

JOB TITLE: Instructional Assistant - Makerspace
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 Makerspace programs and activities, requiring in-depth knowledge of subject area and associated use of technology, computers, software, and equipment; coordinates facilities and activities scheduling; 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 support for program, including technical and instructional assistance to students with special projects, homework, presentations, demonstrations, or other instructional activities in classroom and lab settings; proctors exams and quizzes; collaborates; collaborates with faculty to set up demonstrations; trains staff and students regarding use of tools and equipment, clean up and return procedures, safety practices, and specialized procedures; researches, learns, and shares information regarding new techniques and methods with other District staff; assists with on-site projects; provides ongoing times and locations for formal tutoring sessions (online and/or on-site); hosts additional lab time and tutoring sessions for student projects, examinations, and study, as needed.
2. Provides instructional support in online teaching environments, including Learning Management Systems (LMS), purchasing and assembling take home lab kits, and coordinating distribution activities.
3. Oversees use of Makerspace facilities and equipment, including the labs, classrooms, and mobile lab equipment; monitors and assists with proper use of classroom and lab equipment, materials, and facilities; assists with ensuring safety and security procedures are followed; inspects tools, equipment, and machinery for hazards and takes prompt action to prevent injury or damage; maintains function of all safety guards, stops, switches, and cutouts on all equipment; maintains safety signage; facilitates use of Personal Protective Equipment (PPE) and additional safety equipment; cleans and organizes workspaces, floors, and storage facilities to ensure a safe working environment; rearranges equipment and facilities, as needed; determines and mitigates or eliminates possible safety problems; modifies and updates operating procedures, as needed.
4. Performs equipment and tool maintenance and set-up; assembles, installs, and tests new equipment; operates, inspects, tests, calibrates, maintains, and performs minor repairs to hand and power tools, machinery, equipment, and facilities; performs preventative and operational maintenance, including troubleshooting, diagnosing, and repairing tools, machinery, equipment, and facilities; designs and fabricates new, renovated, or replacement parts, tools, fixtures, mock-ups, and other items for maintenance and instructional activities; arranges for servicing, packaging, shipping, and repair of equipment, as needed.

5. Maintains, inventories, and organizes the Makerspace lab facility, including labs, mobile labs, classrooms, stockroom, and project areas; operates, maintains, repairs, and manages inventory and distribution of department apparatus, equipment, and supplies; assists students with selection of proper tools; maintains records of items checked in and out; inspects incoming shipments and distributes or stores in proper locations; designs, organizes, and maintains department storage facilities.
6. 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; assists with set up of department computer systems and networks; maintains department databases; requests or arranges for assistance, servicing, or repair of department computer equipment from Information Technology Services (ITS) or other resources.
7. Participates in the preparation and administration of assigned budget(s), including grants; researches and purchases assigned contracts, materials, and supplies, and determines future needs; works with vendors to obtain quotes; requests purchase orders; inventories existing supplies and 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; and creates prioritized lists of needed equipment for administration; provides input regarding annual budget development.
8. Provides administrative support for program; responds to inquiries regarding programs operations or refers inquiries to appropriate staff; maintains calendar of Makerspace reservations, events, and class activities; monitors, coordinates, and facilitates use of program facilities, resources, and equipment for access and security; prepares or assists with preparation of program reports and correspondence; maintains records and files.
9. Ensures safe handling, storage, transportation, and disposal of hazardous materials; complies with federal, state, and local laws and industry best practices for the handling and storage of hazardous materials; classifies and packages chemicals for hazardous waste removal; measures and portions bulk hazardous chemicals into portable containers for students use; maintains hazardous chemical storage in a secure location with controlled access; maintains Safety Data Sheets (SDS) for all chemicals and other safety-related documentation for hazardous; prepares listings of unneeded hazardous materials and arranges for pickup and removal from District premises.
10. Prepares, loads, and transports department materials between campuses or off-site locations; may be required to operate District vehicle for transport.
11. May perform basic first aid, as needed.
12. Provides onboarding support, general work training, guidance, supervision assistance, and directs activities of students, temporary employees, or District staff.
13. 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:

- Principles, techniques, protocols, applications, and equipment used in Makerspace programs, including, but not limited to, 3D printing, welding technology, rapid prototyping, and industrial sewing.
- Concepts, procedures, practices, and techniques of equipment and preventive maintenance, repair, diagnosis, troubleshooting, and calibration of tools and equipment.
- Federal, state, and local laws, codes, and regulations regarding instruction, support of students, and lab protocols, including, but not limited to, the Family Educational Rights and Privacy Act (FERPA), the Americans with Disabilities Act (ADA), Occupational Safety and Health Administration (OSHA), CalOSHA, and American Welding Society.
- Basic inventory, bookkeeping, and purchasing processes and procedures.
- Principles and practices of record keeping.
- English usage, spelling, grammar, punctuation, and vocabulary.

Ability to:

- Perform general technical and operational duties in support of the Makerspace laboratories and related facilities, including, but not limited to, operating and maintaining equipment, computers, and tools; maintaining and organizing supply inventory and storage facility; proctoring tests; and supporting classroom and lab activities.
- Assist and advise students with safe working practices and procedures for Makerspace equipment, machinery, and tools.
- Operate vehicles, trucks, forklifts, and maintenance equipment, including hand and power tools, measuring devices, machinery, and stationery or mobile power equipment.
- Read and interpret drawings, sketches, blueprints, diagrams, schematics, and technical manuals.
- Practice safety precautions, techniques, and procedures, including safe lifting techniques, "lock-out/tag-out", laboratory protocols, and safe handling, storage, and disposal of hazardous materials.
- Adapt to changing technologies and learn functionality of new equipment and systems.
- Plan and organize work to meet schedules and changing deadlines.
- Perform basic record keeping functions.
- Compile information and statistics for reports and records.
- 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 Makerspace programs and Learning Management Systems (LMS).
- Maintain confidentiality of information.
- Follow oral and written directions.
- Communicate clearly and concisely, both orally and in writing.
- Provide onboarding support, general work training, guidance, supervision assistance, and directs 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

- Equivalent to the completion of the twelfth grade supplemented by college level coursework or specialized training in construction technology, welding, or a related field.

Experience

- One year of responsible construction and/or welding experience in the areas of electrical, welding, machining, and/or millwright.

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

- Valid California Driver's License.
- First Aid Certificate.
- Forklift 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 primarily performed indoors in a construction/welding shop/site and education classroom/center/laboratory setting; exposure to hazardous chemicals, materials, dusts, mists, fumes, gases, noxious odors, solvents, wet/damp surfaces, and loud noises; work with equipment and apparatus; subject to risk of exposure to blood borne and/or other pathogens due to potential for cuts and/or contact with fresh or dried blood or other body fluids on saws, drills, and other power equipment. Moderate exposure to risks controlled by safety precautions.

Physical: Primary functions require sufficient physical ability and mobility to work in construction/cabinetry shop, education center/classroom/laboratory, or office setting; to stand or sit for prolonged periods of time; to walk, stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull moderate to heavy amounts of weight; to operate shop, 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, gloves, respirators, 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 operate assigned equipment.

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

Board Approved: July 15, 2025