

July 2013

SANTA BARBARA COMMUNITY COLLEGE DISTRICT

CLASSIFICATION: **CLASSIFIED**

CLASS TITLE: **EARTH & PLANETARY SCIENCE
LAB/FIELD TECHNICIAN**

SALARY TABLE: **29**

SALARY RANGE: **33**

BASIC FUNCTION:

Under the direction of the Department Chair, plan, organize and coordinate a variety of field trips to various sites and facilities in support of Earth & Planetary Sciences; perform a variety of specialized, complex and independent activities involved in the preparation, construction, set-up and clean-up of instructional materials and equipment for field trips and laboratory demonstrations and activities in Earth & Planetary Sciences; assure adequate equipment and materials to meet Department needs.

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:

Plan, organize and coordinate a variety of field trips to various sites and facilities; arrange transportation, supplies, equipment and reservations for field trips; maintain and oversee the operation of field equipment; direct field trip functions to assure smooth and efficient activities; issue and collect field trip materials and equipment to and from students.

Coordinate, direct and arrange support services for field trips; coordinate, oversee and participate in the purchasing, preparation and distribution of food and beverages for field trips; maintain and oversee the operation of needed equipment such as stoves, ovens, lanterns, refrigeration equipment, portable latrines and radios; plan related menus; drive a truck to support field trips as directed.

Coordinate activities, supplies and equipment to meet field, laboratory and related instructional needs in geology, geophysics, oceanography, astronomy and related subject areas; apply a variety of complex geological principles, theories and disciplines in the development, analysis and adjustment of field trips, 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 geology such as microscopes, stereoscopes, rock processing equipment, grinders, laps, meters, balances, shakers, splitters, generators, samplers, projectors, telescopes, graphs, tape players, cameras hand and power tools and machinery, and a variety of other geophysical, astronomical, geological, rock processing, soil testing and oceanographic equipment.

Assure adequate equipment and materials to meet Department needs; monitor inventory levels of laboratory and field trip supplies and equipment; select, order, receive, store and maintain adequate inventory of supplies and equipment; initiate, prepare and process purchase requisitions; estimate required inventory levels; estimate and account for related costs; conduct inventories.

Research, collect and maintain inventory of museum specimens used in instructional activities

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including mineral, petrology and paleontology reference samples; maintain map and library collection; prepare and stock student lab drawers with rocks, minerals and fossils as assigned;

conduct field excursions to identify and collect specimens; take photographs as needed.

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

Prepare and maintain collection of rock thin-sections and slabs, polished sections and oriented grain mounts; construct a variety of demonstration models such as geomorphologic models, stream tables, crystal structure models, turbidity tanks, fault models and wave tanks; perform related carpentry and welding tasks; maintain and prepare materials and equipment involving chemicals, soil mechanics, oceanographic cores and related apparatus.

Plan, organize and lay out lab supplies and equipment for use during field trips and laboratories; test demonstrations and exercises to assure proper functioning; provide technical assistance to faculty and students in the use of field trip and laboratory supplies and equipment; explain related instructional and laboratory principles, theories, practices, procedures and techniques as needed.

Research, compile, arrange and assemble field trip and laboratory materials and equipment; design, develop, analyze and implement field trip demonstration, exercise, preparation and set-up procedures; investigate and resolve issues related to field trips, demonstrations and other instructional activities.

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

Perform skilled work in the inspection, diagnosis, repair and maintenance of various vehicles; adjust, overhaul, service and rebuild automotive systems and equipment; troubleshoot, diagnose and resolve vehicle problems and malfunctions; install and replace vehicle parts and components as needed.

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

Coordinate, monitor, develop and maintain budgets for laboratory activities in accordance with prescribed guidelines; review and evaluate 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; clean and disassemble supplies and equipment as needed.

Communicate with College personnel, faculty and various outside agencies to exchange information and resolve issues or concerns; request educational fee waivers as appropriate.

Operate a variety of standard office equipment including a computer and assigned software; set up and operate audio-visual equipment as assigned.

Provide and arrange for field trip medical and emergency services; respond to emergency situations and provide first aid and CPR as needed; transport student to medical facilities as needed.

Maintain current knowledge of laboratory, field trip and Earth & Planetary Sciences terminology, techniques, equipment, materials, principles, theories, practices and procedures.

OTHER DUTIES:

Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

Planning, organization, coordination and support services required for a variety of Earth & Planetary Sciences field trips to various sites and facilities.

Technical practices, procedures and techniques involved in the preparation, construction set-up and clean-up of geological instructional materials and equipment used in field trips and other instructional activities.

Advanced geology and related field trip terminology, techniques, equipment, materials, principles, theories, practices and procedures.

Set up, operation, calibration, maintenance and repair of various field trip instruments, tools and equipment related to geology.

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 and coordinate a variety of field trips to various sites and facilities.

Coordinate, direct and arrange support services for field trips.

Perform a variety of specialized, complex and independent activities involved in the preparation, construction, set-up and clean-up of instructional materials and equipment for field trips and laboratory demonstrations and activities in Earth & Planetary Sciences.

Research, collect and maintain inventory of museum specimens used in instructional activities.

Prepare and maintain sample collections, demonstration models and a variety of other specialized instructional materials related to geology.

Calibrate, modify, maintain and repair complex equipment related to geology instruction as required.

Interpret, apply and explain laws, codes, regulations, policies and procedures.

Train and supervise the performance of assigned student workers as required.

Select, order, receive and maintain adequate inventory levels of supplies and equipment.

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Research, compile, arrange and assemble instructional materials and equipment.
Assist faculty, staff and students in the use of field trip and instructional supplies and equipment.
Observe health and safety regulations and procedures.
Explain geological and field trip 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 geology and two years increasingly responsible experience providing instructional support in subject areas related to geology including work with the development and implementation of field trips and preparation and set-up of instructional materials and equipment.

LICENSES AND OTHER REQUIREMENTS:

Incumbents must obtain a ServSafe license within a designated period of time.
Incumbents must obtain a valid first aid and CPR license including defibrillator certification within a designated period of time.
Incumbents must obtain a California Class B driver's license within a designated period of time.

WORKING CONDITIONS:

ENVIRONMENT:

Indoor and outdoor work 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 heavy objects as assigned by the position.
Walking during field trips.

HAZARDS:

Some incumbents may experience exposure to fumes and hazardous chemicals.
Working around machinery with moving parts
Working at heights.