Core Competencies for Laboratory & Research Operations Competency Statement Examples

Occupational Group: Laboratory & Research Operations

Competency: Analytical/Critical Thinking
Definition: Looks at situations from multiple perspectives; organizes difficult information in a systematic way; identifies issues and underlying causes and thinks through the consequences of different courses of action; compares and evaluates data from different sources to make well informed decisions and identifies alternative solutions.

Job Template: Laboratory Technician 1

Proficient	Advanced	Expert
Identifies, recognizes and resolves routine problems by reviewing detail specifications, sketches, or verbal/conceptual descriptions. Conducts diagnostic tests and inspections to identify faults and their causes, and performs basic maintenance tasks. Collaborates with colleagues from other technical backgrounds to solve problems and make decisions. Ensures compliance with industry standards, regulatory and project requirements.	Formulates and interprets test plans, policies, and strategies to ensure scientific validity, adequacy, or maximum efficiency of systems. Implements design modifications for electronic systems and equipment, considering the load, contingency and future needs.	Develops theoretical models or approaches (i.e., engineering models, computational models, growth and yield models) to anticipate problems with the design and development of electronic equipment. Determines several possible solutions or alternative equipment to use to support research operations when anticipating potential obstacles and developing contingency plans.

Competency: Problem Solving
Definition: Identifies and understands issues, problems, or opportunities; analyzes, develops possible solutions, and takes or suggests the appropriate course of action; remains calm under pressure and follows steps to achieve solution.

Job Template: Electronic Engineer

Proficient	Advanced	Expert
Effectively identifies and addresses common issues and problems that arise during laboratory experiments, ensuring they run smoothly and safely. Monitors and enforces laboratory safety protocols, proactively addressing potential hazards or violations. Maintains an accurate inventory of lab supplies, ensuring materials are readily available for experiments.	Analyzes laboratory methods and procedures, identifying areas for improvement to enhance the effectiveness of experiments. Identifies opportunities to improve the efficiency and effectiveness of laboratory procedures and materials. Identifies opportunities to streamline laboratory processes, improving efficiency and resource utilization. Collaborates with colleagues to identify opportunities for equipment	Contributes to long-term laboratory planning, including the assessment of new equipment, procedures, and technology for adoption. Engages in research and development efforts to explore novel laboratory techniques and approaches. Collaborates with faculty and teaching assistants to enhance laboratory manuals and experiment procedures, optimizing learning outcomes.

	upgrades or new technology adoption, improving laboratory efficiency.	

Competency: Time Management
Definition: Plans and effectively prioritizes work to accomplish tasks and achieve objectives by established deadlines; exercises conscious control of the time spent on specific activities, to increase effectiveness, efficiency and productivity.
Job Template: Laboratory Technician 2

Proficient	Advanced	Expert
Performs laboratory experiments and reporting based on established protocols and timelines. Sets up laboratories and ensures students have appropriate equipment, glassware and supplies prior to classes starting. Reviews class schedules to determine priority of lab set up and experiments.	Reviews experiments to identify and resolve problems/complications with methods and/or techniques and improve completion time. Determines time taken to complete experiments and preparation of labs to establish one's own schedule and allow time for urgent requests.	Creates schedule with major milestones, equipment maintenance, and reporting deadlines to effectively schedule time, determine priorities, and ensure completion. Evaluates laboratory information management system to incorporate time management techniques like workflow management or information tracking.