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APPLICATIONS DEVELOPER I, II & III

BASIC FUNCTION

Under general supervision, perform a variety of professional, technical, and analytical duties involving the design, customization, development, testing, implementation, administration, security and support of new and existing programs, systems, applications, software and databases, for Enterprise Resource Planning (ERP) and/or traditional softwares for district use in both single and multi-platform environments including client based, distributed, cloud and web based systems.

REPRESENTATIVE DUTIES:

The classification specification does not describe all duties performed by all incumbents within the class. This summary provides examples of typical tasks performed in this classification.

- Perform a broad range of software or applications development duties, including systems analysis, technical coding design, interface design, create work breakdown structures (WBS), setting and system configuration and troubleshooting, for use with a variety of operating systems, platforms and devices. *"E"*
- Provide technical support and software development for a variety of integrated enterprise applications such as PeopleSoft or similar Enterprise Resource Planning (ERP) software, Team Collaboration Software tools, data warehousing and similar programs. *"E"*
- Design, code, test, and analyze software programs and applications, including research, design, document, upgrade and modify software specifications throughout production lifecycles; work with users to prototype, test, and validate the functionality of developed applications. *"E"*
- Participate in, plan, coordinate, and oversee activities related to the integration of assigned software programs and applications for testing the functionality of application modules under development; prepare for and guide the migration of software, or related applications or programs from a development environment to live production; attend various meetings to discuss critical changes and their impact on users. *"E"*
- Participate in and support existing systems, applications, and databases by responding to user requests for service, enhancement, modification, customization or information and training; troubleshoot, diagnose, and repair bugs and malfunctions on production and/or in-house developed systems. *"E"*
- Maintain current knowledge of changes, upgrades, patches and perform upgrades for vendor supported packages systems; act as a point-of-contact between manufacturers and vendors of hardware, software and application products, district IT Support Representatives and other project stakeholders for support, maintenance, deployments and troubleshooting. *"E"*
- Analyze, review, and alter applications' software to increase operating efficiency; monitor applications, software and databases and understand usage needs to adapt new requirements, correct errors and perform coding enhancements to assigned systems. "*E*"
- Assist in, develop and track project work plans; provide written and oral communications on projects' timelines, status, deadlines and completion; create and follow change control procedures and systems, review completed work and work in progress for functionality and advise administration on status of projects and any problems impeding completion. *"E"*
- Work with user departments and work groups to perform analysis of business functions, prepare documentation, develop requirements and specifications for new, modified and upgraded systems, and provide recommendations for software solutions. *"E"*

- Maintain and develop professional skills through ongoing training and career development, including self-study, classroom training, industry seminars and workshops; attend and participate in meetings, conferences, and seminars relevant to systems applications development. *"E"*
- Demonstrate a commitment to the Portland Public Schools Equity Initiative by developing a thorough knowledge and application of the district Racial Educational Equity Policy, Equity in Public Purchasing and Contracting and other board policies; participate in staff development, in-services and trainings related to diversity, equity and inclusion in the workplace and in K – 12 education; model appropriate behaviors; develop, recommend and implement improvements to educational and business practices with awareness and understanding of their impact in a racially and culturally diverse community. *"E"*
- Participate in, design and/or create database structures and develop data migration/conversion plans and techniques for system(s) conversions or upgrades; identify functional requirements for enhancement of existing systems. *"E"*
- Provide technical assistance, training, and information to co-workers, District staff and external stakeholders, as necessary; develop user training documents and classes relating to software, application or database system operations, and usage. *"E"*
- Collaborate with colleagues and on cross-functional district teams to participate in and coordinate the planning, implementation and maintenance of information technology software and systems throughout the district. *"E"*
- May provide leadership, work direction and guidance to assigned staff.
- Perform related duties as assigned.

Note: At the end of some of the duty statements there is an italicized "E", which identifies essential duties required of the classification. This is strictly for use in compliance with the Americans with Disabilities Act.

DISTINGUISHING CHARACTERISTICS OF THE CLASS

All levels of the Applications Developer series are responsible for systems analysis and design, programming, testing, implementation, integration and maintenance of new and existing software systems. Application Developers may specialize in a specific area such as data warehousing, integrated enterprise applications, ERP or non-ERP software, large or small scale use applications or may work in multiple areas of application development; all levels provide technical expertise and information regarding assigned functions. The levels are differentiated by the scope of work performed, the levels of complexity in developing/generating codes, programming and systems enhancements, leadership over processes, teams and/or staff, and participation on cross-functional teams related to systems functionality, integration and support.

The Applications Developer I is the primary level classification in the series. Employees in this classification perform a variety of professional duties in the design, development, testing, installation and maintenance of single platform new or modified applications in a specific business functional area. Upon successful completion of not less than two (2) years of active participation learning multiple platforms' systems and functionality, developing a variety of software applications, troubleshooting and problem-solving bugs, development and integration issues, employees in this classification who have gained sufficient knowledge of the broader scope of more complex elements of the professional level, may advance, with the confirmation of duties and recommendation of department leadership, to the Applications Developer II classification.

The Applications Developer II is the professional-expert level classification in the series. Employees in this classification perform a variety of advanced professional duties in the analysis, design, development, testing, installation and maintenance of applications on multiple platforms in a single business area or for multiple business functions, serving as a technical lead on midsize projects and participate in customer technology needs assessments and generation of solutions.

The Applications Developer III is the advanced-level classification in the series. Employees in this classification perform a variety of the most highly complex, professional duties in the analysis, design, development, testing, installation and maintenance of large scale, multifaceted, applications with overall responsibility for system development, upgrades, maintenance and production performance, serving as a

technical expert and project lead on the use of advanced technologies, cross-platform/operating systems, systems integration and connectivity issues.

The Applications Developer classification series differs from the Infrastructure Administrator and Enterprise Solution Administrator classification series' by its primary focus on the customization, coding and modification of open source and proprietary software, applications and programs. The Infrastructure Administrator and Enterprise Solution Administrator classification series' primary focus is on the integration and maintenance of hardware, software and systems.

EMPLOYMENT STANDARDS:

Knowledge of:
A variety of programming languages, such as C#, CSS, SQL, Python, SQR, COBOL and Javascript, their applications and uses; programming and script reading and writing.
Operation, capabilities and limitations of a variety of platforms, programming languages, databases and operating systems.
Current trends in information technology software, business systems, hardware, networks, and communications.
IT Business process functions and methodologies and work breakdown structures (WBS) fundamentals.
Application, database and software development, customization, design, methodologies and life cycle; application development tools, and databases including ERP's, oracle systems and team collaboration software tools.
Web and application development frameworks and tools such as Visual Studio, Powershell and SQL Server Management Studio and related programing language; open source and proprietary application development tools and principals.
Relational and distributed database systems.
The use of testing tools and methodologies; troubleshooting, debugging and error detection techniques.
Strategic planning and project management methodology including Waterfall and Agile methodologies, specifically Scrum; methodologies for proactively leading technological advancements.
Data warehouse concepts, programing and methodology.
Microsoft Office Suite or similar database, presentation, word processing, publishing and spreadsheet software.
Record keeping techniques; data modeling theory and methods.
Project management, scheduling, tracking and reporting techniques.
Children Internet Protection Act (CIPA) and other applicable laws, codes, rules and regulations.
Effective customer service skills using tact, patience and courtesy.
Effective team leadership and training techniques and methodology.
Oral and written communication skills; correct English usage, grammar, spelling, punctuation and vocabulary.

Ability to:
Understand and apply information technology systems workflow processes as well as relationships with other internal and external system databases.
Collaborate with customers to identify business needs and software solutions.
Design logical system processes.
Perform business analysis and understand functional and process needs of departments supporting.
Operate a variety of technologies, computer equipment and various software programs.
Analyze, design, modify and develop applications, software, databases and related databases using standard web, software and application development tools.
Perform maintenance, write, distribute and apply patches, fixes or other modifications or enhancements to existing applications, software, or programs.
Serve as technical lead on moderately complex systems and/or back up for large, complex systems.
Provide advice and mentor other applications development staff on applications development methods and standards or specific systems issues.
Create testing and installation processes.

Use project tracking software; coordinate work efforts with customer representatives and project leads.
Troubleshoot, diagnose and problem solve application performance problems and software issues.
Keep knowledge and skills current; learn and develop technical expertise with current, future, state-of-the-art
software applications.
Think critically about a problem, approach from multiple perspectives and adopt an effective course of action.
Effectively lead technical programs, projects and teams.
Set priorities, manage workflow and perform multiple complex and responsible activities, for multiple projects, concurrently with constantly changing priorities and deadlines.
Provide technical assistance to system users.
Advocate, model, learn and implement Portland Public School's Racial Equity Initiative.
Communicate technical concepts and procedures to a variety of technical and non-technical audiences.
Learn and develop expertise in identifying security concerns.
Communicate effectively both orally and in writing; develop user training documents and classes, and deliver formal and informal presentations; compile, write or revise system and programming documentation and user guides.
Work independently with little direction.
Establish and maintain cooperative and effective working relationships with others; provide work direction, guidance, assistance and leadership to staff for assigned projects.

Education and Training:
For all levels of this classification series is typically obtained through the completion of an Associate's degree in computer science, management information systems or closely related field and the following:

Experience:
The Applications Developer I requires two (2) years of experience in application development/integration with focus in integration of commercial off-the-shelf (COTS) products.

The Applications Developer II requires four (4) years of experience in applications design, development and integration on multiple platforms; *or* two (2) years of experience as an Applications Developer I with Portland Public Schools is required.

The Applications Developer III requires six (6) years of experience with complex, state-of-the-art software applications design, development and integration on multiple platforms, in which a minimum of one (1) year must have included leading large scale technical systems development and integration programs and teams; *or* four (4) years of experience as a Applications Developer II with Portland Public Schools is required.

Experience working in a public K-12 school district or public agency serving and supporting a richly diverse community is highly desirable.

A Bachelor's degree in one of the identified fields may substitute for a maximum of two (2) years of the required experience.

Additional directly related, verifiable work experience may substitute for the required degree on a year-for-year basis.

Any other combination of education, training and experience which demonstrates the candidate is likely to possess the skill, knowledge, ability and trait characteristics essential for this classification may be considered.

Special Requirements:

Some positions in these classifications require the use of a personal automobile and possession of a valid driver's license.

WORKING CONDITIONS

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Persons with certain disabilities may be capable of performing the essential duties of this class with or without reasonable accommodation, depending on the nature of the disability.

Work Environment: Work is performed primarily in a standard office environment with occasional visits to District sites.

Hazards: Hazards: Potential conflict situations.

Physical Demands: Primary functions require sufficient physical ability and mobility to work in an office and school setting and to routinely drive to and from District facilities; dexterity of hands and fingers to operate a computer keyboard and office equipment; sitting, standing and walking for extended periods of time; occasional kneeling, bending at the waist; lifting, pushing, pulling and carrying office equipment, computers, laptops and peripheral equipment, supplies and materials weighing up to 10 pounds; repetitive hand movement and fine coordination to use a computer keyboard; hearing and speaking to exchange information in person and on the telephone; seeing to read, prepare and assure the accuracy of documents.