SIERRA COLLEGE

Job Description

JOB TITLE: Computer Science Instructor

LAST REVISED: February 2022

Purpose

Under supervision of an educational administrator, the Computer Science Instructor will develop curriculum and provide lecture and laboratory instruction for students in the study of computer science and other related courses. The incumbent will be responsible for: evaluating students' performance; coordinating with faculty and other staff regarding support of hardware and software; assisting in the selection of and coordination of adjunct faculty members; participating in articulation and career education activities; coordinating with business and industry partners; participating in shared governance and other activities in support of the instructional program, and performing related work, as assigned.

Sierra College has a strong commitment to the achievement of equity and inclusion among its faculty, staff and students and values the rich diverse backgrounds that make up the campus community. The Computer Science Instructor must demonstrate a profound understanding of and experience with successfully supporting individuals with varying backgrounds. This includes persons with disabilities, various gender identities, sexual orientation, individuals from historically underrepresented communities and other groups to ensure the district provides an inclusive educational and employment environment focused on strategies for success and equitable outcomes for all.

JOB CHARACTERISTICS

Incumbent may supervise students and/or other temporary help, as assigned.

EXAMPLES OF FUNCTIONS AND TASKS

Lecture Preparation/Instruction—ESSENTIAL: Develop syllabi of lecture materials; prepare lesson plans to be used in lectures; coordinate lectures with laboratory assignments; prepare multi-media demonstrations to enhance instructional delivery; integrate the use of the computer throughout the instructional program; prepare handouts and supplemental materials; develop quizzes, tests, and "hands-on" evaluations; evaluate student performance on quizzes, tests, and reports; advise students on matters regarding their academic performance; tabulate scores and assign official grades; review and select learning resources such as textbooks, internet sites, and periodicals determined to be the most useful, appropriate and equity-minded; review and evaluate new instructional material for content, readability, cost effectiveness, and equity-mindedness; read literature (books, newspapers, periodicals, and other print and non-print materials) to stay current in the field of Computer Science; and attend trainings (if funding permits) on culturally-responsive pedagogy. **PERIPHERAL**: Complete instructional materials order forms; review study guides and other supplemental materials for classroom use; maintain appropriate reference materials; develop assignments related to current reference materials in learning resource center; arrange and schedule guest lecturers (ensuring to the best extent possible that guest lecturers present with an equity lens).

Laboratory Instruction/Supervision—ESSENTIAL: Prepare laboratory instruction for students; monitor student use of computers, research technological data to include in labs; develop quizzes and tests; develop syllabi of lecture materials; develop student-assigned projects and sequencing of the work involved, prepare lesson plans for use in labs; coordinate lectures with laboratory assignments; prepare multimedia demonstrations to enhance instructional delivery; prepare handouts and other supplementary course materials; and test and evaluate student performance. PERIPHERAL: Review study guides and other supplementary course materials.

Student Performance Evaluation—ESSENTIAL: Develop quizzes, examinations, homework assignments, projects, and laboratory assignments which fairly evaluate student progress in acquiring knowledge and skill sets of subject material; monitor student activity during examinations and quizzes; read, evaluate, and grade student responses on examinations, quizzes, and projects; assign, read, and evaluate student homework assignments and projects; tabulate scores and assign official grades; advise students on matters regarding their academic performance; and provide information and/or refer students to appropriate student support services (e.g. Extended Opportunity Programs and Services [EOPS], the Learning Skills Center, Tutoring Center, Writing Center, etc.) to ensure a successful learning environment.

Curriculum Development—ESSENTIAL: Review and evaluate curriculum to meet student interests and needs within the parameters of division/department budgets and availability of equipment and materials; work with local and regional employers, industries, and community groups to plan and develop curriculum to meet employment needs; coordinate with full-time and part-time faculty members to enhance consistency and quality of lecture/laboratory content; evaluate and/or revise courses of study to fit curriculum designs; present proposals for curriculum changes to the Curriculum Committee and/or other shared governance bodies; design degree and certificate programs; research, evaluate and incorporate current technology into curriculum; and function as a liaison with advisory committees to determine appropriate curriculum to meet current needs.

Departmental Development—ESSENTIAL: Schedule advisory committee meetings; recommend departmental class schedules for full-time and adjunct faculty members; prepare and manage departmental budget(s) in accordance with established District policies and procedures; assist in record keeping; assist in recruitment and hiring of adjunct faculty members, as requested, in accordance with established District policies and procedures; work with divisional classified staff members and student and/or other temporary help in accordance with established District policies and procedures; prepare capital outlay requests; prepare Staffing Committee requests for new positions; and coordinate with adjunct faculty members to ensure proper delivery of departmental curriculum. Coordinate off-site program, as assigned. **PERIPHERAL**: Write grants and proposals; interview and hire student and/or other temporary help; and prepare annual Program Assessment and Review (ePAR) plans.

Workforce Development Activities—ESSENTIAL: Participate in activities related to local economic development, as appropriate and feasible; provide input to local businesses regarding program capabilities, as requested; participate in the structuring of economic development activities as it relates to departmental operations; assist in development and delivery of industry-specific classes utilizing an equity-minded framework; and assist in maintaining quality and consistency of program delivery; as necessary.

Articulation and Dual Enrollment—ESSENTIAL: Assist local area high schools and educational partners in developing curriculum to coordinate with community college offerings; function as a resource and attend meetings with representatives from local high schools; assist in developing dual enrollment and 2+2 articulation agreements with local high schools; provide local schools with appropriate lesson designs to meet departmental standards for articulation; and assist local schools with selection of equipment and software, as appropriate. Articulate with universities to provide transfer opportunities into appropriate programs.

Shared Governance—ESSENTIAL: Respond in writing to requests for information, as appropriate; represent department and/or division by serving on District-wide committees, as appropriate and feasible; serve on employee selection committees, as requested; serve as functional member of one or more committees and/or task forces; and read and respond to information polls distributed by the Academic Senate and/or other shared governance bodies. Attend and participate in departmental staff meetings, division meetings, District meetings, and other activities, including SC4 (Sierra College Community, Creativity, Culture, and Collaboration) training and activities. **PERIPHERAL**: Attend Board of Trustees

and/or Strategic Council meetings, as necessary; read minutes of shared governance bodies, Board of Trustees reports, and other written material to maintain knowledge of District activities.

Professional Development—ESSENTIAL: Maintain membership and participation in related professional organizations; attend and present workshops at Sierra College and professional conferences, as approved (and ensuring to the best extent possible that such presentations are presented with an equity lens); attend trade shows and industry-sponsored seminars, as approved; consult with industry representatives regarding trends in industry and employment standards for training, as appropriate; read literature to keep abreast of current technological developments; and participate in faculty/industry internships, as appropriate.

Student Recruitment/Job Placement - ESSENTIAL: Conduct tours of District facilities, as appropriate; visit local area "feeder schools" to enhance visibility of departmental programs; host departmental "open house" activities in conjunction with Career Connections functions; prepare program brochures that are culturally-responsive to the populations being reached; provide student career advisement, as appropriate; develop departmental student recruitment materials that are culturally-responsive to the populations being reached; interact with local industry representatives to attempt to place departmental students in internships and permanent positions; give presentations to high school classes, as appropriate; assist departmental students to develop resumes and cover letters for job applications, as appropriate; coordinate industry recruitment visitations to the Computer Science department; solicit and make recommendations for student scholarships from businesses and industries; and coordinate student internships with local industries. **PERIPHERAL**: Attend local job fairs, as approved; make presentations to local area school boards, as requested; and work with local area high schools to develop a pool of potential departmental students.

MINIMUM QUALIFICATIONS

Degrees/Experience: ESSENTIAL: **Degree/Experience Requirements:**
ESSENTIAL: Master's degree in Computer Science or Computer Engineering OR Bachelor's degree in either Computer Science or Computer Engineering AND a Master's degree in Mathematics, Cybernetics, Business Administration, Accounting, or Engineering OR Bachelor's degree in Engineering AND Master's degree in Cybernetics, Engineering, Mathematics, or Business Administration OR Bachelor's degree in Mathematics AND Master's degree in Cybernetics, Engineering, Mathematics, or Business Administration OR Bachelor's degree in any of the above AND A Master's degree in Information Science, Computer Information Systems, or Information Systems OR the equivalent. *(NOTE: Courses in the use of computer programs for application to a particular discipline may be classified for minimum qualifications purposes, under the discipline of the application.)*

Knowledge of: ESSENTIAL Computer Science and related fields; principles of Object-Oriented Programming; programming in Java; HTML programming; the Internet, including history, protocols, networking, and security; networking software and hardware principles; data communications; computer applications software, such as word processing, spreadsheets, database management, presentation programs, and desktop publishing; computer operating systems, including Windows, MacOS, and Linux; and methods to successfully support individuals with varying backgrounds, which includes persons with disabilities, various gender identities, sexual orientation, individuals from historically underrepresented communities and other groups. PERIPHERAL: Full-stack web development, including JavaScript, CSS, and SQL; teaching practices, methods, and techniques.

Ability to:
ESSENTIAL: Provide interactive lectures in front of large and small groups of students; explain Computer Science concepts and processes in a logical, sequential fashion; type/keyboard and/or utilize mouse to operate and configure microcomputers and peripherals; provide students with a "hands on" learning experience in a laboratory setting; form and maintain effective working relationships with peers, staff and

students; work independently and collaboratively to solve problems; participate in SC4 (Sierra College Community, Creativity, Culture, and Collaboration) activities; apply an equity-minded framework and ensure programs, services and processes are designed and delivered to meet the varying needs of all constituents; to interact and work effectively with a diverse population utilizing exceptional interpersonal and intercultural skills; exercise sensitivity to and understanding of the diverse academic, socioeconomic, cultural, disability, gender identity, sexual orientation, and ethnic backgrounds of community college students, faculty, and staff; and develop activities and assignments to address diverse learning styles.

Licenses/Certifications: DESIRABLE:

Physical Suitability Requirements:
ESSENTIAL: Incumbent must be able to function effectively indoors in a classroom/laboratory environment engaged in moderately active work and do the following, with or without reasonable accommodation: <u>Almost constantly</u>: Read printed and written materials and computer screens, stand upright and forward flexing, often for long periods of time, to deliver lectures and assist students in laboratories; lift (from overhead, waist and floor levels, max. 40 lbs.) and carry (max. 40 lbs.) to move equipment and training aids in and out of storage and between classrooms and laboratories; stoop, bend, squat, kneel; push and pull to utilize hand trucks and carts to move equipment and supplies; <u>Frequently</u>: Utilize speech and hearing to communicate in person, before groups, over the telephone and to hear sound prompts from equipment and to respond to students' questions; utilize manual and finger dexterity and fine motor skills to use tools and equipment and to demonstrate visual aids and use of equipment; walk, to move about classroom, laboratory, and campus environment; reach (from overhead and low levels) to demonstrate principles and techniques in a laboratory setting;

Faculty Salary Schedule, subject to placement at date of hire.
FLSA exempt.
SCFA bargaining unit status.
Classification III, Bloodborne Pathogens Exposure Control Program.