**DATE: APRIL 2024**
**FLSA: NON-EXEMPT**
**SALARY: GRADE M**
**CBA: CLASSIFIED BARGAINING UNIT**

# LABORATORY TECHNICIAN – SCIENCES, SENIOR

## BASIC FUNCTION

Prepares and standardizes solutions and other laboratory materials; calibrates and makes minor repairs and modifications to equipment; issues and replacesspecialized materials used in the laboratories; sets up and checks out experiments for instructors; assumes responsibility for ensuring an adequate stock of chemicals, materials, equipment, and supplies for laboratory experiments; and collects, stores, and properly coordinates the disposal of biohazardous and chemical waste.

## SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned area supervisor. May provide lead direction to temporary staff and/or student workers.

## CLASS CHARACTERISTICS

This classification in the Laboratory Technician – Sciences series is responsible for providing technical level support to the District's life/physical science laboratory programs. Incumbents regularly work on tasks which are varied and complex, requiring considerable discretion and independent judgment. Employees in the classification rely on experience and judgement to perform assigned duties and implement program activities. Assignments are given with general guidelines and incumbents are responsible for establishing objectives, timelines, and methods to complete assignments.

## EXAMPLES OF TYPICAL JOB FUNCTIONS

1. Coordinates the daily operation and maintenance of science laboratories and performs technical duties that ensure efficient lab operations.
2. Participates with faculty in the planning and implementation of experimental designs and the preparation of laboratory exercises, including testing new experimental procedures and equipment.
3. Identifies, measures, mixes, and prepares reagents, indicators, chemical solutions, stains, sterile media, and other specialized materials following standard formulas and procedures and using standard laboratory equipment.
4. Assembles, disassembles, operates, adapts, tests, troubleshoots, and maintains equipment, interfaces with computer systems and laboratory apparatuses; performs routine maintenance including calibration on a variety of scientific instruments; and identifies defective equipment for repair or replacement.
5. Participates in necessary training including, but not limited to, Occupational Safety and Health Administration (OSHA) required safety training, District training on software and policies, and equipment/software training with vendor.
6. Provides technical support for scientific instrumentation in the laboratory and its computer-interfaced software and/or peripheral devices.
7. May assist in creating and updating lab manuals, tutorials, and other pertinent educational documents for the laboratory using various software applications and graphics packages.
8. Develops and maintains laboratory safety protocols to comply with federal, state, local, and District environmental health and safety requirements for both biological and chemical hazards; recommends safety-related improvements and modifications in laboratory procedures and operations.
9. Ensures laboratory safety procedures including the routine inspection and/or testing of safety equipment and supplies, such as Safety Data Sheets (SDS), safety showers, and eyewash stations; and

implements protocols for responding to laboratory emergencies such as spills of hazardous materials and injuries to students or employees.
10. Manages hazardous chemical and biological waste by collecting, monitoring, controlling, labeling, keeping detailed logs, storing, and arranging for safe disposal.
11. Ensures completion of routine preventative maintenance and arranges urgent repair services through approved vendors for all standard and sophisticated laboratory equipment, as necessary.
12. Notifies appropriate personnel of needed repairs, maintenance, or any hazardous conditions that exist in the laboratories via submission of work orders.
13. Generates spreadsheets and various forms; and maintains accurate computerized files and reports.
14. Schedules the work of department student workers; orients them to the workplace; leads and monitors their work; trains in the safe preparation and handling of chemical reagents and hazardous materials, as well as the proper use, cleaning, and maintenance of laboratory equipment.
15. Organizes and maintains science laboratories and stockroom areas.
16. Monitors utilization of supplies via periodic inventory reviews to assure a well-stocked laboratory; requisitions and receives laboratory supplies, equipment, chemicals, biological specimens (living and preserved), and bacteriological cultures.
17. Calculates costs of materials from sources such as quotations and price lists; estimates and procures supplies and equipment.
18. Researches products, prepares and evaluates bids, and recommends and makes purchases once approved; receives and verifies shipment content; resolves problems in the ordering and receiving processes.
19. Matches order forms with invoices and records; notes and reports discrepancies; monitors and tracks expenditures to assure payments are current.
20. Compiles and prepares budget data based on revenue and expense estimates; submits justifications for budget items and requested increases.
21. Participates in District-provided in-service training programs.
22. Performs other related duties as assigned; specific duties not listed does not exclude them for this classification if the work is similar or related.

**When assigned to Chemistry**

1. Maintains specialized equipment unique to this discipline.
2. Distributes and issues glassware, lockers, and laboratory instrumentation to students for use in laboratory experiments, demonstrations, exercises, and exams.
3. Maintains records of materials distributed.

**When assigned to Biology**

1. Maintains specialized equipment unique to this discipline.
2. Collects and maintains living specimens needed for various laboratory exercises, which may include plants, animals, and/or fungi.
3. Handles preserved specimens.
4. Collects and processes human pathogenic waste (blood and urine) for disposal.
5. Autoclaves and disposes of biohazard and/or human pathogenic waste in accordance with safety regulations; work with moderate-risk infectious pathogens in biosafety levels 1 and 2 in accordance with local, state, and federal regulations.

**When assigned to Microbiology**

1. Maintains specialized equipment unique to this discipline.
2. Accurately measures, mixes, boils, autoclaves, and pours into plates and test tubes various sterile media to cultivate bacteria for student experiments.

3. Utilizes aseptic technique to culture, inoculate, and propagate bacterial cultures and to avoidcontamination of laboratory experiments.
4. Autoclaves and disposes of biohazard and/or human pathogenic waste in accordance with safety regulations; work with moderate-risk infectious pathogens in biosafety levels 1 and 2 in accordance with local, state, and federal regulations.
5. Works with moderate-risk infectious pathogens in biosafety levels 1 and 2.

**When assigned to Geology/Oceanography**

1. Maintains specialized equipment unique to this discipline.
2. Keeps an updated database of all rock, mineral, fossil, and oceanographic samples.
3. Uses and receives training on proper use of rock saws, polishing laps, and other specialized equipment to make media for corresponding labs.
4. Identifies both geologic and oceanographic samples and prepares them for use in lectures and laboratories.
5. Adjusts and maintains stereo microscopes, biological microscopes, and petrographic microscopes and prepares samples and slides to be used with each.

**When assigned to Physics**

1. Maintains specialized equipment unique to this discipline.
2. Calibrates sensitive and delicate laboratory devices.

## QUALIFICATIONS

**Knowledge of:**

1. Methods, procedures, and techniques used in a college science laboratory program.
2. Materials, equipment, and supplies used in laboratory programs.
3. Advanced laboratory and subject matter terminology, techniques, equipment, materials, principles, theories, practices, and procedures.
4. Methods and techniques of preparing reagents and chemical solutions and stains.
5. Methods and techniques of properly storing and preserving biological specimens and cultures.
6. Diagnostic tools and methods used in the repair, calibration, and maintenance of laboratory equipment and instrumentation unique to the life/physical sciences.
7. Principles, practices, and environmental health and safety regulations affecting laboratory operations.
8. Research techniques and standard reference materials in the field of specialty.
9. Methods and techniques of inventory maintenance.
10. Principles of preventive maintenance for laboratory equipment and materials.
11. Mathematical principles.
12. Recordkeeping principles and practices.

**Ability to:**

1. Maintain all life/physical science laboratory materials and equipment in a safe, organized, and, if necessary, sterile manner.
2. Understand and comply with environmental health and safety practices with respect to the handling and disposal of hazardous materials.
3. Set up and ensure all laboratory equipment is in proper operating condition.
4. Collect, monitor, label, log, store, and dispose of hazardous materials and biological waste.
5. Perform jobs requiring precise attainment of set limits, tolerances, or standards.
6. Monitor and track laboratory expenditures and ensure compliance with budget.

7. Generate and maintain accurate computerized records, databases, reports, and files.
8. Use hand and power tools in the maintenance of laboratory instruments, equipment, and systems.
9. Set up lab equipment and materials used in exercises and experiments.
10. Establish and maintain filing, recordkeeping, and tracking systems.
11. Prepare reports and related documentation on operations.
12. Plan, direct, and oversee the work of student assistants and ensure proper training in laboratory processes, policies, and safety procedures.
13. Independently organize work, set priorities, meet critical deadlines, and follow up on assignments.
14. Exercise independent judgment within general policy and procedural guidelines.
15. Effectively use computer systems, software applications relevant to work performed, and business equipment to perform a variety of work tasks.
16. Communicate effectively in the course of performing work tasks.
17. Establish, maintain, and foster effective working relationships with those contacted in the course of work.
18. Demonstrate clear evidence of sensitivity and understanding of the diverse academic, socio-economic, disability, and ethnic backgrounds of students, staff, and the community.
19. Provide efficient, high-level customer service to the public, vendors, contractors, and District personnel.

**Education and Experience:**

A bachelor's degree, including 16 semester units in a scientific field, e.g., physics, chemistry, biology, microbiology, or similar life/physical science and two (2) years of technical experience in a college, public health, medical facility, clinical or research laboratory program; or an equivalent combination of education, training, and/or experience.

**Licenses and Certifications:**

None.

## PHYSICAL DEMANDS

Must possess mobility to work in a laboratory setting and use standard office and laboratory 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. This is an office and laboratory classification and standing in work areas and walking between work areas may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office and laboratory equipment including calibration devices. Employees in this classification occasionally 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 averaging a weight of 25 pounds or heavier weights of up to 50 pounds with the use of proper equipment and/or assistance from other staff.

The essential functions of this classification must be performed by the incumbents with or without reasonable accommodations.

## ENVIRONMENTAL CONDITIONS

Employees work in a laboratory environment with moderate noise levels, varying temperatures which may include inclement weather, and have direct exposure to hazardous physical or chemical substances. Employees may interact with upset staff and/or public and private representatives in

interpreting and enforcing departmental policies and procedures.