



## Job Description

**JOB TITLE:** INSTRUCTIONAL ASSISTANT-CHEMISTRY

**PAY GRADE:** CL 20

**LAST REVISED:** 09/01/2010

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job. Additional or different duties from the ones set forth below may be required to address changing business needs/practices.*

### **SUMMARY DESCRIPTION**

Under direction of assigned manager, provides a full range of instructional support to the Chemistry Department's faculty, students, and staff requiring in-depth knowledge of subject area; provides tutorial assistance to students in a classroom or laboratory setting; provides assistance to students and staff in the use of technology; maintains equipment in assigned labs; supervises and provides training to student and/or other temporary workers; and performs a variety of other duties as needed to provide technical and teaching assistance to support instructional program laboratory activities.

**REPRESENTATIVE DUTIES** - *The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.*

1. Prepares laboratory experiments; reads syllabi to prioritize duties and organize timeline for laboratory preparation; discusses specifics of experiments with instructors; reads laboratory manuals to understand concepts and prepare proper equipment and reagents; prepares and standardizes chemicals and solutions; maintains, repairs, and calibrates equipment, apparatus, and instrumentation used for experiments; troubleshoots and corrects inconsistencies and problems with laboratory experiments; prepares and distributes "unknown" samples to students and instructors; collects, cleans, and restocks equipment and glassware when experiments are finished; cleans laboratory rooms.
2. Handles hazardous chemicals and waste following OSHA and CalOSHA regulations regarding the proper handling, storage, waste treatment, and disposal of chemicals; cleans up hazardous chemical spillage; collects and processes hazardous wastes from laboratory experiments; maintains separation of incompatible chemicals; combines compatible chemical waste for storage and performs stabilization treatment of hazardous waste until removal; performs detailed labeling of hazardous chemical waste storage bottles; updates and tracks Material Safety Data Sheet (MSDS) materials for all chemicals.
3. Ensures safe laboratory practices are followed; monitors students' activities in the laboratories to ensure health and safety of all persons; monitors laboratory environment to ensure spills are treated appropriately and all hazards are minimized; ensures safety rules are followed by students; tests eye washes and showers to ensure proper working condition; ensures current insurance carrier safety requirements are met.
4. Maintains supply lists and orders supplies; coordinates with instructors to determine current and future needs and how best to meet them; coordinates with vendors to obtain quotes and information about supplies; researches and compares chemical and equipment pricing and technical aspects of instruments; reviews advantages and disadvantages of products and chooses products in consultation with managers and instructors; completes requisitions for supplies, orders products from vendors, and obtains supplies available at local stores; tracks orders; returns defective merchandise and obtains replacements; stocks and maintains forms; updates and organizes master supply lists; collaborates with other areas of the college to borrow, lend, or trade equipment and supplies.

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5. Monitors and documents all chemicals and supplies in the department; obtains and utilizes appropriate forms to document and report all chemicals in the department; appropriately labels and stores all chemicals to ensure compatibility and safe storage; obtains, tracks, and supplies to appropriate authorities Chemical Abstract Registry numbers and Material Safety Data Sheets for all chemicals in the department.
6. Maintains and repairs departmental laboratories, stockrooms, and classrooms; performs minor repairs; places, tracks, and follows-up on work orders for more major repairs and maintenance of equipment; cleans and maintains equipment and facilities.
7. Provides instructional assistance to students; assists students with questions regarding lectures and laboratory course work; proctors exams and quizzes; serves as on-site tutor; sets times and locations for formal tutoring sessions; arranges for extra tutoring sessions to coincide with tests.
8. Maintains and assists with troubleshooting of departmental computer hardware and software including workstations in student computer lab; provides initial computer technical assistance to faculty, staff and students; installs, removes, maintains, and assists with troubleshooting of departmental personal computer hardware and software; answers questions and provides training to students and/or staff members; requests or arranges for assistance, servicing, and/or repair of departmental computer equipment from District information technology staff or other technology resources.
9. Provides a variety of support and assistance to students and the department; organizes, assigns, and maintains student equipment lockers; applies and releases holds on student records in accordance with established District policies and procedures; refers incoming departmental telephone calls to appropriate party; communicates with companies and individuals regarding donating equipment; answers questions from the public and other entities; participates in preparation of grant proposals and the administration of grants.
10. Recruits, hires, trains, and schedules students and other temporary employees; provides assignments and detailed instructions; monitors work performed and takes appropriate action; completes and processes time sheets and other necessary paperwork; monitors hours worked and budgets.
11. Performs related duties as required.

**QUALIFICATIONS** - *The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.*

**Knowledge of:**

Chemical principles including general, analytical, organic, and inorganic chemistry as well as biochemistry.

Chemical properties including reactivities, solubilities, toxicities, flash points, vapor pressures, compatibilities, and chemical grading techniques.

Chemical nomenclature including International Union for Pure and Applied Chemistry (IUPAC) conventions as well as common names of organic and inorganic reagents.

Operational characteristics of laboratory apparatus, instruments, equipment, and materials pertaining to assigned laboratory and subject area.

Mathematical principles and scientific concepts including those related to the preparation of chemical solutions and compounds.

Theories, concepts, principles, applications, and techniques used in chemistry laboratories.

Laboratory safety protocols and procedures including proper handling and disposal of hazardous materials.

Office procedures, methods, and equipment including applicable computer hardware and software applications such as word processing, spreadsheets, and database management,

Basic inventory processes and procedures.

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English usage, spelling, grammar, and punctuation.  
Principles of lead supervision and training.  
Research techniques.  
Occupational hazards and standard safety practices.

### **Ability to:**

Prepare primary standard solutions and standardize solutions to within five parts per thousand using ninety percent confidence limit.  
Assemble, utilize, test, calibrate, clean, and make minor repairs to various chemistry laboratory apparatus and other equipment; instruct others in the use of scientific apparatus.  
Classify elements and compounds according to the Flinn system.  
Identify, classify, separate, and precipitate hazardous wastes.  
Observe laboratory protocols and ensure adherence to safe work practices and procedures.  
Assist with instructional tasks including to administer tests and tutor students.  
Operate office equipment including computers and supporting word processing, spreadsheet, database management, network management, desktop publishing, and Internet navigation applications.  
Adapt to changing technologies and learn functionality of new equipment and systems.  
Read and understand laboratory manuals, technical manuals, and laboratory procedures.  
Make arithmetic calculations of average to above average difficulty.  
Hire, train, and supervise student and/or other temporary help.  
Work independently and collaboratively.  
Maintain accurate records.  
Inventory and purchase chemicals, supplies, and equipment; organize storage facilities.  
Plan and organize work to meet changing priorities and deadlines.  
Apply scientific principles to practical applications; analyze data and solve problems.  
Learn and apply applicable federal, state, and local laws, codes, and regulations as well as administrative and departmental policies and procedures.  
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 Guidelines** - *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. Examples of ways to obtain the knowledge and abilities would be:*

### **Education/Training:**

Two years of college with major course work in chemistry. A Bachelor's degree from an accredited college or university is desirable.

### **Experience:**

Two years of increasingly responsible chemistry laboratory experience.

### **License or Certificate:**

Possession of, or ability to obtain, an appropriate, valid driver's license.

Possession of, or ability to obtain, a Hazardous Materials Awareness Training Card.

**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 indoors in an education classroom/center/laboratory setting; exposure to chemicals, hazardous materials, dusts, mists, fumes, gases, solvents, wet/damp surfaces,



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and noise; risk of cuts and sticks from handling glassware and other sharp objects and subsequent contact with blood borne and/or other pathogens; work with laboratory equipment and apparatus. Moderate exposure to risks controlled by safety precautions.

**Physical:** Primary functions require sufficient physical ability and mobility to work in an office and/or education center/classroom/laboratory setting; to stand or sit for prolonged periods of time; to occasionally walk, stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull light to moderate amounts of weight; to operate laboratory and office equipment requiring repetitive hand movement and fine coordination including use of a computer keyboard; to verbally communicate to exchange information; and requires the wearing of personal protective equipment including safety glasses or goggles, lab coats, rubber or plastic gloves, respirators, or face shields.

**Vision:** See in the normal visual range with or without correction; vision sufficient to read computer screens and printed documents, and to distinguish color; and to operate assigned equipment.

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

*Johnson & Associates*  
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