

POSITION DESCRIPTION

Instructional Lab Technician II (Science)

Position Instructional Lab Technician II (Science)
Department/Site Natural and Physical Sciences
FLSA Non-Exempt
Evaluated by Dean of Natural and Physical Sciences
Salary Range 34

Summary

Performs technical duties to assist in the operation and maintenance of instructional laboratories. Prepares various solutions for laboratory activities. Assembles, sets up, and installs equipment used in laboratory demonstrations, experiments, or simulations. Provides technical and instructional assistance to students.

Essential Duties and Responsibilities

- Following lab preparation orders, Sets up established laboratory experiences for students as required by course outline or faculty direction. Cultivates, maintains cultures, and prepares living specimens and microbial, fungal, and bacterial specimens by following established laboratory protocols.
- Provides care for and observes protocols for humane treatment of living specimens.
- Prepares bio-technical microscopic, preserved animal dissection, and other specialized materials to meet classroom and laboratory requirements.
- Provides assistance to students in the use of laboratory equipment and materials. Sets up, tests, and takes down experiments used in classes and laboratories. Provides technical assistance to students, troubleshooting and diagnosing problems with equipment.
- Prepares chemicals and laboratory materials used in recombinant DNA, serology and PCR related protocols.
- Prepares materials for use in human anatomy, physiology, biology and microbiology laboratories. Prepares and administers drugs used in mouse metabolism experiments. Assists with maintenance of cadavers and prepared specimens.
- Prepares media for use in the culture of microorganisms. Maintains livestock cultures of routinely used microorganisms, e.g., bacteria, coliphage, protozoa and fungi, and invertebrates.
- Prepares stain reagents used in the identification of microorganisms. Prepares chemical reagents used in the enzymatic testing required for microbial identification. Prepares and maintains hazard labels on all chemicals used in laboratory preparations/protocols.
- Cleans laboratory equipment and work areas. Handles and disposes of harmful or hazardous materials according to specific instructions relating to their disposal.
- Monitors production of, collects and processes hazardous waste materials and toxic chemical wastes resulting from laboratory classes according to established protocols. Monitors and documents autoclave operation including compliance with waste management plan.
- Sets up and provides technical and other assistance to students with special projects, field research trips, and classroom/laboratory presentations.
- Inventories and stores equipment, materials, and supplies for easy access, such as but not limited to, live and preserved biologic specimens, laboratory supplies, and written materials required for student instructional needs. Performs repairs on equipment and learning assistance devices. Checks out equipment, supplies, materials used by students.
- Maintains records of laboratory activity, including typing forms or inputting data or otherwise

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retaining information regarding the condition, maintenance and distribution of equipment, materials, supplies, and written materials. This includes documents to support the handling of hazardous or dangerous materials, substances, and chemicals.

- Processes documents connected with the purchase or acceptance of supplies and equipment used in laboratory environments.
- May guide the work of student helpers.
- May provide care for living materials, which may include animals and plants.
- May maintain department pond and greenhouse, which includes care of plants and pond life.
- May administer simulations, tests, and quizzes to students as provided by instructors in class or lab environment. May assist instructors by administering make-up tests.
- Maintains Material Safety Data Sheets (MSDS) and safely disposes chemical and biohazard waste. Prepares and maintains hazard labels on all chemicals used in laboratory preparations/protocols.
- Performs other duties as assigned that support the overall objective of the position.

Qualifications

- Knowledge and Skills

- Requires knowledge of the concepts associated with general biology, zoology, botany, physiology, human anatomy, and microbiology.
- Requires working knowledge of techniques and protocols for biological collecting, the care of living specimens, and preservation.
- Requires working knowledge in the use of scientific and laboratory equipment.
- Requires working knowledge of laboratory or workshop procedures, organization, equipment, tests, experiments, and simulations.
- Requires knowledge of safe and proper handling of harmful chemicals, substances, and hazardous wastes.
- Requires knowledge of basic inventory methods.
- Requires sufficient mathematics skill to make calculations such as metric weights and volumes, and percentages.
- Requires sufficient knowledge of computers to use common desktop and specialized applications used in supporting education.
- Requires sufficient knowledge of the English language to prepare routine correspondence and instructions.
- Requires knowledge of tutoring techniques including students' styles of learning.
- Requires sufficient human relation skills to guide students and student workers, and to convey technical concepts.
- Requires sensitivity to the needs of students with diverse backgrounds and abilities.

- Abilities

- Requires the ability to carry out the responsibilities of the position including set up laboratory assignments, experiments, simulations, tests, and student projects.
- Requires the ability to locate and identify regional plants, animals, and other specimens in the field, including skeletal structures.
- Requires the ability to prepare chemical and other solutions, extracts, and dilutions to specifications, to aseptically transfer and isolate pure cultures of bacteria, prepare electrophoresis gels and DNA laboratory samples, and cultivate various living organisms.

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- Requires the ability to prepare instructional equipment and specimens for laboratory experiments.
- Requires the ability to operate, calibrate, and perform minor repairs to laboratory equipment and tools.
- Requires the ability to read and understand technical manuals.
- Must be able to maintain the lab and equipment in a safe and organized manner, including the handling of hazardous or dangerous materials and equipment as required for some labs.
- Requires the ability to instruct students in the use of equipment.
- Requires the ability to perform routine record keeping and report writing duties.
- Must be able to organize and prioritize work to meet deadlines and manage time effectively.
- Must be able to guide the activities of work-study students.
- Requires the ability to complete required occupational safety and health training within a reasonable time.
- Requires the ability to work varying schedules including evenings.

Physical Abilities

- Incumbent must be able to function effectively indoors and outdoors in a classroom/laboratory environment engaged in work of a moderately active nature.
- Requires sufficient ambulatory ability to stand for extended periods of time, lift and move medium weight materials up to 50 pounds, and move to work stations.
- Requires sufficient arm, hand, finger dexterity to setup experiments and use a computer keyboard and other office equipment.
- Requires normal hearing and speaking skills to communicate with staff and students in one-on-one and small group settings.
- Requires visual acuity to read printed materials and labels and to observe students perform tests and assignments.

Education and Experience

- An associate degree in biology, or related science discipline, or the completion of at least sixty (60) college-level semester units with an emphasis in biology, and one year of science laboratory-related experience; or, in the absence of an associate degree, or the completion of at least sixty (60) college-level semester units, three years of science laboratory-related experience.

Licenses and Certificates

- May require a valid driver's license.

Working Conditions

- Work is performed indoors and outdoors where significant safety considerations exist from physical labor, handling of medium weight, yet, awkward materials, and chemicals.