

LABORATORY TECHNICIAN – EARTH SCIENCES

DEFINITION

Under general supervision, provides instructional support services for faculty and students of the Earth Sciences program; prepares and sets up laboratory exercises, demonstrations, instructional materials, creates displays, and participates in geological field excursions; assists students and faculty in the use and operation of equipment and materials.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Dean, Natural Sciences. Exercises no direct supervision of staff. Provides technical and functional direction and training to student workers.

CLASS CHARACTERISTICS

This is a journey-level classification responsible for conducting a variety of instructional support activities to ensure student learning. Incumbents perform the full range of duties as assigned, working independently, and exercising judgment and initiative. Incumbents at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of assigned area of responsibility. This classification is distinguished from other laboratory technicians by having subject matter expertise in Earth Sciences.

EXAMPLES OF ESSENTIAL FUNCTIONS (Illustrative Only)

- Prepares and sets up laboratory exercises, demonstrations, and instructional materials; monitors laboratory environment; organizes, arranges, stocks, and distributes materials, equipment, and supplies.
- Provides instructional support services for the Earth Sciences program; assists in instructional demonstrations of laboratory procedures and techniques; explains related principles, practices, procedures, methods, materials, terminology, tools, and equipment.
- Installs and maintains instructional software, and ensures computers and related equipment function properly.
- Ensures proper use of laboratory equipment by monitoring activities according to established rules and policies.
- Researches, collects and maintains laboratory inventory of specimens used in instructional activities including mineral and paleontology reference samples; maintain map and department rock and mineral collection; prepare and stock laboratory with rocks, minerals and fossils as assigned; conduct field excursions to identify and collect specimens; create and arrange display of collections.
- Prepares, sets up, operates, calibrates, maintains and repairs a variety of specialized equipment related to earth sciences such as microscopes, stereoscopes, rock processing equipment, grinders, laps, meters, balances, shakers, splitters, generators, samplers, projectors, telescopes, seismographs, tape players, cameras, hand and power tools and machinery, and a variety of other geophysical, astronomical, geological, and rock processing equipment.
- Cleans and ensures proper storage of laboratory equipment; ensures laboratory and work areas are in clean and orderly condition.
- Maintains accurate logs, reports, and records of work performed and materials and equipment used.
- Monitors, orders, receives, stores, and maintains adequate inventory levels of supplies and equipment, including study specimens, charts, maps, field materials, and chemicals as directed.
- Submits work orders for maintenance and repair of equipment and facilities.
- Learns and applies emerging technologies and, as necessary, to perform duties in an efficient, organized, and timely manner.

- Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Terminology, techniques, principles, theories, practices, and procedures related to the Earth Sciences program.
- General methods and procedures for preparing course materials and laboratory exercises and demonstrations used in the Earth Sciences courses.
- Set-up, operation, demonstration, and maintenance of various laboratory apparatus and equipment used in the Earth Sciences program.
- Methods, practices, and techniques of student learning and instruction.
- Modern office practices, methods, and computer equipment and applications related to the work.
- Record keeping principles and procedures.
- English usage, spelling, vocabulary, grammar, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, students, and District staff, including individuals of various ages, disabilities, various socio-economic and ethnic groups.

Skills & Abilities to:

- Explain and apply principles, practices, procedures, methods, materials, tools, terminology, and equipment related to the Earth Sciences program.
- Assist students and faculty in the use and operation of laboratory equipment and materials related to the Earth Sciences program.
- Create an engaging and positive learning environment in a laboratory or other learning environments.
- Maintain laboratory equipment, materials, and supplies used in the Earth Sciences program.
- Interpret, apply, and explain applicable District policies, rules, and regulations related to areas of responsibility.
- Estimate and order required supplies and equipment.
- Establish and maintain filing, record keeping, and tracking systems.
- Organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and software applications programs.
- Use English effectively to communicate in person, over the telephone, and in writing.
- Understand scope of authority in making independent decisions.
- Review situations accurately and determine appropriate course of action using judgment according to established policies and procedures.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

Education and Experience:

Any combination of training and experience which would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications would be:

Equivalent to an Associate's degree from a regionally accredited college in earth science or related field, and experience working in an earth science classroom, laboratory, or similar setting.

Licenses and Certifications:

None.

PHYSICAL DEMANDS

Must possess mobility to work in the field; strength, stamina, and mobility to perform medium to heavy physical work, to operate varied tools and equipment used in the field work for the Earth Sciences programs, and to operate a motor vehicle and visit various District sites; must possess mobility to work in a standard office/classroom setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Incumbents in this classification frequently bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects up to 50 pounds with the use of proper equipment.

ENVIRONMENTAL ELEMENTS

Employees work indoors and outdoors, and are frequently exposed to dust, fumes, and allergens and occasionally exposed to loud noise levels, inclement weather conditions, chemicals, mechanical and/or electrical hazards, and hazardous physical substances. Employees may interact with staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.