

## **Chemistry Lab Technician**

Full-time, 12 Month, Classified Position

**POSITION** Under direction of the Dean of Math, Science and Technology, to perform a variety of duties involved in providing technical support services for regularly scheduled chemistry laboratories to instructors and students; to assist instructors in preparing demonstrations; to prepare laboratory experiments; and to assume responsibility for the operation and maintenance of the chemical and supply storerooms; and to prepare mini courses.

**SUPERVISION EXERCISED** Exercises functional and technical supervision over student assistants.

### **EXAMPLES OF DUTIES AND RESPONSIBILITIES**

Prepare equipment and materials for chemistry laboratory demonstrations and exercises; set up laboratory apparatus; accurately determine, calculate, and prepare all chemicals, reagents, unknowns, and supplies; dispense proper quantities of materials. Perform qualitative and quantitative analytical tests; perform volumetric standardization procedures of chemicals; prepare standard curves. Refine laboratory experiments, kits, tools, and procedures; design, adapt, maintain, and construct equipment for demonstrations and teaching purposes; assist instructors in the design and implementation of new lab equipment and in the revision and development of new lecture demonstrations and laboratory experiments; test run experiments to check for problems and try out new labs and procedures. Maintain proper learning environment in chemistry laboratories; oversee proper use of chemicals and equipment by the students; provide assistance to individual or small groups of students. Plan, organize and maintain laboratory, instruments, laboratory classrooms, and stockrooms; maintain supplies of chemicals and other materials. Establish operational procedures to be followed in the stockroom; provide policy, procedural, and safety information to District personnel and students regarding use of chemistry supplies and materials. Perform physical inventory of instruments, supplies, and equipment; order and maintain supplies, materials and equipment; coordinate with faculty members regarding instructional supply needs; determine and quantify chemical needs; prepare requisitions and order all chemicals and supplies; review receipt of incoming supplies; coordinate with vendors when discrepancies occur; receive, assemble and test new equipment; provide for the proper storage of all chemicals according to compatibility. Perform routine and minor repairs on laboratory equipment; maintain, clean, service, calibrate and test laboratory equipment, scientific instruments, tools, and other supplies. Clean up chemical spills including acids, bases, solids, and mercury; properly dispose of chemical wastes and other potentially hazardous materials; prepare and process hazardous, toxic, and non-hazardous wastes for disposal to minimize toxicity and quantity. Implement and ensure compliance with rules, regulations, policies, and procedures including EPA, OSHA, Proposition 65, Employee Right To Know, insurance, fire and related regulations and requirements; provide reports to fire department on quantities of restricted chemicals; maintain registry of chemicals used in experiments. Participate in budget preparation and administration; prepare cost estimates for budget recommendations; monitor and control expenditures. Plan, prioritize, assign, supervise and review the work of student laboratory assistants; participate in staff selection including to interview and hire; provide or coordinate staff training; work with employees to correct deficiencies. Respond to inquiries and requests for information from staff members, students and the community regarding the chemistry labs and related programs. Provide for laboratory availability to students with permission and/or prior arrangements from instructor; schedule students for make-up labs; prepare and maintain supplies for make-up labs; provide assistance to students on use of equipment; answer questions. Maintain communal cabinets of hardware supplies in the chemistry laboratories; perform annual inspection of all student lockers. Maintain cleanliness of the laboratory; clean equipment, floors, and table top; return unused materials to storage and the stockroom. Perform a variety of clerical duties; maintain and update files and records including Material Safety Data Sheets, chemical records and inventory, locker combinations, and equipment manuals; prepare necessary reports; duplicate and distribute materials. Secure work area and equipment at completion of laboratory hours.

### **OTHER JOB RELATED DUTIES**

Prepare supply information packets for instructors regarding locker check-in procedures and lab handouts. Provide for duplication of experiment handouts; maintain files of originals and copies for distribution. Maintain file of procedures and supply lists for each experiment for each course. Perform regular testing of de-ionized water, emergency showers and eyewash stations. Perform simple glassblowing techniques; use torch to prepare glass tubing, make angles, fire polish, and cut glass. Perform related duties and responsibilities as required.

### **JOB RELATED AND ESSENTIAL QUALIFICATIONS**

**Knowledge of:** Operational characteristics of apparatus, laboratory equipment, instruments, and materials used in chemistry laboratories. Subject matter related to chemistry. Inorganic, organic, biochemistry, quantitative analysis, chemical safety and related concepts of physics and math. Laboratory techniques related to chemistry. First aid and emergency safety procedures for the laboratory. Basic techniques in pH, spectrophotometry, chromatography, acid/base titrations, and standardization. Mathematical principles and scientific concepts. Pertinent federal, state, district, and local laws, regulations, and policies regarding assigned area including EPA, OSHA, Proposition 65, Employee Right-to-Know, insurance and fire regulations and requirements. Principles involved in the usage, hazards, storage and disposal of chemicals and hazardous waste. contaminated waste and material impact to health and the environment. Procedures used in receiving, storing, Issuing and inventorying materials and supplies. Practices and procedures of record keeping. Modern office procedures, methods and computer equipment. Principles of supervision and training, safe work practices and procedures including the use and storage of chemicals.

**Skills to:** Demonstrate correct laboratory methods, practices and techniques. Use standard hardware tools. Operate modern office equipment including computer equipment. Type and word process at a speed necessary for successful job performance.

**Ability to:** Be sensitive to, and have an understanding of, the diverse academic, socioeconomic, cultural, and ethnic backgrounds of community college personnel and students. Analyze laboratory procedures from manuals and prepare laboratory and materials for student and staff use. Prepare and mix solutions and reagents. follow correct laboratory methods, practices and techniques. Provide assistance to students on matters related to assigned laboratory. Under prioritize and manage simultaneous projects, with minimum or no supervision. Supervise and train assigned staff. Comprehend and apply materials having technical content. Prepare and maintain accurate and complete records. Learn, interpret and apply department policies, procedures, rules and regulations. Interact effectively and sensitively with staff and students from diverse backgrounds. Communicate clearly and concisely, both orally and in writing. Establish, maintain, and foster positive and harmonious working relationships with those contacted in the course of work.

#### **EXPERIENCE AND EDUCATION GUIDELINES**

*Any combination of experience and education that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

**Education:** A Bachelors degree or equivalent from an accredited college or university with major course work in general chemistry, quantitative analysis, organic chemistry, or biochemistry.

**Experience:** One year of laboratory experience.

#### **Special Requirements:**

*Essential duties require the following physical abilities and work environment:*

Ability to sit, stand, walk, kneel, squat, stoop, twist, reach, and lift 25 to 40 lbs.; exposure to electrical hazards, chemicals, toxic waste, and mechanical hazards.