CLASS TITLE: INSTRUCTIONAL LAB TECHNICIAN II - PHYSICAL AND APPLIED SCIENCES

BASIC FUNCTION:

Under the general supervision of a Dean, perform a variety of complex technical lab work and provide instructional support in labs for physics, engineering, astronomy, environmental sciences, or the earth sciences.

REPRESENTATIVE DUTIES:

Organize and oversee the operation and maintenance of a highly technical and complex instructional science laboratory.

Prepare and issue materials and equipment for student use in a lab; monitor and maintain records of materials and equipment on loan to or checked out by students and faculty.

Assist faculty, staff, and students in the safe use of a variety of equipment, materials, and supplies in an instructional lab setting.

Provide instructional guidance and assistance to individual and small groups of science students; reinforce concepts, techniques, and practical applications presented by the instructor.

Test, adjust, calibrate, maintain, and perform minor repairs on apparatus and equipment, such as oscilloscopes, voltmeters, lasers, meters and signal generators; fabricate, rebuild, and modify equipment as necessary; send equipment out for major repairs.

Maintain stock rooms, laboratories, and other assigned areas in a safe, clean, and orderly condition; encourage awareness of and oversee the proper use of facilities and safe practices.

Prepare instructional materials, supplies, and equipment for instructors’ demonstrations and student labs; develop and prepare demonstrations and experiments as required; conduct tests of supplies and materials to ensure accurate mixtures and quantities.

Operate computers and related software applications to control scientific experiments, collect data, and produce analytical written reports.

Screen, select, train, evaluate, and provide work direction for student workers.

Order and receive lab supplies, materials, parts, and equipment; maintain inventories, ensuring that adequate quantities are available for timely instructional use.

Ensure the accurate labeling and orderly, safe, and proper storage of all supplies, materials, and equipment.

Maintain a variety of files and records regarding instructional materials, inventories, purchase...
orders, and equipment repairs; prepare reports as required; perform general clerical duties as needed.  

Use and operate a variety of technical equipment and measuring devices including precision balances, computer equipment, drafting and art tools, and environmental monitoring equipment.  

Design and set up displays for science classes and at various locations on campus to promote interest in the science programs.  

Assist in preparing for field trips and accompany students on field trips as required.  

Assist in preparation of the preliminary laboratory budget; project estimated needs, supplies, and requests; monitor budget expenditures.  

Write instruction booklets and short outlines for the use of software.  

Perform other duties as assigned.  

KNOWLEDGE AND ABILITIES:  

KNOWLEDGE OF:  

Principles, practices, procedures, and equipment used in the physical and applied sciences such as engineering, physics, astronomy, environmental sciences, and the earth sciences, including geography, geology, and geographic information systems.  

Health and safety regulations.  

Methods and techniques of record keeping.  

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

Methods and techniques of preparing scientific experiments.  

Electrical and soldering equipment and materials.  

Basic principles of budget preparation.  

Operational characteristics of laboratory apparatus, equipment, and materials pertaining to the assigned laboratories and subject areas.  

Proper methods of storing equipment, materials, and supplies.  

Fundamentals of English grammar, spelling, and composition.  

Principles of customer service.  

Basic inventory and purchasing processes, and procedures.  

ABILITY TO:  

Operate office equipment including computers and supporting word processing and spreadsheet applications.  

Learn and apply techniques of precise measurement and notation.  

Ensure the care and security of assigned equipment, specialized materials and supplies.  

Assemble, maintain, and repair lab equipment.  

Issue and receive equipment and supplies.  

Train and provide work direction to others.  

Understand and follow oral and written directions.  

Learn, interpret, and follow District operations, policies, and objectives.  

Work independently with little direction.
INSTRUCTIONAL LAB TECHNICIAN – PHYSICAL AND APPLIED SCIENCES (continued)

Communicate effectively, both orally and in writing
Establish and maintain effective working and cooperative relationships with others
Plan and organize work to meet schedules and timelines
Maintain records and prepare reports
Analyze situations accurately and adopt effective courses of action
Provide information and assistance to students regarding the operation, use, and care of equipment
Read schematic diagrams and analyze circuitry

EDUCATION AND EXPERIENCE:

A. An associate degree from a recognized college or university in any of the physical or applied sciences AND four years of professional experience performing technical lab work in the physical or applied sciences, preferably in an instructional environment

OR

B. A bachelor’s degree from a recognized college or university in any of the physical or applied sciences AND two years of professional experience performing technical lab work in the physical or applied sciences, preferably in an instructional environment

OR

C. A graduate degree from a recognized college or university in any of the physical or applied sciences

LICENSES AND OTHER REQUIREMENTS:

A valid California Driver License

WORKING CONDITIONS:

ENVIRONMENT:

Instructional lab environment

PHYSICAL ABILITIES:

Hearing and speaking to communicate with students and faculty
Seeing to inspect materials and to observe student behavior
Dexterity of hands and fingers to prepare materials and demonstrations and to operate and maintain lab equipment
Lifting and carrying heavy objects
Reaching to grasp and move supplies

HAZARDS:

Exposure to electrical currents
Exposure to hazardous chemicals
Exposure to laser beams