

SANTA BARBARA COMMUNITY COLLEGE DISTRICT

CLASSIFICATION: CLASSIFIED

CLASS TITLE: LABORATORY TECHNICIAN (OPTION CLASS)

SALARY TABLE: 29

SALARY RANGE: 31

BASIC FUNCTION:

Under the direction of an assigned supervisor, plan, organize, coordinate and prepare laboratory demonstrations, exercises and related instructional materials; perform a variety of specialized, complex and independent activities involved in the preparation, set-up and clean-up of supplies and equipment for laboratory demonstrations and activities in chemistry, biology, physics and engineering, media arts or other assigned subject area.

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:

Plan, organize, prepare and oversee laboratory demonstrations, exercises and related instructional materials; coordinate, schedule and adjust laboratory activities to meet instructional needs of assigned subject area and enhance educational effectiveness; confer with faculty and review and analyze lesson plans, curriculum, experiments, theories, demonstrations, manuals, exercises and instructional materials to determine laboratory equipment, supply and instructional material needs.

Perform a variety of specialized, complex and independent activities involved in the preparation, set-up and clean-up of supplies and equipment for laboratory demonstrations and activities in chemistry, biology, physics and engineering, media arts or other assigned subject area; calibrate, modify, maintain and repair complex laboratory equipment as required; restock lab supplies.

Research, compile, arrange and assemble laboratory materials and equipment; design, develop, analyze and implement laboratory demonstration, exercise, preparation and set-up procedures; investigate and resolve issues and malfunctions related to laboratory demonstrations and other instructional activities; assure smooth, efficient and educationally effective laboratory activities.

Supervise the performance of assigned student workers as required; interview and select student assistants and recommend salary increases, promotions, reassignment, termination and disciplinary actions; participate in recruitment and screening activities; monitor student progress; develop schedules, assign duties and review work for compliance with established standards and procedures.

Monitor inventory levels of laboratory supplies and equipment as assigned by the position; order, receive, store and maintain adequate inventory levels of supplies and equipment; initiate, prepare and process purchase requisitions; estimate required inventory levels; estimate and account for related costs; conduct inventories; issue and collect materials and equipment as required.

Plan, organize and lay out lab supplies and equipment for use in laboratories, classrooms other environment; test demonstrations and exercises to assure proper functioning; provide technical assistance to faculty and students in the use of laboratory supplies and equipment; explain related

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instructional and laboratory principles, theories, practices, procedures and techniques as needed.

Coordinate, monitor, develop and maintain budgets for laboratory activities in accordance with prescribed guidelines as assigned by the position; review and evaluate related financial and budgetary data; control and authorize expenditure in accordance with established limitations; assist in the development of budget requests.

Assure the health and safety of students, staff and faculty by researching, implementing and following health and safety practices and procedures; maintain laboratory and other assigned facilities in a safe, secure, orderly and clean manner; clean and disassemble supplies and equipment as needed.

Prepare and maintain various records and reports related to laboratory demonstrations, preparation, experiments, student assistants, supplies, equipment, inventory, budgets, purchases and assigned duties; compose preparation lists as required; produce instructional media as needed.

Develop, implement and conduct training activities to assure student assistant understanding of laboratory standards, requirements, supplies, equipment, principles, theories, practices and procedures.

Answer student questions and explain related laboratory instructional materials.

Communicate with College personnel, faculty and various outside agencies to exchange information and resolve issues or concerns.

Operate a variety of standard office equipment including a computer and assigned software; set up and operate audio-visual equipment as assigned; arrange for maintenance and repairs of laboratory equipment and facilities as needed; provide input concerning facility renovations as requested.

Maintain current knowledge of laboratory and subject matter terminology, techniques, equipment, materials, principles, theories, practices and procedures.

Attend and participate in various meetings, committees, workshops and training session as assigned.

OTHER DUTIES:

Perform related duties as assigned.

BIOLOGY OPTION:

Coordinate activities to meet laboratory and related instructional needs in subject areas such as general biology, anatomy, physiology, biomedical science, cell biology and microbiology; apply a variety of complex biological principles and disciplines in the development, analysis and adjustment of biology laboratory demonstrations, exercises and instructional materials to meet student needs.

Assemble, measure, mix and distribute various chemicals, reagents, solutions, cultures and other assigned special scientific supplies used in demonstrations, exercises and experiments; oversee and participate in the storage, use and disposal of hazardous materials in compliance with established laws and regulations as directed; prepare related records and reports.

Prepare, set up, operate, calibrate, maintain and repair a variety of specialized equipment related to biology such as measuring devices, lab glassware, micropipettes, weigh balances, microscopes, calculators, pH meters, electrophoresis, spectrophotometers, incubators, water baths, autoclaves, heat sources, centrifuges, ventilator hoods, cameras, analytical balances, duographs, dissolved oxygen meters, EKG machines, flatbed scanners, chromatographs, grass stimulators, microtomes, ophthalmoscopes, PRC assays, respirometers, slide scanners, sphygmomanometers, spectrophotometers and illuminators according to complex calibration procedures.

Research, collect and maintain inventory of plant, animal, culture, colony, live organism and other specimen collections in compliance with established laws and regulations; maintain related records; maintain greenhouse, herbarium, cold sea water storage and other assigned facilities as required.

Maintain current knowledge of safety and hazardous materials issues and regulations.

CHEMISTRY OPTION:

Coordinate activities to meet laboratory and related instructional needs in chemistry; apply a variety of complex chemistry principles, theories and disciplines in the development, analysis and adjustment of chemistry laboratory demonstrations, experiments and instructional materials to meet student needs; analyze and recommend modifications to experiments and procedures.

Assemble, measure, mix, dilute, standardize and dispense various chemicals, reagents, solutions, unknowns, indicators and other assigned special scientific supplies used in demonstrations and experiments; maintain records of laboratory preparations; clean, dry and restock glassware.

Prepare, set up, operate, calibrate, maintain and repair a variety of specialized equipment and glassware related to chemistry such as pH meters, balances, multimeters, visible and infrared spectrophotometers, centrifuges, spectroscopes, magnetic stirrers, hot plates, refractometers, fume hoods, nuclear magnetic resonance spectrometers and electrolysis apparatus; perform related maintenance and repairs as needed.

Collaborate with and take instruction from the campus Chemical Hygiene officer as appropriate and participate in related training to ensure compliance with laboratory health and safety protocols.

Maintain current knowledge of safety and hazardous materials issues and regulations; oversee and participate in the storage, use and disposal of hazardous materials; assure laboratory and hazardous material-related activities comply with established environmental health and safety laws and regulations; develop, maintain and utilize hazardous material methods and procedures for safe collection and handling, storage, labeling and disposal; maintain departmental MSDSs; prepare related records and reports; inspect eyewashes and safety showers to assure proper operation.

Maintain and organize stock and prep rooms for chemistry laboratories; track student locker

assignments; assess charges for lost, broken or damaged equipment and maintain related records; restock lockers and supply rooms as needed; prepare, stock and organize student lab drawers as needed; prepare, issue and receive materials and specialized equipment for student use in laboratory experiments.

MEDIA ARTS OPTION:

Prepare, set up, operate, calibrate, maintain and repair a variety of specialized equipment related to media arts such as cameras, laminators, computers, scanners, printers, strobes, lights, stands, scrims, silks, flags, grids, tripods, monitors, microphones, video switchers, decks, VCRs and DVD players; install new equipment and machinery as directed; prepare and arrange equipment for check out to students; provide training and assistance to students in equipment selection, set-up, use and operation.

Coordinate activities to meet classroom, studio and related instructional needs in subject areas such as photo, video, studio, film and editing; apply and explain a variety of complex media arts, production and computer technology principles, techniques, practices and procedures to students.

Check media arts equipment and materials in and out to students as assigned by the position; reserve equipment; input related data and maintain automated records and files; clean equipment, inspect for damage and maintain inventory data; adjust and maintain related databases as directed; assess and follow up on charges for lost, broken or damaged equipment; maintain related records as required.

Perform a variety of technical duties involved in the installation, operation, configuration, set up, modification and maintenance of computer hardware, software, peripherals, networks and systems to assure smooth and efficient operations of computer lab equipment for use by media arts students; troubleshoot and resolve malfunctions; install, update and utilize a variety of specialized software.

Maintain studios, classrooms and other media arts facilities in proper working condition; develop, maintain and provide information to students and employees concerning policies and procedures for check-out and studio functions as assigned; resolve related issues and conflicts as needed.

Receive, prepare and distribute media arts correspondence related to assigned activities as required; prepare and distribute informational materials related to studio and check-out functions; update website information as required.

PHYSICS & ENGINEERING OPTION:

Coordinate activities to meet laboratory and related instructional needs in physics and engineering; apply a variety of complex physics and engineering principles, theories and disciplines in the development, analysis and adjustment of physics and engineering laboratory demonstrations, exercises and instructional materials to meet student needs.

Prepare, set up, operate, calibrate, maintain and repair a variety of specialized equipment related to physics and engineering such as data projectors, televisions, VCRs, laserdisc players, scanners, cameras, CD/DVD burners, data collection probes, storage devices, digital multimeters, LCR meters, oscilloscopes, signal generators, power supplies, drills, presses, saws, milling machines, sanders,

compressors, computer acquisition probes and software, timing devices, balances, photogates, force probes, voltage and current probes, magnetic sensors, accelerometers, spectrometers, ballistic galvanometers, telescopes, microscopes, lasers and interferometers.

Design, develop, analyze, modify and implement computer animations to illustrate physics and engineering principles for internet and lecture use; utilize specialized software and apply related principles of computer science; develop and maintain multimedia and web resources as directed.

Perform a variety of technical duties involved in the installation, operation, configuration, set up, modification and maintenance of computer hardware, software, peripherals, networks and systems to assure smooth and efficient operations of the computer lab for use by physics and engineering students; troubleshoot and resolve malfunctions; install and update software as needed.

Design and construct laboratory and demonstration equipment in accordance with physics and engineering principles and theories to meet instructional needs as directed; utilize related power tools and equipment.

Serve as the principal contact, organizer and lead presenter for Discovery Camp as required.

KNOWLEDGE AND ABILITIES:**KNOWLEDGE OF:**

Planning, organization, coordination and preparation of laboratory demonstrations, exercises and related instructional materials.

Technical practices, procedures and techniques involved in the preparation, set-up and clean-up of supplies and equipment used in laboratory demonstrations and activities in assigned subject area.

Advanced laboratory and subject matter terminology, techniques, equipment, materials, principles, theories, practices and procedures related to assigned subject area.

Set up, operation, calibration, maintenance and repair of various laboratory instruments, tools and equipment related to assigned subject area.

Inventory practices, procedures and techniques.

Appropriate safety precautions and procedures.

Operation of a computer and assigned software.

Principles and practices of supervision and training.

Oral and written communication skills.

Interpersonal skills using tact, patience and courtesy.

Record-keeping and report preparation techniques.

Budget preparation and control.

ABILITY TO:

Plan, organize, coordinate and prepare laboratory demonstrations, exercises and related instructional materials.

Perform a variety of specialized, complex and independent activities involved in the preparation, set-up and clean-up of supplies and equipment for laboratory demonstrations and activities in chemistry, biology, physics and engineering, art, music, media arts or other assigned subject area.

Review and analyze lesson plans, curriculum, experiments, theories, demonstrations, manuals, exercises and instructional materials to determine laboratory and instructional material needs.

Calibrate, modify, maintain and repair complex laboratory equipment as required.
Interpret, apply and explain laws, codes, regulations, policies and procedures.
Train and supervise the performance of assigned student workers as required.
Order, receive and maintain adequate inventory levels of supplies and equipment.
Research, compile, arrange and assemble laboratory materials and equipment.
Assist faculty, staff and students in the use of laboratory supplies and equipment.
Observe health and safety regulations and procedures.
Explain instructional and laboratory principles, theories, practices, procedures and techniques.
Assure smooth, efficient and educationally effective laboratory activities.
Meet schedules and time lines.
Work independently with little direction.
Maintain records and prepare reports.
Communicate effectively both orally and in writing.
Establish and maintain cooperative and effective relationships with students.
Operate a variety of standard office equipment including a computer and assigned software.

EDUCATION AND EXPERIENCE:

Any combination equivalent to: bachelor's degree in subject of assigned laboratory or instructional area and two years laboratory technician or related instructional experience.

WORKING CONDITIONS:

ENVIRONMENT:

Instructional laboratory environment.
Subject to variable work hours.
Constant interruptions.

PHYSICAL DEMANDS:

Dexterity of hands and fingers to operate a variety of equipment.
Sitting or standing for extended periods of time.
Seeing to read a variety of materials and monitor student activities.
Hearing and speaking to exchange information.
Bending at the waist, kneeling or crouching.
Reaching overhead, above the shoulders and horizontally.
Lifting, carrying, pushing or pulling moderately heavy objects as assigned by the position.

HAZARDS:

Some incumbents may experience exposure to fumes and hazardous chemicals.