

## **SOUTHWESTERN COMMUNITY COLLEGE DISTRICT**

### **CLASS TITLE: INSTRUCTIONAL LAB TECHNICIAN-SCIENCE (OPTION CLASS)**

#### **SUMMARY DESCRIPTION:**

Oversee and coordinate the operations of complex instructional laboratories and related support services in assigned area; maintain assigned instructional laboratories and related support services in a clean, organized, and safe condition; and perform complex technical work in support of assigned labs. This position reports to the Dean, Math/Science/Engineering School or designated administrator.

#### **DISTINGUISHING CHARACTERISTICS:**

The Instructional Lab Technician-Science classification works with minimal supervision and is responsible for labs that use complex, state-of-the-art equipment and analytical instrumentation as well as hazardous materials. The Science labs are dynamic environments requiring that the incumbent maintain a current working knowledge and understanding of complex equipment, hazardous materials, and related safety regulations. Employees in this class are responsible for ensuring all equipment and instrumentation are operational; that hazardous materials are handled, stored, and disposed of according to applicable safety laws and regulations.

The Instructional Lab Technician-Science classification is a broad class covering assignments related to a physical or life science laboratory. The specific abilities and requirements for each position do not allow transfer from one discipline to the other.

#### **REPRESENTATIVE DUTIES:**

*Incumbents in each option class will be required to perform the following duties:*

1. Oversee and maintain safe operation of assigned science instructional laboratories and related support areas; participate in establishing, implementing, and enforcing laboratory safety policies and procedures; participate in safety programs and workshops and stay updated on current safety protocols; institute necessary changes to keep the assigned instructional laboratories and related support areas functioning in a safe manner. **E**
2. Perform and oversee the daily lab operations; prepare and set up laboratory equipment, reagents, media, and other teaching aids for class demonstrations, practical examinations, and student assignments; prepare, label, and issue reagents, materials, and equipment for student use; assign and monitor the use and return of specialized lab equipment; dismantle and clean-up labs. **E**
3. Troubleshoot existing or perform newly-proposed experiments before presentation to students; identify problems and advise instructor. **E**
4. Provide laboratory and safety orientation to student workers and tutors. **E**
5. Receive, inventory, and arrange for proper storage and handling of laboratory equipment and materials such as chemicals, specimens, and instructional models. **E**
6. Assist in preparation of the preliminary laboratory budget; project estimated needs, supplies, materials, and reagents required for instructional lab exercises; coordinate with Department Chair and faculty to discuss program needs to prioritize purchasing; generate requisitions for supplies and equipment; maintain purchasing records; oversee and monitor budget expenditures for assigned budgets. **E**

**SOUTHWESTERN COMMUNITY COLLEGE DISTRICT**  
**Instructional Lab Technician-Science (Option Class) - Continued**

7. Set-up, operate, calibrate, and maintain a variety of laboratory equipment. Coordinate preventative maintenance and service for laboratory equipment and state-of-the-art analytical instrumentation with providers; maintain service records. **E**
8. Work cooperatively with, and coordinate activities with other District staff and service areas including Facilities, Purchasing, Information Technology, and Warehouse staff, and other offices throughout campus. **E**
9. Handle hazardous and/or biohazardous materials; prepare reagents using hazardous materials; properly label containers for laboratory use and collection of hazardous and biohazardous wastes in instructional labs; receive, segregate, inventory, and store chemicals, hazardous, and biohazardous materials according to applicable regulations; employ various sterilization techniques for biohazardous wastes. **E**
10. Provide work guidance to student and/or hourly workers as needed for efficient administration of assigned activities; coordinate schedules and activities of student workers, tutors, and hourly lab technicians; provide guidance and new opportunities for learning new techniques and tasks; maintain attendance reports and prepare payroll time sheets; provide input for performance evaluations. **E**
11. Organize, prepare, and maintain laboratory standard operating procedures for the assigned discipline. **E**
12. Maintain a variety of files and records regarding instructional materials, inventories, purchase orders, and equipment repairs. **E**
13. May provide assistance and technical expertise on related special projects such as the design or modification of laboratory facilities in new or existing facilities. **E**
14. Perform discipline-related duties and responsibilities as required.

The following duties are representative of each option class:

**CHEMISTRY**

- Assign and maintain records of student lockers; ensure that each locker has the required equipment for the assigned experiments; assess charges for lost, damaged or broken equipment, apply student holds, and follow-up with billing. **E**
- Use and operate a variety of technical equipment and measuring devices including burets, volumetric glassware, pH meters, melting point apparatus, analytical balances, multimeters, spectrophotometers, Vernier lab systems, micropipettes, water baths, sonicators, lab ovens, rotary evaporators, various manual/power tools, vacuum pumps, chemical inventory database, and other minor standard lab equipment. **E**
- Prepare and standardize chemical solutions and unknowns for laboratory demonstrations and general instruction. **E**

**PHYSICS/ASTRONOMY**

- Operate a variety of technical equipment including sensors for temperature, pressure, voltage/current, force, light, sound, oscilloscope, multi-meters, voltmeters, resistors, capacitors,

**SOUTHWESTERN COMMUNITY COLLEGE DISTRICT**  
**Instructional Lab Technician-Science (Option Class) - Continued**

inductors, electromagnets, and/or software related to data acquisition for physics lab experiments. *E*

- Set up, operate, and maintain astronomy equipment/software. *E*

**LIFE SCIENCE**

- Employ various sterilization techniques for glassware, media, biohazardous materials, equipment and apparatuses. *E*
- Use and operate a variety of technical equipment including autoclaves, incubators, pipettors, peristaltic pumps, spectrophotometers, fume hoods, incubator shakers, and microscopes, and other minor standard lab equipment. *E*
- Ensure the proper care, storage, handling, and feeding of live specimens including rodents, fish/aquaria, reptiles, echinoderms, arachnids, plants, algae, fungi, protozoa, and bacterial cultures. *E*
- Ensure the proper care, storage, handling of preserved specimens and cadaver. *E*
- Perform and/or oversee technical microbiological preparation with extensive work in media production (tubed, bottled, plated), vital stains, special reagents and aseptic transfers of pathogens and non-pathogens on a routine basis. *E*
- Assign and maintain records of student lockers; ensure that each locker has the required equipment for the assigned experiments

**KNOWLEDGE AND ABILITIES:**

**Knowledge of:**

Principles, practices, procedures, and equipment used in the assigned class option.

Science laboratory operation at the community college level.

Technical aspects of field of specialty.

Applicable terminology, precise measurement techniques, and scientific notation relative to the assigned field of science.

Operational characteristics of equipment used in the assigned science lab.

Basic principles of lead, training, and performance assessment/evaluation.

Basic principles and practices of budget preparation and administration.

Occupational hazards and standard safety practices.

Principles and practices used in storing, handling, and disposing of hazardous and biohazardous materials.

Principles and practices of record keeping.

Modern office procedures, methods, and equipment including computers and applicable software applications.

Pertinent federal, state, and local codes, laws, and regulations.

Correct English usage, grammar, spelling, punctuation, and vocabulary.

Oral and written communication skills.

Interpersonal skills using tact, patience, and courtesy.

**Ability to:**

Demonstrate competence in assigned area.

**SOUTHWESTERN COMMUNITY COLLEGE DISTRICT**  
**Instructional Lab Technician-Science (Option Class) - Continued**

Prepare and set up laboratory equipment, models, reagents, and other teaching aids for class exercises, experiments, and demonstrations for assigned area.

Oversee and maintain safe operation of assigned instructional laboratories and related support areas.

Assist instructors in planning demonstrations.

Plan and organize work; prioritize and coordinate experimental laboratory set-ups.

Use, operate, and ensure the proper operation, care, and security of assigned laboratory equipment, and measuring devices.

Issue, present, and receive supplies and specialized materials, which may include chemicals, in a safe and orderly fashion.

Prepare chemical solutions, reagents, unknowns, and other laboratory materials, supplies, and equipment utilized by instructors and students in assigned area.

Apply techniques of precise measurements and notation.

Maintain adequate quantities of lab materials and supplies.

Assemble, maintain, and coordinate repair of lab equipment for safety and functionality.

Adapt to changing technologies and learn functionality of new lab equipment and systems.

Provide work guidance to student and/or hourly workers as needed for efficient administration of assigned activities.

Work independently with little or no direction.

Meet schedules and time lines.

Maintain records and prepare reports.

Understand and follow oral and written instructions.

Work with and exhibit sensitivity to and understanding of the diverse racial, ethnic, disabled, sexual orientation, and cultural populations of community college students.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

**EDUCATION AND EXPERIENCE:**

Any combination equivalent to: completion of two (2) years of college with major coursework in area directly related to area of assignment **AND** two (2) years of work experience working in a laboratory type setting.

**DISTRICT VALUES**

Incumbents in District positions are expected to exhibit an equity-minded focus, responsiveness, and sensitivity to and understanding of the diverse academic, socioeconomic, cultural, gender identity, sexual orientation, and ethnic backgrounds of community college students, and employees, including those with physical or learning disabilities, and successfully foster and support an inclusive educational and employment environment.

**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 in an instructional science lab setting with frequent contact with students and staff; exposure to potentially hazardous and biohazardous materials, fumes, dust, gases; work in or with water.

**Physical:** Primary functions require sufficient physical ability and mobility to work in an instructional

**SOUTHWESTERN COMMUNITY COLLEGE DISTRICT**  
**Instructional Lab Technician-Science (Option Class) - *Continued***

science lab setting; to stand or sit for prolonged periods of time; to occasionally stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate lab and office equipment requiring repetitive hand movement and fine coordination including use of a computer keyboard; operate a variety of laboratory equipment; and to verbally communicate to exchange information.

**Vision:** See in the normal visual range with or without correction.

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

Created: March, 1995

*Ewing & Company*

Revised: January, 2021

*Ralph Andersen & Associates*