

JOB TITLE: Instructional Assistant - Earth Science
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 Earth Science 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; 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 department, including technical and instructional assistance to students with special projects, coursework, homework, field trips, demonstrations, or instructional activities in classroom and laboratory settings; proctors exams and quizzes; provides ongoing times and locations for formal tutoring sessions (online or on-site); hosts additional lab time and tutoring sessions for student projects, examinations and study, as needed; assists with class projects; leads paleontological digs; assists with curriculum planning and coordination; assists with layout and production of instructional materials, including graphics; films, edits and completes educational videos; researches, learns, and shares information regarding new research, techniques, and methods with District staff.
2. Provides instructional support in online teaching environments, including learning and video conferencing platforms. 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; provides care, maintenance, and observes protocols for treatment of specimens; prepares microscopic materials for classroom and laboratory use.
3. Serves as or assists with the role of Curator and Collection Manager for Sierra College's Natural History Museum and collaborates with the Museum Director and other staff; performs duties related to exhibits and specimen curation, including preparing, collecting, and maintaining specimen inventory, databases and exhibits; ensuring exhibits are installed according to current earthquake safety guidelines, making minor exhibit repairs, and arranging for assistance, servicing, or major repair to exhibits and building features.
4. Performs equipment maintenance and set-up; inspects, maintains, and performs minor repairs to equipment, including weather station, seismograph, and multimedia equipment; participates in processes to upgrade or replace equipment and resources; tests, calibrates, and adjusts precision scientific instruments, tools, and laboratory equipment; services, repairs, and calibrates air tools, lapidary equipment and rock saws; paints, repairs, wires, and installs items in support of program operations and activities; arranges for servicing, packaging, shipping, and repair of equipment, as needed.
5. Maintains, inventories, and organizes the department lab facility, including stockroom and project area; 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; prepares listings of unneeded hazardous materials and arranges for pickup and removal from District premises; updates Safety Data Sheets (SDS) and other safety-related documentation for hazardous materials.

6. Maintains outdoor specimens, including rocks and fossils within the cactus garden and surrounding the building.
7. Organizes, maintains, files, inventories, and stocks topographic and geological maps.
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, including databases and Geographic Information Systems (GIS); assists with set up of department computer systems, including multiple student lab computers; 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 department; responds to inquiries regarding department operations or refers inquiries to appropriate staff; monitors, coordinates, and facilitates use of department facilities, resources, and collections for access and security; prepares or assists with preparation of department reports and correspondence, including applications for federal and state permits and completing permit compliance reports; maintains department records, including warranties, licenses and operating information for equipment and software.
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 for administration; provides input regarding annual budget development.
11. Prepares, loads, transports, and sets-up equipment for field courses; provides technical support related to equipment operations including assisting students and faculty with equipment problems during field courses; assists students with locating and identifying specimens and confirming their results; breaks-down, cleans, and stores equipment.
12. Prepares, loads, and transports department materials between campuses or off-site locations; may be required to operate District vehicle for transport.
13. Arranges student transportation to and from field trips as needed, including completing and submitting vehicle reservation requests, confirming vehicle reservations, and coordinating with Facilities staff.
14. May perform basic first aid, as needed.
15. Provides onboarding support, general work training, guidance, supervision assistance, and directs activities of students, temporary employees, or District staff.
16. 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, techniques, protocols, and applications of Earth Science and related scientific disciplines, including geology, mineralogy, structural geology, paleontology, and associated field work practices and museum curation.
- Geologic field techniques such as mapping, navigating, stratigraphic interpretation, specimen extraction, and data recording.
- Fabrication procedures, including wood and metal working practices, processes, and techniques.
- General maintenance and upkeep procedures for audiovisual equipment.

- Operational characteristics of laboratory apparatus, equipment, and materials.
- Principles and techniques used in the repair and calibration of scientific instruments.
- Federal, state, and local laws, codes, and regulations regarding specimen collection, instruction, and support of students, including, but not limited to, the Endangered Species Act, Antiquities Act, Archaeological Resources Protection Act (ARPA), Paleontological Preservation Act (PRPA), 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 Earth Science Department including, but not limited to, identifying stellar objects; operating, calibrating, and maintaining scientific equipment (e.g., GPS, Brunton compass, field radios), computers, and multimedia tools; maintaining and organizing supply inventory and storage facility; proctoring tests; and supporting classroom and lab activities.
- Collect, prepare, and correctly identify fossil, rock, and mineral samples for laboratory use; appropriately organize and maintain outdoor rocks and fossil specimens.
- Design and fabricate materials using metal and wood.
- Read and interpret blueprints, diagrams, schematics, geologic maps, and manuals.
- 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 earth science.
- 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 geology, paleontology, or a related scientific field.

Experience

- Two years of increasingly responsible experience in earth sciences, geology, paleontology, or related scientific field.

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 indoors in a classroom/laboratory setting and outdoors in the field; exposure to dusts, mists, fumes, wet/damp surfaces, extreme heat or cold, moderately high levels of noise, chemicals and caustics, and allergenic plants and materials; risk of insect and animal stings and bites; risk of exposure to 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 indoor/outdoor 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 heavy amounts of weight; 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, 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