

SOFTWARE ENGINEER I

DISTINGUISHING FEATURES OF THE CLASS: Under supervision, incumbents of this class, located at Westchester Community College, are responsible for participating as part of a team in the design, development, configuration, integration, testing and operation of custom programming projects and systems, including in-house and third party software components, and off-the-shelf software modules. Incumbents perform these duties at any point in the life cycle for existing and new systems. Supervision is not a responsibility of this position. Guidance may be provided to Interns and Student Workers. Does related work as required.

EXAMPLES OF WORK: (Illustrative Only)

Prepares project plans, designs software module architecture, documents and presents the design and code to acquaint other staff with the details of the system;

Performs various, related project management tasks at any point in the life-cycle of an application system to build effective application systems in a timely manner;

Participates in the collection and organization of functional requirements, analyzes them and develops a conceptual (logical) representation of the requirements;

Assists in preparing RFP's for vendor software, software tools and components and also works with vendors with a view towards effective integrating their systems and/or software modules;

Designs and develops Web-based applications using HTML, Java, ASP, Visual Basic, UNIX Shell Script, Perl, and Microsoft SQL, or other tools appropriate to the application;

Uses systems configuration management and version control tools in the various life-cycle stages of a system;

Designs database schemas to meet the data needs of the department, as identified in requirements analysis or county-wide mandates;

Designs, develops and administers systems based upon relational database management software such as Oracle and Microsoft SQL Server, or upon object-oriented database software;

Uses computer applications or other automated systems such as spreadsheets, word processing, calendar, email and database software in performing work assignments.

May perform other incidental tasks, as needed.

FULL PERFORMANCE SKILLS, ABILITIES AND ATTRIBUTES: Thorough knowledge of the fundamental concepts of server and client operating systems, including UNIX, Windows and Microsoft Windows; knowledge of designing and programming for Object Oriented Programming or Java; knowledge of at least one of the following languages: Microsoft SQL, JavaScript, UNIX Shell Script, Perl; knowledge of formal requirements, analysis and design methodologies; knowledge of the design and programming of effective, maintainable solutions - at the module level - and its architecture; knowledge of the use of select software components/objects as appropriate; familiarity object-oriented, database management systems, middleware, or embedded systems; ability to use Rapid Application Development tools; ability to identify, evaluate and convey (both orally and in writing) requirements, designs and operations of application software and systems; ability to read, write, speak, understand, and communicate in English sufficiently to perform duties of the position; ability to gather and analyze data and draw conclusions; ability to establish and maintain effective working relationships; ability to effectively use computer applications such as spreadsheets, word processing, calendar, email and database software; ability to read, write, speak, communicate and understand English sufficiently to perform the duties of the position; thoroughness and attention to detail; resourcefulness; initiative; imagination; good judgment; physical condition commensurate with the demands of the position.

MINIMUM ACCEPTABLE TRAINING AND EXPERIENCE: A Bachelor's Degree* and four (4) years of recent (within the last 6 years) experience (pre- or post-degree) designing and programming application software in at least one of the following languages: Java, Oracle Database, Microsoft SQL, JavaScript, UNIX Shell Script, or Perl.

SUBSTITUTIONS: A Bachelor's degree* in Information Technology or closely related field may be substituted for one year of the required experience. A Master's Degree* in Information Technology or a closely related field may also be substituted for one additional year of experience.

SPECIAL REQUIREMENTS: Possession of a valid license to operate a motor vehicle in the State of New York at time of appointment and maintain same while in the title.

NOTES:

1. *Education beyond the secondary level must be from an institution recognized or accredited by the Board of Regents of the New York State Department of Education as a post-secondary, degree-granting institution.
2. Unless otherwise noted, only experience gained after attaining the minimum education level indicated in the minimum qualifications will be considered in evaluating experience.
3. Experience on a home personal computer may not be used as a substitute for the aforementioned experience.