, designs, analyzes, codes, implements, and tests software applications and modules in various languages, including business software systems and applications; provides network support including providing technical solutions and training; writes, modifies, and maintains software documentation and specifications; performs integration testing and support of various computer operating and/or network systems; installs, configures, and troubleshoots various hardware and software platforms; analyzes and documents client needs and requirements; may train other programmer/analysts; develops product documentation to describe system requirements and use; may design and develop computer-based and/or multimedia courseware for customer training initiatives utilizing appropriate authoring languages, systems, animation and graphics software; participates in meeting; prepares reports on analyses, findings, and project progress; performs technical research on emerging technologies to determine impacts on application execution.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	8 years
AA/AS	6 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

**ANT-047 SR Computer Programmer/Analyst**

**Minimum/General Experience:** Requires at least five years' experience in the computer programming field. Depending on the job assignment, knowledge of or certification in specific applications or processes may be required in the following areas: Web technologies, design technologies, specific programming languages, authoring languages and systems, and Modeling and Simulation (M&S) technologies, processes, and tools.

**Functional Responsibility:** Participates in all phases of software development, including system design, analysis, architecture, and engineering; programs, designs, analyzes, codes, implements, and tests software applications, modules, and databases in various languages, including those associated with scientific, technical, or engineering problems; performs process analyses in order to recommend improvements; performs system, network, and/or database administration, analysis, design, implementation, and testing; analyzes and documents client needs and requirements; provides technical support including providing technical solutions and training; writes, modifies, and maintains software documentation and specifications; Performs a variety of testing for computer operating and/or network systems; performs data and technical analysis and information engineering; installs, configures, and troubleshoots various hardware and software platforms; may design and develop computer-based and/or multimedia courseware for customer training initiatives utilizing appropriate authoring languages, systems, animation and graphics software; participates in meetings and design reviews; prepares reports on analyses, findings, and project progress; performs technical research on emerging technologies to determine impacts on application execution; may serve as a technical task or team lead.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-048 Principal Computer Programmer/Analyst**

**Minimum/General Experience:** Requires at least eight years' experience in the computer programming field. Depending on the job assignment, knowledge of or certification in specific applications or processes may be required in the following areas: Web technologies, design technologies, specific programming languages, authoring languages and systems, and Modeling and Simulation (M&S) technologies, processes, and tools.

**Functional Responsibility:** Participates in all phases of software development, including system design, analysis, architecture, and engineering; plans and

directs the development of major programming projects and the installation of systems; programs, designs, analyzes, codes, implements, and tests software applications, modules, and databases in various languages, including those associated with scientific, technical, or engineering problems; performs process analyses in order to recommend improvements; performs system, network, and/or database administration, analysis, design, implementation, and testing; analyzes and documents client needs and requirements; provides technical support including providing technical solutions and training; writes, modifies, and maintains software documentation and specifications; performs a variety of testing for computer operating and/or network systems; performs data and technical analysis and information engineering; installs, configures, and troubleshoots various hardware and software platforms; may design and develop computer-based and/or multimedia courseware for customer training initiatives utilizing appropriate authoring languages, systems, animation and graphics software; participates in meetings and design reviews; prepares reports on analyses, findings, and project progress; may supervise and direct the work of lower-level analysts; performs technical research on emerging technologies to determine impacts on application execution; may serve as a technical task or team lead.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-049 Computer Systems Programmer**

**Minimum/General Experience:** Must have at least five years' experience, of which at least three years must be specialized. Specialized experience includes: systems analysis and programming. Must demonstrate the ability to work independently or under only general direction.

**Functional Responsibility:** Create and/or maintain operating systems, communications software, database packages, compilers, assemblers, and utility programs. Modify existing software, as well as create special-purpose software to ensure efficiency and integrity between systems and applications. Assist in the development, testing and maintenance of disaster recovery procedures.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience

HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-050 Web Designer**

Minimum/General Experience: Requires at least two years experience in Web design. Also requires knowledge of the principles, methods, and techniques used in Web design.

Functional Responsibility: Designs and builds Web pages using a variety of graphics software applications, techniques, and tools; designs and develops user-interface features, site animation, and special-effects elements; designs the Website to support the customer's strategies and goals relative to external communications; contributes to the Web design group's efforts to specify, improve, and implement the look, feel, and function of online projects; interfaces directly with customers, users, graphic artists, and Web software developers.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-051 Web Developer**

Minimum/General Experience: Requires at least four years' experience in software development, installation, and modification in an online environment.

Functional Responsibility: Provides application development and technical support for internal and external Webs; develops Web pages and applications for customers; collaborates with graphic artists to develop Web page graphics that support interactive, marketing-focused content; provides technical consultation in new systems development, new package evaluations and enhancements of existing systems; prepares functional specifications from which programs will be written, then designs, codes, tests, debugs and documents programs; participates in the technical design, development, testing, implementation and maintenance of Web site enhancements; plans, schedules and conducts systems tests, monitors test results, and takes appropriate corrective action; may prepare technical user guides.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	8 years
AA/AS	6 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

**ANT-052 SR Web Developer**

Minimum/General Experience: Requires at least eight years' experience, of which at least two years must include technical leadership experience and at least four years' experience in software development, installation, and modification in an online environment.

Functional Responsibility: Designs and develops well-integrated and cost-effective solutions for internal and external Webs; works closely with client project managers and technical leaders to understand customers' business objectives and systems requirements; designs and develops Web infrastructures; designs and implements an intranet strategy for authorization of users to access controlled components; designs relational databases to perform well logically and physically for decision support; coordinates enhancements and maintenance of Web systems and sites; provides recommendations for server operating systems, hardware requirements and encryption standards for communications to and from secure servers; provides technical advice and expertise to Webmasters and Web developers in the installation, acceptance testing, and evaluation of newly released and beta software; may serve as a functional/technical team or task lead.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-053 Web Tech Administrator**

Minimum/General Experience: Requires at least four years' experience in systems technology. Must have an understanding of federal information security/assurance policies, standards and regulations.

Functional Responsibility: Responsible for achieving overall technical integrity of organization's Website. Maintains and upgrades hardware and software including website technical architecture related to hardware and telecommunication connectivity. Administers e-mail, chat, and FTP and HTTP services. Communicates router configuration changes and troubleshoots system errors and bugs. Maintains

servers, creates monitoring reports and logs, and ensures functionality of links. Monitors site for acceptable performance and user accessibility. Establishes backups and monitors site security.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	8 years
AA/AS	6 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

**ANT-054 Web Content Manager**

Minimum/General Experience: Requires at least two years' experience in production management, Web page design, Web design languages, and Web graphics types and standards.

Functional Responsibility: Responsible for developing and providing content that will motivate and entertain users so that they regularly access the Website and utilize it as a major source for information and decision making. Responsible for managing/performing Website editorial activities including gathering and researching information that enhances the value of the site. Locates, negotiates, and pursues content. Seeks out customers to gather feedback for Website improvement and enhancements.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-055 Web Security Administrator**

Minimum/General Experience: Requires at least four years' experience in software development, installation, and modification in an online environment. Requires experience in security administration, evaluation of security/Information Assurance (IA) product capabilities, assessment and policy development. Must have a solid understanding of federal information security/assurance policies, standards and regulations.

Functional Responsibility: Performs all procedures necessary to ensure the safety of the organization's Website and transactions across the Internet. Applies Internet Firewall technologies to maintain security. Ensure that the user community understands and

adheres to necessary procedures to maintain security. Works under limited supervision.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	8 years
AA/AS	6 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

**ANT-057 Computer Systems Analyst**

Minimum/General Experience: Must have at least three years of computer experience in assignments of a technical nature working under close supervision and direction. Must have at least one year experience in analyzing and programming applications on large-scale on mid-tier computers (or LAN-based) with a minimum of one year of design and programming of moderately complex ADP systems.

Functional Responsibility: Develops requirements for information systems from a project's inception to conclusion. Develops required specifications for simple to moderately complex systems. Assists senior computer systems analyst in preparing input and test data for the proposed system.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-058 Staff Computer Systems Analyst**

Minimum/General Experience: Must have five years of computer experience in information systems design and management. At least three years of experience in analysis and design of business applications for complex large-scale or mid-tier computer systems, or LAN-based systems.

Functional Responsibility: Analyzes and develops computer software processing a wide range of capabilities, including numerous engineering, business, and records management duties. Develops plans for systems from project inception to conclusion. Analyzes the problem and the information to be processed. Defines the problem, and develops system requirements and program specifications from which programmers prepare detailed flow charts, programs, and tests. Coordinates closely with programmers to

ensure proper implementation of program and system specifications. Develops, in conjunction with functional users, system alternative solutions.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-059 SR Computer Systems Analyst**

Minimum/General Experience: Must have eight years of computer experience working independently or under general direction on complex application problems involving all phases of systems analysis. At least five years' experience in analysis and design of business applications for complex, large-scale or mid-tier computer systems, or LAN-based systems.

Functional Responsibility: Analyzes and evaluates user needs and identifies resources required for each task to determine functional requirements; conceptualizes, develops, and implements complex systems designed to meet client requirements; defines systems objectives and prepares system design specifications to meet requirements; designs, develops, implements, and tests new systems or modifies existing systems that meet the user's needs; codes applications and tests to software requirements; writes or updates software specifications; analyzes procedures and systems to refine their formulation and convert to programmable formats; analyzes data requirements to determine data source and destinations; coordinates with client to define problem, determine data availability, report requirements, and resolve system design problems; creates logical data models based on functional requirements; performs quality review of specifications for internal and external delivery; troubleshoots and provides technical support and solutions to users; develops analytical tools for use in the design and redesign of programs as assigned; may serve as a technical team or task lead.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-060 Principal Computer Systems Analyst**

Minimum/General Experience: Must have ten years' of computer experience working independently or under general direction on complex application problems involving all phases of systems analysis. At least five years' experience in analysis and design of business applications for complex, large-scale or mid-tier computer systems, or LAN-based systems.

Functional Responsibility: Analyzes and evaluates user needs and identifies resources required for each task to determine functional requirements; conceptualizes, develops, and implements complex systems designed to meet client requirements; defines systems objectives and prepares system design specifications to meet requirements; designs, develops, implements, and tests new systems or modifies existing systems that meet the user's needs; develops and executes test plans; codes applications and tests to software requirements; writes or updates software specifications as necessary; writes technical project documentation including detailed design documents and program specifications; analyzes procedures and systems to refine their formulation and convert to programmable formats; analyzes data requirements to determine data source and destinations; coordinates with client to define problem, determine data availability, report requirements, and resolve system design problems; creates logical data models based on functional requirements; performs quality review of specifications for internal and external delivery; troubleshoots and provides technical support and solutions to users; develops analytical tools for use in the design and redesign of programs as assigned; may serve as a technical task or team lead.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
MA/MS	8 years
Doctorate Degree/Ph.D.	7 years

**ANT-061 Legacy System Analyst**

Minimum/General Experience: Expert with five years of experience in a specific "legacy system(s)" functionality to include knowledge of designated "legacy" hardware, operating systems, capacities, configurations, applications programs, preference programming languages, and administration, operations, and maintenance characteristics of the designated "legacy" system.

Functional Responsibility: Analyze requirements for maintaining, modifying or converting unique application systems that are deemed "legacy" systems. Provide guidance and technical/functional advice to programmers. Provide unique knowledge of the

history of changes to the “legacy” applications. Develop plans to migrate “legacy” systems to new technologies and/or new functionality. Analyze and document “legacy” system functionality to identify mandatory requirements to be fulfilled by migration system candidates. May also participate in the analysis and evaluation of migration system candidates. May also participate in designing, developing and implementing changes to “legacy” systems to accommodate such requirements as interim interfaces to migration systems and/or conversion to migration systems.

Minimum Education: N/A

Approved Substitutions	
Education	Experience
HS	5 years
AA/AS	3 years
BA/BS	1 year
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-062 JR Functional Analyst/Specialist**

Minimum/General Experience: Requires at least one year directly related experience in a specific functional area.

Functional Responsibility: Analyzes user needs and performs research and functional analysis on a variety of projects; works under direct supervision; does related work as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	5 years
AA/AS	3 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-063 Functional Analyst/Specialist**

Minimum/General Experience: This position requires a minimum of five years’ experience, of which at least three years must be specialized. Specialized experience includes: developing functional requirements for complex integrated systems. Must demonstrate the ability to work independently or under only general direction.

Functional Responsibility: Analyzes user needs to determine functional requirements. Performs functional allocation to identify required tasks and their interrelationships. Identifies resources required for each task.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-064 SR Functional Analyst/Specialist**

Minimum/General Experience: This position requires a minimum of seven years’ experience, of which at least six years must be specialized. Specialized experience includes: developing functional requirements for complex integrated systems. Must demonstrate the ability to work independently or under only general direction.

Functional Responsibility: Analyze user needs to determine functional requirements. Performs functional allocation to identify required tasks and their interrelationships. Identifies resources required for each task. Provides daily supervision and direction to support staff.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-065 Principal Functional Analyst/Specialist**

Minimum/General Experience: This position requires at least eight years’ experience, of which at least six years must be specialized. Specialized experience includes developing functional requirements for complex integrated systems. Requires advanced technical knowledge of the principles, methods, techniques, work processes, and applicable regulations in assigned subject-matter area(s).

Functional Responsibility: Analyzes user needs and performs research and functional analysis on a variety of projects at a highly technical level; may have supervisory responsibility; serves as technical advisor to clients in assigned subject areas’ recommends functional changes, and identifies areas for further investigation; generates recommendations in the form of technical briefings, reports, and other major documents provided to senior level client personnel; may serve as a technical team or task lead.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
BA/BS	10 years
Doctorate Degree/Ph.D.	7 years

**ANT-066 SR Principal Functional Analyst/Specialist**

Minimum/General Experience: This position requires at least ten years' experience, of which at least six years must be specialized. Specialized experience includes developing functional requirements for complex integrated systems. Requires advanced technical knowledge of the principles, methods, techniques, work processes, and applicable regulations in assigned subject-matter area(s).

Functional Responsibility: Analyzes user needs and performs research and functional analysis on a variety of projects at a highly technical level; may have supervisory responsibility; serves as technical advisor to clients in assigned subject areas; recommends functional changes, and identifies areas for further investigation; generates recommendations in the form of technical briefings, reports, and other major documents provided to senior level client personnel; serves as primary client liaison and coordinates with sub-contractors, government personnel, and technical experts; serves as technical team or task lead.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	16 years
AA/AS	14 years
BA/BS	12 years
Doctorate Degree/Ph.D.	9 years

**ANT-067 Data Management Specialist**

Minimum/General Experience: Must have at least six years' experience, of which at least three years must be specialized. Specialized experience includes: demonstrated experience using current DBMS technologies, application design utilizing database management systems and experience with DBMS internals. General experience includes increasing responsibilities in DBMS systems analysis and programming. Must demonstrate the ability to work independently or under only general direction.

Functional Responsibility: Provides highly technical expertise in the use of DBMS. Evaluates and recommends available DBMS products to support validated user requirements. Defines file organization,

indexing methods, and security procedures for specific user applications.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

**ANT-068 Data Administrator**

Minimum/General Experience: Must have at least six years' of general experience in systems analysis or programming including four years of specialized experience in DBMS.

Functional Responsibility: Provides highly technical expertise and guidance in the design, implementation, operation and maintenance of database management systems (DBMS). Evaluates and recommends available DBMS products after matching requirements with system capabilities. Determines file organization, indexing methods, and security procedures for specific applications. Controls the design and use of databases. Controls the global view of databases, controls the access to the databases, assures the safekeeping of the databases (from accidental or intentional damage or loss), and monitors the use of databases. Must be capable of defining all required database administration policies, procedures, standards, and guidelines. Is an authority on the design of databases and the use of database management systems. Evaluates and recommends available DBMS products after matching requirements with system capabilities. Prepares and delivers presentations on DBMS concepts.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

**ANT-069 Data Manager**

Minimum/General Experience: Must have at least seven years' experience, of which at least five must be specialized. Specialized experience includes: demonstrated experience using current DBMS technologies, application design utilizing various database management systems and experience with DBMS internals. General experience includes increasing responsibilities in DBMS systems analysis

and programming. Must demonstrate the ability to work independently or under only general direction.

**Functional Responsibility:** Manages the development of database projects. Plans and budgets staff and database resources. When necessary, reallocates resources to maximize benefits. Prepares and delivers presentations on Database Management Systems (DBMS) concepts. Provides daily supervision and direction to support staff.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-070 Computer Operations Manager**

**Minimum/General Experience:** Must have at least six years' experience, of which at least three years are specialized. Specialized experience includes: supervision and operations experience on a large-scale computer system, knowledge of hardware, software and operating systems. General experience includes operations experience on a large-scale computer system.

**Functional Responsibility:** Manages the work of computer operations personnel; identifies processing requirements and schedules job streams for computer runs; responsible for security and routing of input and output data, problem resolution and restart/recovery, interpreting technical documentation standards and preparation of documentation according to standards; interfaces with client and/or other government personnel; determines appropriate course of action in case of malfunction and confers with and directs staff as warranted.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	8 years
BA/BS	4 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

**ANT-071 SR Computer Operations Manager**

**Minimum/General Experience:** Must have at least eight years' experience, of which at least four years are specialized. Specialized experience includes: supervision and operations experience on a large-

scale computer system, knowledge of hardware, software and operating systems. General experience includes operations experience on a large-scale computer system.

**Functional Responsibility:** Manages and directs the operations and support of the computer systems and peripheral equipment in large scale or multi-shift operations; supervises and directs the work of computer operations personnel; identifies processing requirements and schedules job streams for computer runs; responsible for the security and routing of input and output data, problem isolation and restart/recovery, interpreting technical documentation standards and preparation of documentation according to standards, and interfacing with client and/or government personnel; determines appropriate course of action in case of malfunction and confers with and directs staff as warranted.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-076 Communications Engineer**

**Minimum/General Experience:** Must have at least six years of general experience with telecommunications systems including three years of specialized experience.

**Functional Responsibility:** Provides technical support for telecommunications activities including planning, designing, installing, and maintaining large telecommunications networks. Develops, operates, and maintains voice, video, and/or data communications systems. Applies telecommunications engineering principles and theory to propose design and configuration alternatives. Evaluates existing communications systems to identify deficiencies and performance improvements. Consults with user personnel to ensure that problems have been properly identified and that the solution will meet the requirements. Analyzes system performance, usage and traffic flows, accesses and interfaces, transmission techniques, and protocols. Performs system analyses and feasibility studies concerning communications and communication networks. Prepares studies and gives presentations on communications concepts. Provides technical guidance to other personnel concerning data communications requirements. Participates in preparing specifications for acquiring commercially available data communications networks.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

#### ANT-077 SR Communications Engineer

Minimum/General Experience: Must have at least ten years of general experience with telecommunications systems including four years of specialized experience.

Functional Responsibility: Provides technical direction for telecommunications activities including planning, designing, installing, and maintaining large telecommunications networks. Develops, operates, and maintains voice, video, and/or data communications systems. Applies telecommunications engineering principles and theory to propose design and configuration alternatives. Evaluates existing communications systems to identify deficiencies and performance improvements. Consults with user personnel to ensure that problems have been properly identified and that the solution will meet the requirements. Analyzes system performance, usage and traffic flows, accesses and interfaces, transmission techniques, and protocols. Performs system analyses and feasibility studies concerning communications and communication networks. Prepares studies and gives presentations on communications concepts. Provides technical guidance to other personnel concerning data communications requirements. Participates in preparing functional specifications for acquiring commercially available data communications networks.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
MA/MS	8 years
Doctorate Degree/Ph.D.	7 years

#### ANT-078 JR Network Engineer

Minimum/General Experience: This position requires no experience and knowledge of the principles, methods, and techniques used in network administration and engineering plus knowledge of and ability to use relevant hardware, software and other equipment. Certification in specific applications may be required, depending on job assignment.

Functional Responsibility: Performs basic engineering work concerned with the analysis, planning, designing,

evaluating, selecting, and upgrading of network systems; performs various tests and documents results; administers and maintains local and wide area networks; provides technical support and troubleshooting to users; configures systems to user environments; assists in telecommunications activities including planning, designing, installing, and maintaining large telecommunications networks; assists in the maintenance and operation of voice, video, and data communications systems; supports the acquisition of hardware and software as well as subcontractor services as needed.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	4 years
AA/AS	2 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

#### ANT-079 Network Engineer

Minimum/General Experience: Must have at least two 2 years' related network design/administration experience. Also requires knowledge of the principles, methods, and techniques used in network administration and engineering plus knowledge of and ability to use relevant hardware, software and other equipment. Certification in specific applications may be required, depending on job assignment

Functional Responsibility: Analyzes local and wide area network systems, including planning, designing, evaluating, selecting, and upgrading operating systems and protocol suites and configuring communication media with concentrators, bridges, and other devices; resolves interoperability problems to obtain operations across all platforms including email, file transfer, multimedia, teleconferencing, and the like; configures systems to user requirements; supports the acquisition of hardware and software as well as subcontractor services as needed; performs various tests and documents results; administers and maintains local and wide area networks; provides technical support and troubleshooting to users; plans network layout design; may administer network security.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-080 Staff Network Engineer**

**Minimum/General Experience:** Must have at least 5 years' related network design/administration experience. Also requires knowledge of the principles, methods, and techniques used in network administration and engineering plus knowledge of and ability to use relevant hardware, software and other equipment. Certification in specific applications may be required, depending on job assignment

**Functional Responsibility:** Analyzes local and wide area network systems, including planning, designing, evaluating, selecting, and upgrading operating systems and protocol suites and configuring communication media with concentrators, bridges, and other devices; resolves interoperability problems to obtain operations across all platforms including email, file transfer, multimedia, teleconferencing, and the like; configures systems to user requirements; supports the acquisition of hardware and software as well as subcontractor services as needed; performs various tests and documents results; administers and maintains local and wide area networks; provides technical support and troubleshooting to users; plans network layout design; may administer network security; may perform database administration; may provide guidance and training to lower level personnel and serve as technical team or task lead.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-081 SR Network Engineer**

**Minimum/General Experience:** Must have at least eight years' related network design/administration experience. Also must have advanced knowledge of the principles, methods, and techniques used in network administration and engineering plus advanced knowledge of and ability to use relevant hardware, software and other equipment is required.

**Functional Responsibility:** Analyzes local and wide area network systems, including planning, designing, evaluating, selecting, and upgrading operating systems and protocol suites and configuring communication media with concentrators, bridges, and other devices; resolves interoperability problems to obtain operations across all platforms including email, file transfer, multimedia, teleconferencing, and the like; configures systems to user requirements; supports the acquisition of hardware and software as well as subcontractor services as needed; performs various tests and documents results; administers and maintains local and wide area networks; provides

technical support and troubleshooting to users; plans network layout design; may administer network security; may perform database administration; may supervise and direct the work of lower level personnel; may serve as technical team or task lead.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	14 years
AA/AS	12 years
BA/BS	10 years
Doctorate Degree/Ph.D.	7 years

**ANT-082 Principal Network Engineer**

**Minimum/General Experience:** Must have at least ten years' related network design/administration experience. Expert knowledge of the principles, methods, and techniques used in network administration and engineering plus expert knowledge of and ability to use relevant hardware, software and other equipment is required.

**Functional Responsibility:** Provides expert level analysis of local and wide area network systems, including planning, designing, evaluating, selecting, and upgrading operating systems and protocol suites and configuring communication media with concentrators, bridges, and other devices; resolves interoperability problems to obtain operations across all platforms including email, file transfer, multimedia, teleconferencing, and the like; configures systems to user requirements; supports the acquisition of hardware and software as well as subcontractor services as needed; directs various testing and the documentation of results; plans network layout design; may administer network security; may perform database administration; may supervise and direct the work of lower level personnel; serves as technical team or task lead.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	16 years
AA/AS	14 years
BA/BS	12 years
Doctorate Degree/Ph.D.	9 years

**ANT-083 Network Administrator**

**Minimum/General Experience:** Requires at least seven years' experience. Also requires knowledge of the principles, methods, and techniques used in network troubleshooting and support as well as knowledge of

operating systems and applications and network management. Must have working knowledge of current technologies and products for Web services and security.

**Functional Responsibility:** Supports, installs, maintains, troubleshoots, and coordinates the usage of local and wide area networks (LAN and WAN), electronic mail, telecommunications, and PC based systems and related software; evaluates hardware and software, including peripheral, output, and telecommunications equipment; sets up and administers security procedures; troubleshoots problems; recommends and implements LAN policies and procedures and ensures adherence to security procedures; trains users on LAN operations and procedures.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-084 SR Network Administrator**

**Minimum/General Experience:** Requires eight years' experience and knowledge of the principles, methods, and techniques used in network troubleshooting and support, operating systems and applications and network management. Must have working knowledge of current technologies and products for Web services and security.

**Functional Responsibility:** Responsible for the planning, design, acquisition, installation, and maintenance of LAN and WAN, electronic mail, telecommunications, and PC based systems and related software; evaluates hardware and software, including peripheral, output, and telecommunications equipment; sets up and administers security procedures; troubleshoots problems; establishes and implements LAN policies and their conformance; coordinates activities of LAN support personnel, providing guidance on common networking issues; assesses vendor products; manages network performance, troubleshoots problems, and maintains network security.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-088 Network/Computer Support Specialist**

**Minimum/General Experience:** Must have at least three years directly related experience in network support. Requires advanced knowledge of the following: principles, methods, and techniques used in network troubleshooting and support; modems, data scopes, patch panels, concentrators, associated terminals, and network management software; Desk Top Operating Systems and Applications. Certification in one or more specific application(s) may be required, depending on job assignment.

**Functional Responsibility** Installs, configures, and upgrades computer hardware; provides end-user software troubleshooting and support; provides network troubleshooting and support; diagnoses hardware, software and operator problems and corrects them; analyzes IT infrastructure processes and makes recommendations for improvement; involved in IT infrastructure planning; recommends Business Process improvements; leads deployment activities; may provide end-user training; involved in the development of larger Business Applications and Exchange, Web Applications, and Virus Software implementation; may supervise Network/Computer Support Technicians.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-089 Computer System/Network Integration Engineer**

**Minimum/General Experience:** Received certification level training in proprietary product network operating system or integration tools and at least one year experience in computer system/network engineering and/or technical subject specialization, or; 4 or more years experience in computer system/network engineer and/or technical subject specialization. Two more years experience within a specific field of technology related to computer systems integration/network integration administration or security and/or a specific technical subject specialization.

**Functional Responsibility:** Performs system and network analysis, design and administration. Designs computer and communications architectures, provides timely technical support, and designs hardware/software solutions for communications

architectures.

Doctorate Degree/Ph.D.	3 years
------------------------	---------

**ANT-092 SR Telecommunications Analyst**

Minimum/General Experience: Most have at least three years' directly related experience in telecommunications systems design and support. Must also have advanced knowledge of the fundamental concepts used in telecommunications systems administration and support as well as relevant hardware and software systems.

Functional Responsibility: Evaluates, designs, and maintains existing or proposed telecommunications systems; analyzes the telecommunications needs of the user and recommends solutions; designs, develops, and tests telecommunications software solutions; prepares detailed specifications and flow charts for implementation of new internal programs or modification to vendor software; coordinates installation of equipment; monitors the operations of telecommunications systems and services of vendors; provides end user training of telecommunications features and functionality; may provide guidance and technical training to lower level analysts.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	5 years
BA/BS	1 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-093 Communications Network Manager**

Minimum/General Experience: Must have at least six years' experience, of which at least three years are specialized. Specialized experience includes: supervising the operation and maintenance of communications network systems. General experience includes all aspects of communications networks.

Functional Responsibility: Schedules conversions and cutovers. Oversees network control center. Supervises maintenance of systems. Coordinates with all responsible users and sites. Supervises staff.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years

**ANT-102 Hardware Specialist**

Minimum/General Experience: Must have at least five years' progressive experience in systems analysis with three years' intensive and progressive specific experience in the specialty.

Functional Responsibility: Determines feasible hardware alternatives in client server environments. Reviews computer systems in terms of capabilities and makes recommendations for improved utilization. Prepares or directs preparation of reports concerning hardware. Prepares or participates in preparing functional requirements and specifications for hardware acquisitions.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-103 Quality Assurance/IV&V Analyst**

Minimum/General Experience: Must have at least two years' related experience in quality assurance and/or software engineering. Must also have experience with Independent Validation and Verification (IV&V) and system configuration.

Functional Responsibility: Assists in the review and evaluation of software products and systems to ensure adherence to customer quality standards; develops software/systems testing procedures and conducts tests; analyzes and documents IV&V issues; presents IV&V results; works under general supervision.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-104 Quality Assurance/IV&V Specialist**

Minimum/General Experience: Must have at least four years' experience of which two years must be specialized. Specialized experience includes:

Configuration Management, IV&V, software testing and integration, software metrics and their application to software quality assessment. General experience includes increasing responsibilities in quality assurance, quality control and IV&V.

**Functional Responsibility:** Assists in the evaluation of software and associated documentation. Participates in formal and informal reviews to determine quality; presents IV&V results and troubleshoots technical problems; makes recommendations to improve overall quality.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	8 years
AA/AS	6 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

**ANT-105 Quality Assurance/IV&V Manager**

**Minimum/General Experience:** Must have at least seven years of engineering and/or system analysis and programming experience, including four years of quality assurance, IV&V or system configuration experience.

**Functional Responsibility:** Organizes and maintains all quality assurance and IV&V documentation required. Responsible for ensuring compliance with recognized standards and practices. Reviews all documentation for completeness, accuracy, and correctness. Supports the test and integration personnel as a witness to testing requirements; presents IV&V results and troubleshoots technical problems; makes recommendations to improve overall quality. Certifies that deliverables have met all quality requirements.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-108 Configuration Management Specialist**

**Minimum/General Experience:** Must have five years of engineering and/or system analysis and programming experience, including two years of configuration management experience.

**Functional Responsibility:** Responsible for configuration management activities including product identification, change control, status accounting, operation of the program support library, and development and monitoring of equipment/system acceptance plans. Evaluates and selects configuration management tools and standards. Coordinates with users and systems development personnel on releases of both system-level software and applications software. Verifies the completeness and accuracy of release libraries before implementation and ensures that correct versions of programs are included in specified releases. Prepares configuration management plans and procedures. Responsible for configuration management of requirements, design, and code. Operates and manages program support library. Monitors library structure and procedures to assure system integrity, including procedures for collection, release, production, test, and emergency libraries and the movement/migration of components between libraries. Monitors end-item acceptance plans. Will supervise lower level personnel. Must have demonstrated capability for oral and written communications.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-109 SR Configuration Management Specialist**

**Minimum/General Experience:** Must have at least seven years' directly related experience in configuration management and support. Must also have advanced knowledge of the principles, methods, and techniques used in configuration management and support as well as knowledge and familiarity with Configuration Management software support packages commonly utilized in project management. Must be able to supervise and direct the work of others and have the ability to serve as a technical team or task lead.

**Functional Responsibility:** Conducts periodic site inventory in order to create and maintain inventories of equipment, software, and/or systems; prepares, maintains and inventories associated technical drawings for assigned projects; researches data, and creates and maintains inventory and other databases for assigned projects; prepares configuration change requests and verifies, tracks, and documents configuration changes; performs logistic-related tasks like shipping/receiving, tracking, and disposal of equipment, software, and/or systems; coordinates equipment/software utilization among individual users; provides documentation support for assigned projects;

performs quality assurance checks on drawings prepared by other configuration management specialists; may serve as a team or task lead; may supervise and direct the work of other configuration management specialists; provides training on configuration management processes, software, and/or systems.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

### ANT-111 Training Specialist/Instructor

Minimum/General Experience: Must have four years' experience in information systems development, training, or related fields. Must have two years specialized experience. Specialized experience includes: experience in developing and providing IT and end-user training on computer hardware and application software. General experience includes information systems development, training, or related fields. Demonstrated ability to communicate orally and in writing.

Functional Responsibility: Conducts the research necessary to develop and revise training courses. Develops and revises these courses and prepares appropriate training catalogs. Prepares all instructor materials (course outline, background material, and training aids). Prepares all student materials (course manuals, workbooks, handouts, completion certificates, and course critique forms). Trains personnel by conducting formal classroom courses, workshops and seminars.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	8 years
AA/AS	6 years
MA/MS	2 years
Doctorate Degree/Ph.D.	1 years

### ANT-112 SR Training Specialist/Instructor

Minimum/General Experience: Must have six years' experience in information systems development, training, or related fields, with at least three years experience developing and providing IT and end-user training on computer hardware and application software.

Functional Responsibility: Conducts the research necessary to develop and revise training courses and prepares appropriate training catalogs. Prepares all instructor materials (course outline, background material, and training aids). Prepares all student materials (course manuals, workbooks, handouts, completion certificates, and course critique forms). Trains personnel by conducting formal classroom courses, workshops, and seminars. Provides daily supervision and direction to staff.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

### ANT-114 Training Specialist

Minimum/General Experience: Requires at least three years' directly related experience in the design and development of training programs. Also requires knowledge of the principles, methods, and techniques used in the design and development of computer-based training programs as well as relevant hardware/software and computer equipment as required. Must be able to present training programs to users and serve as a technical team lead.

Functional Responsibility: Designs training objectives; develops computer-based training programs for assigned software; designs courseware and structures training classes; creates lesson text; provides documentation for software training; designs program authoring systems; creates final version of training programs; presents training programs to users; designs program flowcharts; may serve as a team lead.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	5 years
BA/BS	1 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

### ANT-115 SR Training Specialist

Minimum/General Experience: Requires at least seven years' directly related experience in the design, development, testing, and implementation of computer-based training programs. Also requires thorough knowledge of the principles, methods, and techniques used in the design, development, testing, and implementation of computer-based training

programs; knowledge of relevant hardware/software and computer equipment as required. Must be able to present training programs and evaluate effectiveness of training and serve as a team or task lead.

**Functional Responsibility:** Defines training requirements and analyzes system software changes; develops computer-based training objectives and methodologies; coordinates with subject matter experts to design training strategy; designs courseware, including structuring training classes; creates lesson text; provides documentation for software training; tests training programs and edits for effectiveness, creates final version; designs program authoring systems; presents training programs to users, validates and evaluates training effectiveness; designs program flowcharts; may develop multi-media training as required; conducts research into new training, educational, and multimedia technologies; may serve as a team or task lead.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	9 years
BA/BS	5 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

#### ANT-116 Principal Training Specialist

**Minimum/General Experience:** Requires at least ten years' related experience in instructional development. Also requires advanced knowledge of the principles, methods, and techniques used in technology-based training as well as the use and application of off-the-shelf tools and associated equipment and systems.

**Functional Responsibility:** Designs and develops instructional approaches and/or strategies to meet training requirements; conducts analysis of training requirements and media requirements; develops appropriate training objectives and test methods and designs instructionally valid training materials; ensures integrity of task analysis, training requirements, training hierarchies, instructional materials, and evaluation plans; designs and develops computer-based training, web-based training, electronic performance support systems and other technology-based learning solutions; develops flow diagrams and story boards; designs instructionally sound lessons in a variety of delivery media; interacts with customer and subject matter experts to ensure technical accuracy of instructional content. Also provides guidance and work leadership to lower-level personnel and may serve as technical team or task lead.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	12 years
BA/BS	8 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

#### ANT-119 Testing and Validation Specialist

**Minimum/General Experience:** Requires no experience and knowledge of the principles, methods, and techniques used in analysis and assessment as well as the use and application of related off-the-shelf tools.

**Functional Responsibility:** Designs and develops assessment instruments and/or strategies to meet training requirements; conducts analysis of training requirements (needs, job, task analysis); interviews subject matter experts or incumbents to collect information; develops relevant and measurable assessment criteria, standards, and methodologies; designs reliable and valid assessment materials; gathers data and compiles information into documents related to assessment.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	4 years
AA/AS	2 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

#### ANT-121 Principal Testing and Validation Specialist

**Minimum/General Experience:** Requires at least five years' related experience in educational psychology, industrial/organizational psychology, testing, psychometrics, or instructional media/technology. Also requires advanced knowledge of the principles, methods, and techniques used in analysis and assessment as well as the use and application of related off-the-shelf tools. Must have the ability to provide work leadership and supervision to assigned staff.

**Functional Responsibility:** Designs and develops assessment instruments and/or strategies to meet training requirements; conducts analysis of training requirements (needs, job, task analysis); interviews subject matter experts or incumbents to collect information; develops relevant and measurable assessment criteria, standards, and methodologies; designs reliable and valid assessment materials; prepares reports and technical documentation related to assessment; works on complex analysis or test

development projects. Serves as a technical team/task lead and may have supervisory responsibility.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
BA/BS	7 years
Doctorate Degree/Ph.D.	4 years

### ANT-123 Instructional System Designer

**Minimum/General Experience:** Requires at least two years' related experience in instructional development. Also requires knowledge of the principles, methods, and techniques used in technology-based training as well as the use and application of off-the-shelf tools and associated equipment and systems.

**Functional Responsibility:** Designs and develops instructional approaches and/or strategies to meet training requirements; conducts analysis of training requirements and media requirements; develops appropriate training objectives and test methods and designs instructionally valid training materials; ensures integrity of task analysis, training requirements, training hierarchies, instructional materials, and evaluation plans; designs and develops computer based training, web-based training, electronic performance support systems and other technology-based learning solutions; develops flow diagrams and story boards; designs instructionally sound lessons in a variety of delivery media; interacts with customer and subject matter experts to ensure technical accuracy of instructional content.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

### ANT-124 SR Instructional System Designer

**Minimum/General Experience:** Requires at least five years' related experience in instructional development as well as thorough knowledge of the principles, methods, and techniques used in technology-based training and use and application of off-the-shelf tools and associated equipment and systems.

**Functional Responsibility:** Designs and develops instructional approaches and/or strategies to meet

training requirements; conducts analysis of training requirements and media requirements; develops appropriate training objectives and test methods and designs instructionally valid training materials; ensures integrity of task analysis, training requirements, training hierarchies, instructional materials, and evaluation plans; designs and develops computer based training, web-based training, electronic performance support systems and other technology-based learning solutions; develops flow diagrams and story boards; designs instructionally sound lessons in a variety of delivery media; interacts with customer and subject matter experts to ensure technical accuracy of instructional content; may provide guidance and work leadership to lower-level personnel.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	11 years
AA/AS	9 years
BA/BS	7 years
Doctorate Degree/Ph.D.	4 years

### ANT-128 Staff Graphics Design Specialist

**Minimum/General Experience:** Requires at least five years' directly related experience in graphics design. Also requires knowledge of the principles, methods, and techniques used in the preparation of graphics material and associated software and equipment. Requires experience using graphics software programs.

**Functional Responsibility:** Performs a wide variety of graphics/illustration activities to produce brochures, briefings, displays, and other materials; involved in all aspects of graphics/illustration projects from conceptualization and development to final presentation; may act as a technical consultant on matters of design, composition and methods of presenting technical data; uses a broad range of graphics production software and equipment; exercises creative judgment and originality by translating needs into graphics capabilities; may participate in website design.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	7 years
BA/BS	3 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

### ANT-129 SR Graphics Design Specialist

**Minimum/General Experience:** Requires at least eight years' directly related experience in graphics design. Knowledge of the principles, methods, and techniques used in the preparation of graphics materials as well as knowledge of the associated software and equipment and in-depth knowledge of graphics software programs.

**Functional Responsibility:** Performs high-level computer graphic design activities to produce brochures, briefings, displays, and other materials; involved in all aspects of graphics/illustration projects from conceptualization and development to final presentation; may act as a technical consultant on matters of design, composition and methods of presenting technical data; uses a broad range of graphics production software and equipment; exercises creative judgment and originality by translating needs into graphics capabilities; may participate in website design; provides technical training and guidance to lower-level graphics personnel and may act as a team or task lead.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	10 years
BA/BS	6 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

**ANT-130 Principal Graphics Design Specialist**

**Minimum/General Experience:** Requires at least nine years' directly related experience in graphics design. Also requires knowledge of the principles, methods, and techniques used in the preparation of graphics materials and associated software and equipment and an in-depth knowledge of graphics software programs. Requires the ability to supervise and direct the work of others.

**Functional Responsibility:** Provides full supervision and training for graphic design personnel, directing the production of graphics projects from design through final presentation; acts as a technical consultant on matters of design, composition and methods of presenting technical data; uses a broad range of graphics production software and equipment; exercises creative judgment and originality by translating needs into graphics capabilities; may participate in website design; acts as a team or task lead.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	11 years

BA/BS	7 years
MA/MS	5 years
Doctorate Degree/Ph.D.	4 years

**ANT-133 Contract Administrator**

**Minimum/General Experience:** Requires at least two years' related experience in contracts administration. Also requires thorough knowledge of the practices, procedures, and processes of contracts administration as well as relevant laws, regulations, terms, conditions, and policies governing assigned contracts.

**Functional Responsibility:** Performs all duties of contract administration, including negotiation, correspondence, documentation, certification, financial reporting, and product delivery; implements subcontract administration procedures; negotiates contract terms from proposal stage to project close-out in accordance with relevant regulations; prepares and submits proposals including pricing and scheduling details and coordination of requirements; prepares consulting agreements; modifies contract schedules and participates in vendor reseller agreement negotiations when required; ensures timely processing of technical reports and deliverables; collects data for clients as requested

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-134 SR Contract Administrator**

**Minimum/General Experience:** Requires at least five years' related experience in contracts administration. Also requires advanced knowledge of the practices, procedures, and processes of contracts administration as well as thorough knowledge of relevant laws, regulations, terms, conditions, and policies governing assigned contracts including Federal Acquisition Regulations (FAR) and labor law.

**Functional Responsibility:** Performs all duties of contract administration, including negotiation, correspondence, documentation, certification, financial reporting, and product delivery for complex contracts; implements subcontract administration procedures; negotiates contract terms from proposal stage to project close-out in accordance with relevant regulations; coordinates approval of negotiations, contracts, and subcontracts with appropriate management staff; provides advice and interpretation of contract requirements; reviews solicitation requests

to ensure compliance with terms and conditions; prepares and submits cost proposals including pricing and scheduling details, coordination of requirements, and cost proposal risk assessment; prepares responses to certifications and representations; prepares consulting agreements; modifies contract schedules and participates in vendor reseller agreement negotiations when required; ensures timely processing of technical reports and deliverables; coordinates with program managers to ensure contract requirements are fulfilled; collects data for clients as requested; may provide work leadership to lower level contracts personnel.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-137 Program Management Specialist**

Minimum/General Experience: Requires at least three years' related administrative experience. Also requires demonstrated effective organizational skills and knowledge of word processing, spreadsheet, and/or other pertinent software applications.

Functional Responsibility: Responsible for management, performance and completion of projects associated with a contract program; collects and evaluates data for monitoring development and life-cycle requirements of various programs and systems; creates program cost estimates to support program cost/schedule/technique audits or to generate budget submissions; manages program staff; prepares management plans, budgets and schedules; uses and develops CPM and PERT evaluation techniques; uses computer programs and models to track program data; maintains contact with customer to ensure conformance to customer requirements.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	7 years
AA/AS	5 years
MA/MS	1 years
Doctorate Degree/Ph.D.	0 years

**ANT-138 SR Program Management Specialist**

Minimum/General Experience: Requires at least six years' related administrative experience. Also

requires demonstrated effective organizational skills and knowledge of word processing, spreadsheet, and/or other pertinent software applications.

Functional Responsibility: Responsible for management, performance and completion of significant projects associated with a contract program; collects and evaluates data for monitoring development and life-cycle requirements of various programs and systems; creates program cost estimates to support program cost/schedule/technique audits or to generate budget submissions; manages and coordinates projects of considerable scope and magnitude; manages program staff; oversees the development of design concepts and test criteria; prepares management plans, budgets and schedules; uses and develops CPM and PERT evaluation techniques; uses computer programs and models to track program data; maintains contact with customer to ensure conformance to customer requirements.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	10 years
AA/AS	8 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

**ANT-139 Principal Program Management Specialist**

Minimum/General Experience: Requires at least eight years' related administrative experience. Also requires demonstrated management and organizational skills and knowledge of word processing, spreadsheet, and/or other pertinent software applications.

Functional Responsibility: Responsible for management, performance and completion of major projects associated with a contract program; collects and evaluates data for monitoring development and life-cycle requirements of various programs and systems; creates program cost estimates to support program cost/schedule/technique audits or to generate budget submissions; manages and directs, with full authority, all phases of a program from inception to completion; manages program staff; oversees the development of design concepts and test criteria; reviews project and program schedules and plans and reports on alternative courses of action and potential impacts; directs, prepares and coordinates proposal preparation, management plans, budgets and schedules; uses and develops CPM and PERT evaluation techniques; uses computer programs and models to track program data; maintains contact with customer to ensure conformance to customer requirements.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

#### ANT-148 SR Documentation Specialist

**Minimum/General Experience:** Requires at least eight years' directly related experience in the research, preparation, and writing of technical and marketing materials. Also requires thorough knowledge of the principles and practices of technical research, writing, and editing as well as word-processing, desk-top publishing, and web applications and computer equipment.

**Functional Responsibility:** Collects and organizes information required for preparation of user's manuals, training materials, installation guides, and reports at a complex level; researches and learns the assigned system; interviews key personnel; writes materials; performs detailed edits of contract deliverables, proposals, brochures, press releases, and other materials to ensure technical accuracy, consistency, and adherence to specified content and format; participates in the writing, design, and development of marketing brochures, advertisements, news releases, feature articles, conference programs and proceedings, public relations announcements, newsletters, and other materials; designs, develops, produces, maintains, and manages client web sites as assigned; rewrites technical materials and coordinates with technical personnel to ensure accuracy; compiles and collects information for the preparation of technical proposals; Creates multi-media presentation materials, including slides; may participate in the coordination of and attend various conferences and meetings; may serve as a team lead.

Minimum Education: AA/AS

Approved Substitutions	
Education	Experience
HS	10 years
BA/BS	6 years
MA/MS	4 years
Doctorate Degree/Ph.D.	3 years

#### ANT-150 Technical Editor

**Minimum/General Experience:** Must have at least five years' directly related experience in the research and preparation of technical materials. Also requires knowledge of the principles and practices of technical research, writing, and editing, as well as word-

processing and desktop publishing applications and computer equipment as required.

**Functional Responsibility:** Prepares and edits a wide variety of complex technical materials for publication, including user's manuals, training materials, installation guides, proposals, and reports; reviews, researches, and edits information for preparation of contract deliverables; provides support to the creation of proposals and multi-media presentation materials, including slides; responsible for the coordination of multiple aspects of document publication; participates in the design and development of marketing brochures, conference programs and proceedings, public relations announcements, and other materials when requested; may supervise and direct the work of word processing, graphics and/or technical writing staff; coordinates and attends various conferences and meetings; plans budgets, schedules and priority of work for publications projects.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

#### ANT—158 Imagery Analyst

**Minimum/General Experience:** Two years of related experience supporting statistics/data analysis and programming in data analytical language. Knowledge of the principles, methods, and techniques used in statistical analysis. Knowledge of the principles, methods, and techniques used in database management. Ability to prepare and present technical research specific certifications or military education/training may be required, depending on job assignment.

**Functional Responsibility:** Provides analysis and research for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability. Prepares assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information within Earth Observation Services. Assists with development of analytical procedures to meet changing requirements and ensure maximum operational success. Collects data using a combination of standard intelligence methods and business processes. Performs data collection, analysis, interpretation, and management duties. Prepares presentations that reflect the results of the

data analysis. Works with scientists and other technical experts to design and develop statistical analyses methodologies. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: BA/BS

<b>Approved Substitutions</b>	
<b>Education</b>	<b>Experience</b>
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT- 159 Imagery Sr. Analyst**

Minimum/General Education: 5 years of related experience supporting statistics/data analysis and programming in data analytical language. Comprehensive knowledge of the principles, methods, and techniques used in statistical analysis. Comprehensive knowledge of the principles, methods, and techniques used in database management. Experience preparing and presenting technical research specific certifications or military education/training may be required, depending on job assignment.

Functional Responsibilities: Provides analysis and research for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability. Prepares assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information. Develops and maintains analytical procedures to meet changing requirements and ensure maximum operational success within Earth Observation Services. Collects data using a combination of standard intelligence methods and business processes. Performs and manages data collection, analysis, interpretation, and management duties. Prepares presentations that reflect the results of the data analysis. Provides data-related training to staff. Coordinates with scientists and other technical experts to design and develop statistical analyses methodologies. May provide guidance and work leadership to less-experienced staff. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: BA/BS

<b>Approved Substitutions</b>	
<b>Education</b>	<b>Experience</b>

HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-160 Imagery Principal Analyst**

Minimum/General Education: 8 years of related experience supporting statistics/data analysis and programming in data analytical language. Provides and manages analysis and research for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability. Advanced knowledge of the principles, methods, and techniques used in statistical analysis. Advanced knowledge of the principles, methods, and techniques used in database management within Earth Observation Services Experience preparing and presenting technical research specific certifications or military education/training may be required, depending on job assignment.

Functional Responsibility: Prepares and reviews assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information. Develops, supervises, and maintains analytical procedures to meet changing requirements and ensure maximum operational success. Oversees the collection of data using a combination of standard intelligence methods and business processes. Manages data collection, analysis, interpretation, and management duties. Delivers presentations that reflect the results of the data analysis. Develops and provides data-related training to staff. Coordinates with scientists and other technical experts to design and develop statistical analyses methodologies. Provides guidance and work leadership to less-experienced staff. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: BA/BS

<b>Approved Substitutions</b>	
<b>Education</b>	<b>Experience</b>
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-161 Imagery Sr. Principal Analyst**

Minimum/General Experience: Minimum of 20 years of related GEOINT experience with Service or

National Agency requirements. Plans and executes broad imagery exploitation requirements. Provides remotely sensed imagery analysis and research for national security, infrastructure, technology, country, geographic area, and targeted vulnerability. Understands and can exploit GEOINT data from active sensors such as synthetic aperture RADAR (SAR) and light detection and ranging (LIDAR). Masters' Degree in Geospatial Sciences, Intelligence, Geography or the equivalent and 10 years' experience processing and exploiting remotely sensed imagery. Expert knowledge of the principles, methods, and techniques used in statistical analysis within Earth Observation Services. Advanced knowledge of the principles, methods, and techniques used in database management. Expert experience preparing and presenting technical research specific certifications or military education/training may be required, depending on job assignment.

**Functional Responsibilities:** Conducts Multi-INT research, populates intelligence databases, and produces written, graphic, and oral intelligence products. Prepares expert assessments of current threats and trends based on sophisticated GEOINT collection, research, and analysis of classified and unclassified imagery. Understands the DOD and Intelligence Community (IC) reporting and classification standards. Develops and maintains remotely sensed imagery analytical procedures to meet changing requirements and ensure maximum operational success. Builds expert level Advanced Geospatial Intelligence (AGI) collection requirements to answer intelligence requirements. Performs and manages data collection, analysis, interpretation, and management duties. Provides GEOINT related training to staff. Coordinates with physical and imagery scientists and other technical experts to design and develop statistical analyses. May provide guidance and work leadership to less-experienced staff. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: MA/MS

Approved Substitutions	
Education	Experience
HS	26 years
AA/AS	24 years
BA/BS	22 years
Doctorate Degree/Ph.D.	19 years

**ANT-162 Geospatial Analyst**

**Minimum/General Experience:** 2 years of related experience supporting statistics/data analysis and programming in data analytical language. Knowledge of the principles, methods, and techniques used in statistical analysis within Earth Observation Services. Knowledge of the principles, methods, and techniques used in database management. Ability to prepare and present technical research. Specific certifications or military education/training may be required, depending on job assignment.

**Functional Responsibilities:** Provides analysis and research for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability. Prepares assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information. Assists with development of analytical procedures to meet changing requirements and ensure maximum operational success. Collects data using a combination of standard intelligence methods and business processes. Collects data using a combination of standard intelligence methods and business processes. Performs data collection, analysis, interpretation, and management duties. Prepares presentations that reflect the results of the data analysis. Works with scientists and other technical experts to design and develop statistical analyses methodologies. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	6 years
AA/AS	4 years
MA/MS	0 years
Doctorate Degree/Ph.D.	0 years

**ANT-163 Geospatial Sr. Analyst**

**Minimum/General Experience:** 5 years of related experience supporting statistics/data analysis and programming in data analytical language. Comprehensive knowledge of the principles, methods, and techniques used in statistical analysis within Earth Observation Services. Comprehensive knowledge of the principles, methods, and techniques used in database management. Experience preparing and presenting technical research. Specific certifications or military education/training may be required, depending on job assignment.

**Functional Responsibilities:** Provides analysis and research for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability. Prepares assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information. Develops and maintains analytical procedures to meet changing requirements and ensure maximum operational success. Collects data using a combination of standard intelligence methods and business processes. Performs and manages data collection, analysis, interpretation, and management duties. Prepares presentations that reflect the results of the data analysis. Provides data-related training to staff. Coordinates with scientists and other technical experts to design and develop statistical analyses methodologies. May provide guidance and work leadership to less-experienced staff. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	9 years
AA/AS	7 years
MA/MS	3 years
Doctorate Degree/Ph.D.	2 years

**ANT-164 Principal Geospatial Analyst**

**Minimum/General Experience:** Requires 8 years of related experience supporting statistics/data analysis and programming in data analytical language. Bachelor's degree in Computer Science, Statistics, Geography or a related technical or military discipline or the equivalent combination of education, professional training, or work/military experience.

**Functional Responsibility:** Provides analysis and manages research methods for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability within the GEOINT environment. Prepares and reviews assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information. Develops and maintain rules and methodologies for analytical procedures to meet changing requirements and ensure maximum operational success. Oversees the collection of data using a combination of standard intelligence methods and business processes. Performs data collection, analysis, interpretation and management duties; delivers presentations that reflect the results of the data analysis and provides data-

related training to staff. Coordinates with scientists and other technical experts to design and develop statistical analyses methodologies. Provides guidance and work leadership to less-experienced staff. Maintains current knowledge of relevant technologies and subject areas. Participates in special projects as required.

Minimum Education: BA/BS

Approved Substitutions	
Education	Experience
HS	12 years
AA/AS	10 years
MA/MS	6 years
Doctorate Degree/Ph.D.	5 years

**ANT-165 Geospatial Sr. Principal Analyst**

**Minimum/General Experience:** Minimum of 20 years of related GEOINT experience with Service or National Agency requirements. Masters' Degree in Geospatial Sciences, Intelligence, Geography or the equivalent and 10 years' experience processing and exploiting remotely sensed imagery. Expert knowledge of the principles, methods, and techniques used in statistical analysis within Earth Observation Services. Expert knowledge of the principles, methods, and techniques used in database management. Experience preparing and presenting technical research. Specific certifications or military education/training may be required, depending on job assignment.

**Functional Responsibilities:** Provides analysis and research for national security, infrastructure, technology, country, geographic area, biographic and targeted vulnerability. Delivers assessments of current threats and trends based on the sophisticated collection, research and analysis of classified and open source information. Develops and supervises analytical procedures to meet changing requirements and ensure maximum operational success. Supervises collection of data using a combination of standard intelligence methods and business processes. Performs data collection, analysis, interpretation and management duties. Delivers presentations and maintains digital Geospatial Services that reflect the results of the data analysis. Understands the DOD and Intelligence Community (IC) reporting and classification standards. Develops and maintains remotely sensed imagery analytical procedures to meet changing requirements and ensure maximum operational success. Develops and provides data-related training to staff. Coordinates with scientists and other technical experts to design and develop statistical analyses methodologies.

Provides guidance and work leadership to less-experienced staff. Maintains current knowledge of relevant technologies and subject areas of staff. Participates in special projects as required.

Minimum Education: MA/MS

<b>Approved Substitutions</b>	
<b>Education</b>	<b>Experience</b>
HS	26 years
AA/AS	24 years
BA/BS	22 years
Doctorate Degree/Ph.D.	19 years

