

Career Group Concept & Illustrative Examples of Work

Research Support

(To Replace: UH Research Associate I-VI , UH NMR-Mass Spectrometer Technician, UH NMR-Mass Spectrometer Facilities Manager, UH Observatory Superintendent, UH Haleakala High Altitude Site Superintendent, UH Electronics Technician I-II, UH Observatory Technician I-II, UH Observatory Research Technician, UH Observatory Crew Chief, UH Observatory Foreman, UH Laser/Electro-Optical Technician I-II, UH Scientific Instrument Technician I-III, UH Scientific Glassblower, UH Communications Supervisor, and UH Marine Laboratory Supervisor)

Career Group Concept

The Research Support Career Group consists of positions that provide support services to research programs, e.g., astronomy, chemistry, physics, biology, botany and other research fields and endeavors. Positions in the Career Group range from entry level practitioner/technician positions to positions of subject matter and/or technical experts and/or program managers/ administrators with responsibility to direct and oversee programmatic policies, program operations to include strategic planning, program development and service delivery.

Illustrative Examples of Work:

Note: The “Illustrative Examples of Work” are intended to serve as guides - not absolute standards. A position may be assigned to this Career Group when it meets the Career Group Concept and the majority of the position’s work time is associated with the performance of some of the described duties and responsibilities performed by positions in the Career Group.

Research: Prepares samples for chemical analysis; conducts and records results of analysis; conducts literature reviews, library searches and researches data sources; collects data and/or samples, classifies, catalogs, maintains collection information, processes specimens and charts/graphs data collected; monitors experiments in progress, collects data and conducts tests in accordance with established experimental protocols; prepares, cleans, maintains, calibrates and operates laboratory and experimental testing equipment and apparatus for the purpose of conducting and recording results of analyses; conducts interviews and/or makes observations and collects data from psychological, sociological, language or education experiments, tests and studies involving human subjects; completes all administrative and technical arrangements for research experiments or projects; performs autopsies and surgical procedures on

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research animals; supervises and/or provides the care and feeding of laboratory animals; executes personal computer based programs of complex scientific and mathematical data analyses; executes and/or supervises scientific data reductions and analyses for a complete research project requiring considerable independent interpretation of research data; designs, fabricates, operates and maintains sophisticated research equipment; assists and/or designs and prepares research projects and proposals; writes, proofreads, edits or assists in the writing of manuscripts, final research reports and findings for publications; plans, directs and supervises program operations to include the promulgation, implementation, interpretation and maintenance of policies, procedures, practices and systems; and supervises and/or trains professional, technical and/or clerical personnel.

Nuclear Magnetic Resonance (NMR)/Mass Spectrometer: Operates, calibrates, maintains, adjusts, repairs and modifies a computer-controlled nuclear magnetic resonance or mass spectrometer; adjusts and modifies equipment to non-standard, complex tests, e.g., off-resonance decoupling, boron-11 and deuterium NMR spectra, etc.; designs, modifies, and fabricates highly sophisticated optical, mechanical, analog, digital and linear devices for specialized research applications; trains students, faculty and staff in the proper use of equipment; supervises staff in the operation, installation, repair, maintenance, calibration, modification and adjustment of NMR, highly complex mass spectrometers and peripheral electronic equipment; plans, directs and supervises program operations to include the promulgation, implementation, interpretation and maintenance of policies, procedures, practices and systems; and supervises subordinate level professional, technical and/or clerical personnel.

Program and/or Facility Management and Administration: Plans, manages and administers the operations/maintenance of a research facility, e.g., Haleakala High Altitude Site; oversees site characterization studies relating to the meteorological and electromagnetic properties; develops short and long term plans that may include identification of goals and objectives for programs and/or facilities operations and management, operating budgets, operations/maintenance plans, instrumentation development/upgrades, major repairs, maintenance and capital improvements; plans, directs and supervises program operations to include the promulgation, implementation, interpretation and maintenance of policies, procedures, practices and systems; and supervises subordinate level professional, technical and/or clerical personnel.

Technician: Designs, develops, fabricates, constructs, modifies, rebuilds, calibrates and recalibrates, operates, overhauls and/or repairs a variety of research, scientific laboratory, glass, telescope and observatory sensing equipment, hyperbaric chamber related equipment and electro-optical devices, e.g., lasers, that may be based on models crafted

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from wood, plastic and other materials with specific pieces of equipment being highly complex, state-of-the-art with minimal margins for error; prepares rough and finished sketches and blue prints; prepares cost estimates and requisitions authorized supplies, tools and materials and stocks replacement parts; trains students, faculty and special investigators in correct and speciality procedures in the use of instruments and data interpretation; supervises and manages the operations of an scientific instrument development and fabrication shop involving the making of work assignments and specification of target completion dates, review of subordinate technicians work to insure compliance with design specifications, supervision of the fabrication of very sophisticated and highly complex equipment, planning and executing the shop's annual operating budget and maintaining an appropriate inventory of supplies, materials and replacement parts; supervises the operations of a communications center between the University and remote stations and shipboard research personnel that requires the repair and maintenance of communications equipment, dissemination of messages received and transmission of messages; supervises the operations of a marine science laboratory with responsibility for the maintenance and repair of laboratory buildings, facilities and equipment including the plumbing, electrical and refrigeration systems and associated pumps, compressors, boats, motors, diving gear, photographic equipment and electronic measuring equipment; supervise custodial and contract maintenance workers; serves as on-site safety officers; operates and/or supervises the operations of telescopes and associated computer control and data recording systems; plans, schedules and supervises an observatory crew in the operations and maintenance of a observatory facility, facility support equipment, telescopes and associated observatory imaging equipment; constructs, modifies and repairs a variety of electro-optical devices, e.g. lasers, pocket cell, mode lockers, doubling crystals and cooling systems; and supervises and/or directs the work of subordinate technical, clerical, student personnel or skilled trades person.