

PHYSICAL SCIENCES LABORATORY TECHNICIAN

DEFINITION

Prepares and assembles materials and equipment used in physical science experiments and demonstrations; operates and services scientific equipment; assists students and faculty with instructional activities; and orders, issues, receives, and stores laboratory materials and supplies.

TYPICAL DUTIES

Schedules and oversees the use of one or more physical science laboratories by students, faculty and staff. Instructs students individually in the proper and safe use and operation of a variety of equipment and tools and orients students to established policies within the instructional laboratory.

Assembles supplies and constructs apparatus; sets up and may assist in conducting classroom experiments and demonstrations.

Issues and receives materials and equipment for student use in laboratory and classroom assignments; keeps records and effects the return of supplies and equipment checked out to students.

Operates, maintains, and makes minor adjustments and repairs on laboratory equipment such as audio oscillators, balances, barometers, electrostatic generators, force tables, galvanometers, geiger counters, interferometers, lasers, magnetometers, measuring microscopes, oscilloscopes, potentiometers, spectrosopes, telescopes, and vacuum pumps.

Sets up and operates audio visual equipment on an as needed basis.

Maintains inventory records of supplies, materials and equipment and prepares requisitions as needed.

Stores supplies and equipment and keeps storerooms and working areas orderly and clean.

May assist instructional staff in writing instructions and designing apparatus for specialized experiments.

May provide training and work direction to student employees.

Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

A **Physical Sciences Laboratory Technician** applies knowledge of the physical sciences and scientific laboratory procedures and techniques in performing a broad range of duties related to the day-to-day operations of physical science laboratories, which includes the preparation of supplies, materials, and equipment, maintenance of equipment and facilities, storekeeping functions; and proper and safe use of equipment and materials.

An **Engineering Laboratory Technician** applies knowledge of engineering technology in performing a broad range of duties related to the day-to-day operations of an engineering laboratory which includes the preparation of materials and equipment, maintenance of equipment and facilities, storekeeping functions; and proper and safe use of equipment and tools.

SUPERVISION

General supervision is received from a Department Chair. Functional supervision is received from instructional staff. Work direction may be provided to student employees.

CLASS QUALIFICATIONS

Knowledge of:

- Basic principles of physics, including the mechanics of solids, fluids, heat, sound, electricity, magnetism, and optics and their relationships to specializations such as astronomy and geology
- Scientific laboratory procedures and techniques used in a physical science laboratory
- Scientific laboratory equipment and apparatus
- Scientific methods of measurements
- Health and safety practices applicable in a physics classroom or laboratory
- Capabilities of computer systems, software, and hardware common to instructional laboratories
- Principles of record keeping

Ability to:

- Provide instructional assistance to students and instructional staff
- Follow complex instructions and formulae in the preparation and construction of media and equipment setups
- Effectively and safely operate, adapt, and maintain scientific equipment
- Perform minor repairs and adjustments to a variety of laboratory equipment
- Maintain an inventory of equipment and tools
- Make complex arithmetic calculations
- Keep detailed and precise records
- Work effectively and cooperatively with students and instructional staff
- Give clear and concise instructions
- Effectively utilize computer hardware and software
- Learn general and specialized software applications

ENTRANCE QUALIFICATIONS

Education and Experience:

An associate degree or its equivalent, from a recognized college or university, with a major in physics or a closely related field.

OR

Graduation from high school or its equivalent **AND** two years of full-time paid experience as a laboratory technician in a physical science laboratory.