

CONTRA COSTA COUNTY OFFICE OF EDUCATION

CLASS TITLE: WEB/DATA SYSTEMS ENGINEER

RANGE: 20

BASIC FUNCTION:

Under the direction of the assigned supervisor, perform specialized activities in the design, development, content management, project management, delivery, support, and maintenance of web, database and ERP solutions such as static web sites, dynamically generated web sites, stand alone web and database applications, third party integrated web applications; provide associated systems integration, deployment, and maintenance.

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:

Perform a variety of specialized duties involved in the design, development and maintenance of web sites, web and database applications and integrated systems for the Contra Costa County Office of Education (CCCOE).

Research, prepare, compose, design and edit a variety of publications and web documents; utilize artistic, photographic, graphic and web publishing techniques; operate designated computer systems, specialized software and peripherals to create web site and web application (UI) designs.

Evaluate web sites to assure ease of use, consistency, clarity and up-to-date links; update web sites with new information, links and publications as needed; assure web sites are updated in response to publication modifications; work with clients in updating, maintaining and troubleshooting web sites.

Collaborate with clients and departments in developing and implementing web and database solutions; test and debug web sites and database solutions; confer with users to determine web site, page and application needs and requirements; assure projects meet established time lines and specifications.

Design and assure functionality of links, online forms, surveys and scripts; design and implement a variety of web site features; create, scan and modify photographs, icons and graphics for web user interface use.

Incorporate latest front-end web design and user interface standards and compliance with W3C HTML, XHTML, CSS and 508/WAI accessibility guidelines.

Establish and maintain contact with personnel and clients in the analysis of web site development projects; analyze requests for web site/application additions, solutions and revisions.

Architect and develop new and modify existing web applications utilizing PHP, ASP, JAVA, JSP, XML/XSLT, HTML, JavaScript, RDBMS (SQL), Filemaker or any other appropriate technologies.

Debug existing errors and perform related system management activities; assure performance standards are met.

Perform back end systems deployment and configuration in conjunction with Technology Systems Network Engineering. Such systems may include SQL, Unix, Linux, Macintosh or Windows based server administration tools, web servers, dynamic web page generators, relational database management servers, applications servers, mail servers and other systems components that may include GPL, OSS or commercially licensed proprietary software solutions.

Provide integration between front-end web applications and backend database systems. Work with Districts to build integration with existing SIS systems and CCCOE Financial and SIS systems.

Assist Network Engineer(s) in maintaining appropriate OS patches and security measures for all related web and database systems. This may include implementation/maintenance of SSL/TLS, OS level patches, audit and hardening of legacy code.

Evaluate and potentially implement third-party SaaS solutions as required by County Office such as e-mail marketing tools or Google Apps.

Quantify (as appropriate) web systems projects timelines, resources allocation and personnel utilization using industry standard project management tools such as MS project or other applicable project management solutions. Track and communicate milestones and project risks appropriately.

Assist, facilitate, project manage otherwise contribute to other technological initiatives required by the CCCOE.

Provide trainings and workshops to groups of database, web and web application users as required. Prepare supporting documentation for training sessions and presentations.

Perform various customer relationship activities; communicate with customers regarding logistics, training issues and content suggestions; compile qualitative and quantitative data and resolve issues; serve as CCCOE representative in dealing with technology vendors regarding troubleshooting and feature requests.

Prepare and maintain records related to assigned activities including web development documentation, user accounts, district/school set-up status, e-mail records, etc; compile usage statistics through analytics tools such as Google Analytics.

Communicate with a variety of school districts, school sites, county offices, vendors, development groups and other outside agencies to promote, plan, design, coordinate activities, and resolve issues or concerns related to web and database systems and technology projects.

Operate a variety of computers and software systems including workstations and servers; operate standard office equipment; operate audio-visual equipment including projectors and televisions; drive a vehicle to various sites to conduct work.

Attend and conduct meetings related to web projects; maintain current knowledge of technological advances in the field.

OTHER DUTIES:

Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

Internet principles, practices, products and services.

Website design and implementation.

Database design, creation and query processes.

SQL Query and Reporting

Server management and data recovery practices.

HTML, JavaScript, SQL, XML and web-related and shell scripting and programming languages (such as PHP, ASP, Perl, or JAVA/JSP), used in dynamic web page development and systems integration.

Graphic Design software including the Adobe Suite of Products.

Code generation Integrated Development Environments such as Eclipse and Zend

Concurrent Versioning Systems or Version Control Systems

Principles of program design, codes, testing and implementation.

Open-source applications

Interpersonal skills using tact, patience and courtesy.

Principles of training/supporting technology users.

Applicable laws, rules and regulations related to assigned activities.

Oral and written communication skills.

ABILITY TO:

Implement new web technologies to meet the needs of the client using the knowledge listed above.

Establish and maintain cooperative and effective working relationships with others.

Provide support, training and service to assigned staff and users for the web and related applications.

Evaluate, install and learn software programs for writing, editing and compiling scripts.

Work independently with little direction.

Maintain current knowledge of technological advances in the fields of web design and development.

Perform a variety of specialized duties involved in the design, development and maintenance of internal and external education-related web sites for the County Office. Research, prepare, compose, design, edit and distribute a variety of web documents and publications.

Design and assure functionality of links, online forms, surveys and scripts.

Apply principles and techniques of computer programming and data structuring to specific problems or requests.

Create, plan, develop, format and layout text, color and art work.

Demonstrate proficiency in designated computer programming languages.

Proofread, edit and revise web documents and publications.

Determine proper content and artistic and visual layout for web sites to maximize effectiveness and meet County Office goals and objectives.

Analyze situations accurately and adopt an effective course of action.

Maintain records and prepare reports.

Meet schedules and time lines.

Communicate effectively both orally and in writing.

Establish and maintain cooperative and effective working relationships with others.

EDUCATION AND EXPERIENCE:

Any combination or equivalent to college coursework and five years demonstrated experience working with: database driven dynamic web page/web application management, graphic and user interface design, database design, web server administration, heterogeneous OS server administration, back-end systems integration, ancillary software and hardware implementation and technical project management.

LICENSES AND OTHER REQUIREMENTS:

Valid California driver's license.

WORKING CONDITIONS:

ENVIRONMENT:

Indoor environment.

Driving a vehicle to conduct work.

PHYSICAL DEMANDS:

Hearing and speaking to exchange information and make presentations.

Seeing to view a computer monitor.

Dexterity of hands and fingers to operate a computer keyboard.

Sitting for extended periods of time.