



Orange County Department of Education
Human Resources Department
Classified Management Class Specification

Software Engineer

Class Code: 1373

Work Days: 225

GENERAL PURPOSE

Design and create engineering specifications for software programs and applications; implement specific development methodology; document software specifications; code, test, and debug programs according to specifications; modify, expand, and update applications; develop software prototypes; collaborate with technical teams; assess and test hardware and software interaction; collaborate with other stakeholders to ensure architecture is aligned with business requirements; and provide assistance to higher level management staff.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from higher level management staff.

ESSENTIAL DUTIES AND RESPONSIBILITIES

This position description is intended to describe the general nature and level of work being performed by an employee assigned to this position. This description is not an exhaustive list of all duties, responsibilities, knowledge, skills, abilities, and working conditions associated with this position. All requirements are subject to possible modification to reasonably accommodate individuals with a disability.

1. Recommend and assist in the implementation of goals, objectives, and strategic plan; establish schedules and methods for providing specialized services; and implement policies and procedures.
 2. Analyze procedures, data, and processes to develop logical solutions to complex application programming problems.
 3. Perform complex application development duties, including gathering requirements, analysis, design, development, testing, and debugging; developing software prototypes; releasing applications and updates; and communicating and collaborating with stakeholders and related staff.
 4. Test and update applications and programs to support new operating systems and software.
 5. Conduct meetings with customers and transform requirements into effective applications.
 6. Follow established OCDE application design standards, policies, and procedures.
 7. Follow established quality assurance and security standards for applications.
 8. Follow established database standards and procedures.
 9. Independently perform complex application development/programming analysis duties.
 10. Provide detailed design and specification documentation for all systems and databases.
 11. Provide oversight, guidance, and support to Software Developers and related technical staff.
 12. Provide project oversight and support.
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13. Verify stability, interoperability, portability, security, and scalability of application architecture.
 14. Develop software prototypes.
 15. Install, research, test, and verify the proper functioning of software updates.
 16. Research new features, software, and tools. Make recommendations to improve existing processes and tooling.
 17. Attend advisories and user group meetings to learn about and contribute to OCDE business applications and processes.
 18. Keep up-to-date on emerging application design and database architectures, technologies, and methodologies, and attend training classes as necessary.
 19. Demonstrate attendance sufficient to complete the duties of the position as required. This includes nights and weekends for implementations, updates, and processes.
 20. Perform related duties similar to the above in scope and function as required.

QUALIFICATIONS (KNOWLEDGE, SKILL, ABILITY REQUIREMENTS)

Knowledge of:

1. Principles and practices of application architecture, security, and analysis.
2. Methods and techniques used to design, develop, test, and deploy applications.
3. Methods and techniques of evaluating requirements and developing information systems solutions.
4. Principles and practices of programming languages, development operations, tooling, and related technology.
5. Project management and reporting.
6. Methods and techniques of developing application technical manuals and documentation.
7. Application development best practices.
8. C#.
9. ASP.NET (WebForms and MVC).
10. Microsoft .NET Framework.
11. Visual Studio .NET Development Environments.
12. Structured Query Language (SQL).
13. Microsoft SQL Server 2008 and above.
14. SQL Server Integration Services (SSIS).
15. Database design and development.
16. JavaScript (and JavaScript frameworks).
17. Hyper Text Markup Language (HTML).
18. Cascading Style Sheets (CSS).
19. Reporting tools such as Crystal Reports or SQL Server Reporting Services (SSRS).
20. Procedures, methods, and techniques of project and workflow management and organization.

21. OCDE business applications and processes.

Ability and Skill to:

1. Provide project oversight and support.
2. Manage multiple competing priorities efficiently and effectively.
3. Interpret the organizational and division strategic plan and create relevant goals and plans for assigned areas.
4. Effectively adapt and adjust program services to meet changing priorities and customer-specific needs.
5. Establish and maintain effective working relationships with various constituencies.
6. Understand, interpret, and explain laws, codes, contracts, regulations, policies, and procedures.
7. Prepare clear and concise correspondence, reports, and other written materials.
8. Analyze problems, identify alternative solutions, project consequences of proposed actions, and implement recommendations in support of goals.
9. Communicate clearly and concisely, both orally and in writing, in English.

Education, Training, and Experience:

A typical way of obtaining the knowledge, skills, and abilities outlined above is a bachelor's degree in a computer-related field and three (3) years of experience in the areas of design, development, testing, debugging, and deployment of applications using Microsoft.NET and SQL Server; or an equivalent combination of training and experience.

PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class.

Physical Demands

Employees must be able to perform the essential functions of the position with or without accommodation. Employees in this classification must be able to travel countywide to a variety of sites within a reasonable time frame, read written and electronic materials, and communicate clearly with those contacted through the course of work (typically in person, on the phone, and via email); perform deskwork for extended periods; and access and operate all required equipment for job duties. The position may include occasional need to traverse uneven surfaces and move items weighing up to 25 pounds.

Mental Demands

While performing the duties of this class, employees are regularly required to use written and oral communication skills; read and interpret information; analyze and solve problems; use mathematical reasoning; make observations; learn and apply new information or skills; perform highly detailed work; work on multiple, concurrent tasks with frequent interruptions; work under intensive deadlines and meet productivity requirements; and interact successfully with various groups of people encountered in the course of work.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform essential functions.

Employee typically works in an office environment that is fast-paced with high pressure.