APPLICATIONS ANALYST SERIES
APPLICATIONS ANALYST I, II, III and IV

DEFINITION

To perform professional level duties in the analysis, evaluation, design, development, testing, implementation, documentation and maintenance of strategic City computer system applications across multiple platforms and technologies; to provide technical support and training to end users on the use of applications; and to perform a variety of duties relative to assigned areas of responsibility.
NOTE: This is a deep classification as provided in the HR Administrative Rules, 8.5 –Classification: Deep Classification Series, and incumbents may be reclassified in accordance with that Rule.

EXAMPLES OF WORK for Applications Analyst Series-- *(Any one position may not include all of the duties listed nor do the listed examples include all tasks which may be found in positions of this class series.)*

1. Perform professional level duties in the analysis, evaluation, design, development, testing, implementation, documentation and maintenance of strategic City computer system applications across multiple platforms and technologies.

2. Analyze functional and business requirements for new or enhanced applications; meet with users and department management staff to ensure complete understanding of business requirements; analyze current manual or computer systems; analyze interrelationships between new tasks and existing applications; research internal and external available technology and resources; make recommendations on application solutions; present cost benefit analyses and review with department staff.

3. Design data and application structures for new computer application systems using appropriate design tools; analyze current systems; design data structures and application interface; design on-line screens, maps, reports, forms, menus and input and output records; write, test, debug and install application; develop optimum software configurations to achieve application functional goals; locate, review, reformat, convert and download existing system data; install, test and connect applications on personal computers.

4. Determine method of integrating new programming code into existing programs to meet user needs; ensure data integrity and program structure and reliability are maintained.

5. Troubleshoot and rectify computer application problems; test and debug applications, determine whether new application meets the client's business and technology requirements; recommend changes as needed.

6. Develop and write documentation on new and enhanced applications design and functionality; design and write descriptions and functions of the applications and database code; recovery procedures and intervention methods; prepare and update user manuals and

documentation including design and as-built documentation, user guides and training materials.

7.   Provide training to end users on use of applications; develop training materials; conduct or coordinate training classes; evaluate training programs to ensure they are effective in meeting goals and objectives.

8.   Maintain and provide technical support for new or current applications; troubleshoot and resolve application or database problems; evaluate requests for application enhancements; provide guidance to end users on applications use and operating parameters.

9.   As assigned within City departments, provide technical assistance to end users in updating and maintaining system data to ensure adherence to critical operating deadlines; write, modify and generate system reports; serve as liaison with central information technology staff for system or production problems; install system updates.

10.   As assigned, serve as project lead over all aspects of assigned application development project; evaluate and assess client needs; identify and allocate resources including staff, equipment and materials; set project priorities, goals and objectives.

11.   Plan, prioritize, delegate and review the work of assigned staff; establish schedules and methods for achieving goals and objectives; review work products, make corrections and coordinate staff training and development efforts as appropriate.

12.   Prepare project cost estimates and justification for new or enhanced applications; may prepare requests for proposals for vendor services.

13.   Prepare and present project progress reports for department management or committee; identify problems and issues; recommend solutions.

14.   Oversee quality assurance procedures for new applications; review new application software for compliance with applicable quality assurance standards before implementation.

15.   Attend and participate in professional group meetings; stay abreast of new trends and innovations in the field of information systems.

16.   Perform related duties and responsibilities as required.

WORKING CONDITIONS

Environmental Conditions:
Office environment; exposure to computer screens.

Physical Conditions:
Essential and marginal functions may require maintaining physical condition necessary for sitting for prolonged periods of time; extensive use of computer keyboard; extensive verbal and electronic communication with system users; near visual acuity for performing programming or software installation functions.

APPLICATIONS ANALYST I - Generalist - 30000201

DISTINGUISHING CHARACTERISTICS

This is the entry-level class in the Applications Analyst series. This class is distinguished from the Applications Analyst II by the performance of the more routine tasks and duties assigned to positions within the series including support of the least complex applications. Since this class is typically used as a training class, employees may have only limited or no directly related work experience.

SUPERVISION RECEIVED AND EXERCISED

Receives immediate supervision from higher level supervisory or management staff.

QUALIFICATIONS

Knowledge of:
- Basic theories and applications of computer science.
- Basic principles and practices of applications programming.
- Basic methods and techniques of using application design and development tools.
- Personal computer hardware and software components.
- Basic methods and techniques used in the installation, trouble shooting, upgrading and problem resolution of software applications.
- Operational characteristics of various computer programs, software packages and programming languages.

Ability to:
- Provide technical support for the implementation and maintenance of various software applications.
- Create and generate various reports, charts and other materials.
- Respond to and identify user needs and determine resolutions.
- Learn methods and techniques of applications analysis, design, development and programming.
- Learn to recommend, design, implement and install computer software applications.
- Learn to apply a wide variety of computer programming languages.
- Learn to install and troubleshoot applications.
- Learn to evaluate, test, implement and support new system applications.
- Learn to analyze and assess the technological needs of City departments.
- Communicate clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Maintain mental capacity, which allows for effective interaction and communication with others.
- Maintain physical condition appropriate to the performance of assigned duties and responsibilities.
- Maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading writing and operating assigned equipment.

SPECIALTIES:
Positions in this class are assigned to one of the following specialties: Generalist. Positions assigned to the Generalist specialty are defined in the Definition and Examples of Work sections of the class specification.

Classification History:
Adopted: 12-16-98
Class created as a result of IT Classification and Compensation Study 1997-1998. This class is composed of the following class:
> 2530   Adopted:01-15-85 Revised: 07-01-92 (Class revised, retitled and job class number changed as a result of Nonrepresented Classification & Compensation Study, 1991-92. Formerly titled Computer Programmer/Operator)

Revised: 7-24-97 (Class revised, Examples of Work and KSAs updated.)
June 2009 - Change Job Class number from 2531 to 30000201, due to system change.

APPLICATIONS ANALYST II - Generalist   -   30000203

DISTINGUISHING CHARACTERISTICS

This is the full journey-level class within the Applications Analyst series. Employees within this class perform the full range of duties as assigned. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit. This class is distinguished from the Applications Analyst III in that the latter supports, administers, and maintains large or complex applications and may serve in a project lead capacity on specialized applications development projects.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from higher level supervisory or management staff.

QUALIFICATIONS

In addition to the qualifications for Applications Analyst I:

Knowledge of:
- Methods and techniques of using application design and development tools.
- Methods and techniques of applications development, analysis, design, development and programming.
- Principles and practices of computer science and information systems.
- Methods and techniques of structured programming.
- Principles and practices of software troubleshooting.
- Database principles and concepts.
- Methods and techniques used in the installation, trouble shooting, problem resolution and maintenance of computer applications.
- Methods and techniques of developing and writing technical documentation.
- Methods and techniques of developing training materials and conducting training sessions.

Ability to:

- Recommend, implement and install computer applications.
- Apply a wide variety of applications programming languages.
- Design software to meet user requirements.
- Detect, isolate and resolve applications problems.
- Analyze and assess the technological needs of City departments.
- Develop, install, and trouble shoot and upgrade City applications.
- Create and develop concise technical documents and reports.
- Analyze and assess the technological needs of City departments.
- Integrate multiple data sets and data designs to individual applications.
- Independently perform a variety of responsible applications design and development duties.
- Design training materials and conduct training programs.

SPECIALTIES:

Positions in this class are assigned to one of the following specialties: Data Analyst or Generalist. Positions assigned to the Generalist specialty are defined in the Definition and Examples of Work sections of the class specification.

Classification History:

Adopted: 12-16-98
Class created as a result of IT Classification and Compensation Study 1997-1998. This class is composed of the following class:

  2532 Revised:07-17-84; 07-01-92
  (Class revised and job class number changed as a result of Nonrepresented Classification & Compensation Study, 1991-92)

Revised: 01-24-94 (Updated Examples of Work, Special Requirements and Other Characteristics)
Revised: 06-06-01 Added Data Analyst Specialty
Revised: 12-01-04 (Changed FLSA status from exempt to covered per contract negotiations)
June 2009 - Change Job Class number from 2532 to 30000203 (GEN), due to system change.
June 2009 - Change Job Class number from 2532 to 30000202 (DATA), due to system change.

Applications Analyst II - Data Analyst Specialty - 30000202

Summary:

Responsible to provide a variety of professional and analytical work in the development and maintenance of automated information systems. Analyzes information needs of multiple users to assist in determining appropriate system structure, design system and report specifications, and produce reports to senior management. Duties of this class include designing and creating programs to retrieve and analyze data. This position reports directly to the IT Manager.

Examples of Work:

- Analyzes information needs of multiple users to assist in determining appropriate system structure.
- Analyzes user needs and design, writes and executes computer programs in a variety of programming environments; designs input and output documents such as forms and reports.

- Investigates and resolves data, reporting and system inconsistencies; develops and implements workflow, data entry, collection, and reporting procedures.
- Performs and analyze statistical studies of data as needed to support assigned functions.
- Designs, develops and maintains databases for smaller systems; designs, writes, and tests programs to access database and prepares reports to meet specified needs.
- Designs data structures and application interface, designs on-line screens, maps, reports, form, menus and input and output records.
- Locates, reviews, reformats, converts and downloads existing system data.
- Determines method of integrating new programming code into existing programs to meet user needs; ensures data integrity and program structure and reliability are maintained.
- Develops tools to integrate system data from multiple internal and external databases into a single reporting tool.
- Develops tracking system to identify accurate and useful information in Key Result Areas as identified by individual Divisions.
- Develops user reports which will be available at the management and station level including graphical and mapping images.
- Develops automatic messaging service to Bureau managers for Quality Assurance Reports.

Knowledge of:
- Principles, practices and procedures of statistical analysis.
- SQL Server structure, language, data management and query tools.
- Advanced Access database structure.
- Analysis of small and large data sets.
- Continuous Quality Assurance processes including data collection.
- Medical research methodologies.
- Spatial analysis with ability to convert data into graphical and mapping reports.

Ability to:
- Work on multiple programs and prioritize work effectively.
- Work in a team environment to produce positive results.

APPLICATIONS ANALYST III   - Generalist -   30000204

DISTINGUISHING CHARACTERISTICS

This is the advanced journey-level class in the Applications Analyst series. Employees perform the most difficult and responsible types of duties assigned to classes within this series including maintaining large or complex City applications, and serving in a project lead capacity on specialized applications development projects. Employees at this level are required to be fully trained in all procedures related to assigned area of responsibility.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from higher level supervisory or management staff.
May provide lead direction to assigned information systems project staff.

QUALIFICATIONS
In addition to the qualifications for Applications Analyst II:

Knowledge of:
- Advanced applications programming techniques.
- Advanced methods and techniques of using application design and development tools.
- Basic principles, practices, methods and techniques of leading application development projects.
- Database management systems and related computer languages.
- Methods and techniques of evaluating client information technology requirements.
- Advanced methods and techniques of applications development, analysis, design, programming and installation.
- Advanced principles and practices of computer science and information systems.
- Advanced principles and practices of information systems hardware and software troubleshooting.
- Operational characteristics of multiple operating systems and platforms.

Ability to:
- Perform highly advanced programming duties.
- Design and implement projects to meet user specifications.
- Design, develop, install, and troubleshoot and upgrade City applications.
- Oversee applications quality assurance procedures.
- Serve as project leader on assigned information systems projects.
- Perform highly advanced applications development, analysis and programming duties.
- Install, test and configure hardware and software applications and programs.
- Design, evaluate, test, implement and maintain a variety of software applications.

SPECIALTIES:
Positions in this class are assigned to one of the following specialties: Vertical GIS or Generalist. Positions assigned to the Generalist specialty are defined in the Definition and Examples of Work sections of the class specification.

Classification History:
Adopted: 12-16-98
Class created as a result of IT Classification and Compensation Study 1997-1998. This class is composed of the following class:

      2534 Revised: 04-17-84; 07-01-92 (Class revised and job class number changed as a result of Nonrepresented Classification & Compensation Study, 1991-92)

Revised: 01-24-94   (Updated Examples of Work, Special Requirements and Other Characteristics)
Revised: 07-23-97   (Updated Summary, Examples of Work, Special Requirements and Other Characteristics)
Revised: 02-08-06   (Re-titled GIS specialty to Vertical GIS – GISV; awaiting language for description)
June 2009 - Change Job Class number from 2533 to 30000204 (GEN), due to system change.
June 2009 - Change Job Class number from 2533 to 30000205 (GISV), due to system change.

APPLICATIONS ANALYST III - Vertical GIS Specialty -   30000205
(Awaiting language for specialty description)

APPLICATIONS ANALYST IV - Generalist   -   30000207

DISTINGUISHING CHARACTERISTICS

This is the working lead level class in the Applications Analyst series. Positions at this level are distinguished from other classes within the series by the level of responsibility assumed and the complexity of duties assigned. Employees perform the most difficult and responsible types of duties assigned to classes within this series including designing, developing, implementing and maintaining large or complex computer applications and providing lead direction and training to lower level information systems staff.

SUPERVISION RECEIVED AND EXERCISED

Receives general direction from higher level supervisory or management staff.
Exercises functional and technical supervision over lower level professional and technical staff.

QUALIFICATIONS

In addition to the qualifications for Applications Analyst III:

Knowledge of:
- Principles of lead supervision and training.
- Principles, practices, methods and techniques of providing applications development project management services.
- Methods, techniques, principles and practices of integrating a variety of applications into existing and proposed operating systems across multiple platforms.
- Advanced methods and techniques of evaluating client information technology requirements.
- Advanced principles and procedures of applications development quality assurance.

Ability to:
- Lead, organize and review the work of professional and technical information systems staff.
- Design and implement relational data models.
- Perform highly advanced applications programming and database management duties.
- Perform highly complex systems analysis duties.
- Provide applications development project management services.
- Perform feasibility studies and conduct cost-benefit analyses.
- Design and integrate applications within a variety of operating systems and platforms.

SPECIALTIES:
Positions in this class are assigned to one of the following specialties: Enterprise GIS, Web Developer or Generalist. Positions assigned to the Generalist specialty are defined in the Definition and Examples of Work sections of the class specification.

Classification History:
Adopted: 12-16-98
Class created as a result of IT Classification and Compensation Study 1997-1998. This class is composed of the following class:
2534 Revised: 04-17-84; 07-01-92
(Class revised and job class number changed as a result of Nonrepresented Classification & Compensation Study, 1991-92)
Revised: 01-24-94   (Updated Examples of Work, Special Requirements and Other Characteristics)
Revised: 07-23-97   (Updated Summary, Examples of Work, Special Requirements and Other
                        Characteristics)
Revised: 03-07-03   (Added GIS Specialty)
Revised: 01-18-06   (Corrected "Specialties" section from GISB to GIS specialty.)
Revised: 02-08-06   (Re-titled GIS specialty to Enterprise GIS – GISE; no modifications to description)
June 2009 - Change Job Class number from 2534 to 30000207 (GEN), due to system change.
June 2009 - Change Job Class number from 2534 to 30000206 (GISE), due to system change.
Revised: 09-03-09   (Added Web Developer Specialty)

Applications Analyst IV – Enterprise GIS Specialty   - 30000206

Summary:

Work includes responsibility for enterprise GIS web application development with a strong focus on business level integration. The Enterprise GIS Applications Analyst IV will: develop enterprise GIS web applications that support city-wide business goals and objectives; provide expert design and development of state of the art business applications utilizing the latest GIS and Information Technologies; participate in a variety of GIS projects; define tasks, project scope of works, time lines, deliverables and budgets; and provide GIS web application support. Employees in this specialty must demonstrate strong communication skills with a solid GIS business process foundation, must exhibit superior skills in design and development of intelligent user interfaces with a strong focus on reusability and standards.

Examples of Work:

- Plan, design and program enterprise GIS Internet applications.
- Analyze user/business needs and provide business level solutions
- Manage projects
- Work with Data Architect to develop GIS spatial data models to support integrated business solutions.
- Work with GIS Solutions Architects to develop enterprise internet mapping applications that support integrated business solutions.
- Analyze and present GIS spatial data for specific business needs.
- Develop citizen focused GIS Internet applications and portals.
- Assist in providing strategic corporate direction to leverage emerging GIS Internet mapping technologies.

Knowledge, Skills and Abilities:
- Knowledge of GIS principles, methods and applied concepts.
- Thorough knowledge and experience using ESRI GIS software including MapObjects IMS, ArcIMS, ArcObjects
- Thorough knowledge of relational database products such as Microsoft Access, Microsoft SQL Server, Oracle.
- Expert skills in HTML, ColdFusion, DHTML, JavaScript, XML, ASP, Java, SOAP.
- Demonstrated applications programming skills that comply with standard object oriented approaches such as COM/DCOM and EJB object technologies.
- Demonstrated ability to plan, design and develop intelligent GIS Internet interfaces with strong emphasis on local government solutions.
- Ability to assess business needs and develop requirements, specifications and designs necessary to deliver enterprise GIS Internet solutions.
- Ability to plan and manage projects
- Ability to articulate issues, technical information, build consensus, and establish and maintain effective working relationships with all levels of the GIS community and personnel inside and outside the bureau.

Applications Analyst IV - Web Developer Specialty   -   30001234

Summary
Performs advanced, specialized web development and design work, including web application development, web graphic design, and production of photography, video and other media for use on web sites; works with bureau representatives to create interesting and interactive web sites with easy to navigate layouts, fully utilizing the best web development and design tools and applications; serves as advisor to bureaus and BTS Web application developers on how to best present content.

Examples of Work:

- Informs and implements current best practices in web design, including information architecture, user interface design, human-computer interactivity, usability, search engine optimization, informational graphics, social and viral media, dynamic content, syndication and web trends.

- Consults with clients to determine project objectives; gathers information and develops design options and specifications, estimates materials, equipment costs, budget and time schedules to complete projects; designs and codes web pages, using applicable programming languages and web design protocols..

- Serves as project coordinator by preparing requests for proposals and reviewing bids; manages project schedules and budgets; coordinates the tasks of others to implement assigned projects; reviews and assesses work performed by graphic design staff and private consultants as assigned.

- Acts as technical advisor for website development; develops and recommends standards and policies; advises on how best to present content.

- Prepares and updates lists of vendors, consultants and suppliers including fee schedules, capabilities and requirements; negotiates letters of agreement for procurement or retention of supplies and services.

- Evaluates new and updated versions of web development / web graphic design software and requests; installs, updates and maintains software as required.

- Provides information to help other staff members and the public in interpreting and understanding graphic presentations.

- Continually updates knowledge of web development software, computer technology and graphic reproduction technology.

Knowledge of:
- Advanced practices, methods and techniques of web development
- In-depth knowledge of web design; graphic design and layout for web sites.
- Professional video / photography and its use on web sites; advanced video and photo editing.
- Use of modern web development practices using both client and server side coding.
- Standard development tools and frameworks used for web development.
- Methods, practices and terminology used in the internet medium.
- Principles and practices of project management and evaluation.
- Principles and techniques used in the management and direction of work, including goals and objectives development and work planning and organization.
- Basic copyright considerations surrounding the use of text, video, audio, and photos.
- Principles and practices of writing and editing text for the web.

Ability to:
- Use modern graphic, video, and web development tools to create exciting and engaging web sites.
- Use social media tools such to enhance City communications.
- Apply graphic design, writing style and techniques appropriate for differing audiences and purposes.
- Interpret information and create artistic and/or graphic designs in accordance with sound design, layout and composition principles and applicable policies and guidelines.
- Independently perform advanced graphic design assignments with initiative and creativity.
- Establish and maintain effective working relationships with other bureau and City employees and the public.
- Operate a computer and advanced graphics, design, presentation and desktop publishing software to create visually appealing and effective graphics designs and layouts for the web.
- Code pages in web languages such as HTML, XHTML, CSS, and JavaScript.
- Review, organize and direct the work of a project team;

Skill in:
- Operating computer software on the Windows platform to create web, photo, and video content.
- Working with city bureaus to build understanding of business needs.
- Developing and maintaining server side and client side code to support advanced web site features.