

JOB TITLE: Instructional Assistant - Chemistry

PAY GRADE: CL 20

LAST REVISED: July 2025

*Job Descriptions/Class Specifications are intended to present a descriptive list of the range of duties performed by employees in the job and are **not** intended to reflect all duties performed within the job.*

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. A strong candidate for this position must have the understanding and ability to successfully support individuals with varying backgrounds. This includes persons with disabilities, various gender identities and sexual orientations, as well as individuals from historically underrepresented communities and other groups. Our District is committed to providing strategies for success and proactive student-centered practices and policies focused on eliminating equity gaps to ensure the District provides an inclusive educational and employment environment focused on strategies for success and equitable outcomes for all.

SUMMARY DESCRIPTION

Under general supervision from assigned manager and in collaboration with instructional faculty, provides instructional support to the Chemistry Department, requiring in-depth knowledge of subject area and associated use of technology, computers, software, and equipment; provides technical and instructional assistance to support laboratory and classroom activities at multiple campuses; prepares, tracks, and maintains chemicals for use in the laboratories; collects, bulks, tracks, maintains, and reports hazardous waste produced during labs; and provides purchasing, inventory, and maintenance duties for laboratory and classroom supplies, materials, and equipment.

REPRESENTATIVE DUTIES

The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

1. Provides instructional assistance for department, including technical and instructional assistance to students with special projects, coursework, homework, presentations, demonstrations, or other instructional activities in classroom and laboratory settings; proctors exams and quizzes collaborates with faculty to set up demonstrations; assists with curriculum planning and coordination; assists with layout and production of departmental instructional materials, including graphics and audio-visual aids; researches, learns, and shares information regarding new laboratory techniques and methods with other District staff; assists with class projects; provides ongoing times and locations for formal tutoring sessions (online or on-site); hosts tutoring sessions for student projects, examinations, and study.
2. Provides instructional support in online teaching environments, including Learning Management Systems (LMS) and related online instruction software tools, purchasing and assembling take-home lab kits, and coordinating distribution activities; plans, assists, and coordinates with Chemistry Department Faculty with remote/online instruction, as needed, including creating viewable laboratory content, taking photographs, uploading content, recording and editing videos, building exams, and aiding in troubleshooting.
3. Prepares, monitors, and cleans-up materials and supplies for classroom and laboratory activities; collects laboratory schedules from, interacts with, and coordinates laboratory preparation with department faculty; reads syllabi and laboratory manuals to prioritize duties and organize timeline for laboratory preparation; proofreads and suggests edits or updates to laboratory manuals; updates and maintains written procedures for laboratory preparations and set up guides, prepares and standardizes chemicals and solutions; troubleshoots and corrects inconsistencies and problems with laboratory experiments.
4. Monitors proper use of laboratory equipment and materials, as well as compliance with safe laboratory practices for hazardous spill cleanup and disposal tests eye washes and showers weekly according to the CHP; ensures current insurance carrier safety requirements are met.

5. Monitors, documents, and inventories chemicals, equipment, and supplies; documents and reports all chemicals in the department; stores and labels secondary chemical storage bottles and containers; obtains, updates, tracks, and supplies Chemical Abstract Registry numbers and Safety Data Sheets (SDS) to appropriate authorities; handles, stores, collects, labels, transports, and disposes of hazardous chemicals and waste following federal, state, and other hazardous materials regulations; maintains separation of incompatible chemicals; combines compatible chemical waste for storage until removal; maintains bulk hazardous waste inventory; performs weekly and monthly safety checks of department stockrooms and laboratories in accordance with the District's Chemical Hygiene Plan (CHP).
6. Performs equipment maintenance and set-up; inspects, maintains, and performs minor repairs to equipment, apparatus, and instruments; tests, calibrates, and adjusts various precision scientific instruments and laboratory equipment; services, repairs, and calibrates tools; arranges for servicing, packaging, shipping, and repair of equipment, as needed.
7. Maintains, inventories, and organizes the department lab facility, including stockroom, project areas, and classrooms; maintains, repairs, and manages inventory and distribution of department apparatus, equipment, and supplies; inspects incoming shipments and distributes or stores in proper locations; designs, organizes, and maintains department storage facilities; schedules calibration and maintenance of laboratory equipment and orders replacement components, as needed.
8. Provides initial computer technical assistance, training, and support to faculty, staff, and students; installs, removes, maintains, and assists with troubleshooting department computer hardware and software; requests or arranges for assistance, servicing, or repair of department computer equipment from District Information Technology Services (ITS) staff or other resources.
9. Provides administrative support for the department; responds to inquiries regarding department operations or refers inquiries to appropriate staff; coordinates sharing of department resources; monitors, coordinates, and facilitates use of department facilities and resources for access and security; prepares or assists with preparation of department reports and correspondence; maintains department records, including warranties, licenses and operating information for equipment and software organizes, assigns, and maintains student equipment lockers; communicates with companies and individuals regarding equipment donations; participates in preparation of grant proposals and the administration of grants.
10. Participates in the preparation and administration of assigned budget(s); researches and purchases assigned contracts, materials, and supplies, and determines future needs; works with vendors to obtain quotes; requests purchase orders; inventories supplies and instructional materials; discusses new products or special needs with vendors and District staff; works with District staff to obtain laboratory, lecture, or other supplies; maintains expenditure records and prepares reports; advocates for the needs of the department; creates prioritized lists of needed equipment and quotes for administration; provides input regarding annual budget development.
11. Prepares, loads, and transports department materials between campuses or off-site locations; may be required to operate District vehicle for transport.
12. May perform basic first aid, as needed.
13. Provides onboarding support, general work training, guidance, supervision assistance, and directs activities of students, temporary employees, or District staff.
14. Performs related duties that support the overall objective of the position.

QUALIFICATIONS

The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.

Knowledge of:

- Theories, concepts, principles, protocols, applications, and techniques used in chemistry laboratories including general, analytical, organic, inorganic chemistry and biochemistry.
- Chemical properties, including reactivities, solubilities, toxicities, flash points, vapor pressures, compatibilities, and chemical grading techniques.
- Chemical nomenclature, including International Union for Pure and Applied Chemistry (IUPAC) conventions and common names of organic and inorganic reagents.

- Operational characteristics of laboratory apparatus, instruments, equipment, and materials.
- Principles and techniques used in the repair and calibration of scientific instruments.
- Mathematical principles and scientific concepts, including those related to the preparation of chemical solutions and compounds.
- Federal, state, and local laws, codes, and regulations regarding instruction, support of students, and laboratory protocols, including, but not limited to, the Family Educational Rights and Privacy Act (FERPA) and the Americans with Disabilities Act (ADA).
- Basic inventory, bookkeeping, and purchasing processes and procedures.
- Research techniques.
- English usage, spelling, grammar, punctuation, and vocabulary.

Ability to:

- Perform general technical and operational duties in support of the Chemistry Department, including, but not limited to, operating, calibrating, and maintaining scientific equipment, computers, and tools; maintaining and organizing supply inventory and storage facility; proctoring tests; and supporting classroom and lab activities.
- Prepare primary standard solutions and standardize solutions to within three parts per thousand using ninety percent confidence limit.
- Classify elements and compounds according to the Flinn system.
- Read and understand laboratory and technical manuals and procedures.
- Apply scientific principles to practical applications; analyze data and solve problems.
- Adapt to changing technologies and learn functionality of new equipment and systems.
- Practice safety precautions, techniques, and procedures, including safe lifting techniques, laboratory protocols, and safe handling, storage, and disposal of hazardous materials.
- Plan and organize work to meet schedules and changing deadlines.
- Perform basic record keeping functions.
- Utilize office procedures, methods, and equipment, including computers, technology, and applicable software applications sufficiently to perform the duties of the classification, including those used in the field of chemistry and Learning Management Systems (LMS).
- Maintain confidentiality of information.
- Make arithmetic calculations of average to above average difficulty.
- Follow oral and written directions.
- Communicate clearly and concisely, both orally and in writing.
- Provide onboarding support, general work training, guidance, supervision assistance, and direct activities of students, temporary employees, or District staff.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Work independently and collaboratively.
- Apply District policies and procedures.

EDUCATION AND EXPERIENCE GUIDELINES

Any combination of education and experience that demonstrates the required above knowledge and abilities is qualifying. Examples of ways to obtain the above knowledge and abilities could include, but are not limited to, the following:

Education/Training

- Two years of college with major course work in chemistry or a related scientific field.

Experience

- Two years of increasingly responsible experience in a chemistry laboratory.

License/Certificate - Possession of, or ability to obtain within a reasonable timeframe, each of the following:

- Valid California Driver's License.
- First Aid Certificate.
- Hazardous Materials Awareness Certificate.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT

The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.

Environment: Work is performed primarily indoors in an education classroom/center/laboratory setting; exposure to chemicals, hazardous materials, dusts, mists, fumes, gases, solvents, noxious odors, wet/damp surfaces, and noise; risk of cuts and sticks from handling glassware and other sharp objects and subsequent contact with blood borne and/or other pathogens; work with laboratory equipment and apparatus. Moderate exposure to risks controlled by safety precautions.

Physical: Primary functions require sufficient physical ability and mobility to work in an office and/or education center/classroom/laboratory setting; to stand or sit for prolonged periods of time; to occasionally walk, stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight up to 65 pounds; to operate laboratory and office equipment requiring repetitive hand movement and fine coordination, including use of a computer keyboard; to verbally communicate to exchange information; and requires the wearing of personal protective equipment, including safety glasses or goggles, lab coats, rubber or plastic gloves, respirators, and/or face shields.

Vision: See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents, and to distinguish color; and to operate assigned equipment.

Hearing: Hear in the normal audio range with or without correction.

Board Approved: July 15, 2025